Curriculum Vitæ

Joaquim Armando Pires Jorge

Full Professor

Department of Computer Science and Engineering
Instituto Superior Técnico / Universidade de Lisboa

Emails: jorgej@tecnico.ulisboa.pt jorgej@acm.org jorgej@ieee.org
ORCID ID: https://orcid.org/0000-0001-5441-4637
Google Scholar: https://scholar.google.com/citations?user=RgiMdpAAAAAJ

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SUMMARY

Joaquim Jorge is *Full Professor* at *Instituto Superior Técnico*, the School of Engineering of the *Universidade de Lisboa* at the Department of Computer Science and Engineering (DEI), where he teaches Computer Graphics and Human-Computer Interaction and holds the UNESCO Chair of Artificial Intelligence and Extended Reality. He is Adjunct Professor at the University of Wellington and Invited Honorary Professor at the Catholic University of Rio de Janeiro. He was an Adjunct Professor at the Department of Computer Science at the University of Calgary from 2009 to 2018, The Technical University of Vienna in 2012 and the Technical of Darmstadt in 1999. He has chaired or co-chaired the Scientific Program Committee of multiple international conferences, including IEEE VR 2020, Eurographics 2016, ICCG 2015, SCCG 2015, IUI 2012, CAe'08, ICIG'07, HCIed'07, WSCG'06, EGSBIM'05, EGMM'04, EGSBM'04, DSV-IS'03, CGE'02 and EGMM'01. He organized over 50 international events including IEEE VR 2022 and IEEE VR 2021, Eurographics'98, ACM ISS 2020, INTERACT 2011, and in 2001 a Strategic *Workshop* in Portugal with the support of the European Commission and the *National Science Foundation* on Universal Accessibility (EC / NSF *Workshop* - WUAUC'01) in *Alcácer do Sal*. A longtime practitioner of Computer Graphics and Interactive Systems, he first joined the Eurographics Association (EG) in 1986 and was a member of the EG Executive Committee between 1997 and 2006. He participated in many national and European projects in the area of Computer Graphics and Multimedia, coordinating the SmartSketches European project from 2002 to 2004. He was a proposal evaluator for the National Science Foundation (NSF) in 2000, 2001 and 2003 under the ITR program and the European Commission under the IST program (5th-7th Framework programs). He was a consultant at the FhG/IGD (Institute for Computer Graphics, Darmstadt, Germany) on Multimodal Interfaces and coordinates the Graphics & Interaction Research Group at INESC-ID, a Research Institute Affiliated with the University, since 2000. Since January 2007 he is Editor-in-Chief of the Computers & Graphics Journal (Elsevier), having served on the Editorial Board of seven other scientific publications including Computer Graphics Forum (Blackwells) between 1999 and 2008. In November 2018 he founded Graphics & Visual Computing Journal an Open Access sister publication to Computers and Graphics. He supervised or co-supervised 16 doctoral theses and 68 MSc theses, as well as 50 capstone projects at IST. He is author or co-author of over 378 peer-reviewed publications, including 164 presented at international conferences, 3 books, 63 journal articles and 31 communications to workshops. He has served in the international program committee of over 208 conferences. In addition to being a national delegate to IFIP's Human-Computer Interaction Technical Committee (TC13) from 2001-2013, he is also a member of ACM/SIGGRAPH, IEEE (Senior Member since 2000), IAPR and was Chairman of the Eurographics Portuguese Chapter from 2000-2008. He is the first Portuguese ACM Distinguished Speaker Program (DSP) since September 2015, having given 22 keynote talks at scientific events as well as 42+ keynote talks and guest lectures in academic contexts. In 2014 he received the IFIP Silver Core Award in recognition of his contributions to IFIP / TC13. From 2015 to 2019 he was an elected member of the Executive Committee of the ACM Europe Council. He has been nominated IEEE Distinguished Visitor in 2021 and IEEE Distinguished Contributor in 2022. He is a *Membre Libre* of the French National Academy of Surgery since November 2022. He was named Fellow of the Eurographics Association in 2010 and Distinguished Member of the ACM in 2017. In September 2022 he was elected to serve on the IEEE Computer Society Board of Governors from January 2023 to December 2025. He was inducted into the IEEE VR Academy in March 2025. He was elevated to **IEEE Fellow** in 2025.

SCIENTIFIC AREAS OF INTEREST

Extended Reality, Multimodal Interfaces, Visual Languages, Fuzzy Logic, Pattern Recognition, Computer Graphics, User Centered Design, eLearning, Multimedia Information Retrieval.

ACADEMIC QUALIFICATIONS

Technical University of Lisbon

- Habilitation (Agregação) (unanimity) in Computer Graphics, Instituto Superior Técnico, November 22, 2002. Jury: José Luís Encarnação (Darmstadt Technical University), António Francisco Espinho Romão (Vice-Rector UTL), Fernando Nunes Ferreira (FEUP), João Duarte Cunha (FCUL), Amílcar Costa Sernadas (IST / UTL), João Bento (IST / UTL), João Lourenço Fernandes, José Manuel Tribolet, João Pavão Martins, José Alves Marques and Mário Rui Gomes (DEI / IST / UTL).

Rensselaer Polytechnic Institute, Troy, NY

- PhD in Computer Science, May 1995. Advisor: Ephraim Glinert
- Master of Science in Computer Science, December 1991. Advisor: Ephraim Glinert

Instituto Superior Técnico / Technical University of Lisbon

- BSEE, 1984, Major: Telecommunications.

ACADEMIC CAREER

- **Adjunct Professor, Victoria University Wellington, New Zealand, since Dec. 2022.**
- **Honorary Invited Professor, Catholic University of Rio de Janeiro, Brazil,** since 2021.
- **Visiting Professor**, Technical University of Vienna, Austria, Department of Informatics, October 2012 / January 2013.
- **Full Professor**, Department of Computer Science and Engineering (DEI), Instituto Superior Técnico of the Technical University of Lisbon (IST / UTL), since 22 October 2008.
- *Adjunct Professor*, University of Calgary, Alberta, Canada, Department of Computer Science, March 2006 – June 2018.
- **Associate Professor with Habilitation**, DEI / IST / UTL, October 2004 - September 2008.
- **Assistant Professor with Habilitation**, DEI / IST / UTL, November 2002 - September 2004.
- **Assistant Professor**, DEI / IST / UTL, since October 1998, definitive provision: October 2002.
- **Visiting Professor**, Technical University of Darmstadt, Germany, where he taught the course "The Vanishing Computer" during spring semester 1999.
- **Assistant Professor**, Department of Electrical and Computer Engineering (DEEC), IST / UTL, October 1997 - September 1998.
- **Teaching Assistant**, DEEC / IST / UTL, April - September 1997.
- **Professor**, Higher Institute of Languages and Administration (ISLA), Leiria Center, May 1996 - September 1997.

SCIENTIFIC ACTIVITY

The scientific activity has evolved since 1996 in a synergistic and coordinated manner with teaching and international cooperation activities. From an early emphasis in Computer Aided Design systems prior to the Doctorate, a second phase was devoted to Visual Languages, Pattern Recognition and Fuzzy Logic with application to Calligraphic Interfaces. After the PhD, the activity developed consisted on one hand on the expansion of the thesis that culminated in the approval of the *SmartSketches* project and, on the other hand, through the recognition of the Internet as an important vehicle of Information Dissemination, motivating the interest in Digital Publishing. a National Project (SAGRES) appears. More recently and with a strategic focus, the work has turned to Ubiquitous Multimedia and Computation based on supervising doctoral, master's and bachelor's degree work.

Research Areas

The research activity carried out since the completion of the doctorate falls into four major areas. In the areas of **Graphic Interfaces and Modeling**, he has supervised several PhD and Master theses. In the areas of Calligraphic and Multimodal Interfaces has developed considerable activity that led to two

projects, one national (Smart Sketches) and another international (*SmartSketches*). In the area of **eLearning and Digital Publishing,** he has been supervising master's, doctoral and international projects (CGEMS, HP / TFT) and other national projects (SAGRES) and publishing at international conferences. More recently it has sought to develop the area of **Accessibility and Ubiquitous Computing** through national projects (BloNo) and work supervised including a doctoral thesis by Daniel Gonçalves (completed in 2007) and one by Tiago Guerreiro, in addition to an international meeting that took place from 22 to 25 May 2001, with the support of the European Commission and the *National Science Foundation with proceedings published by ACM Press*. In the area of **Visualization and Virtual Environments**, he has been involved in several European projects (SATIN, IMPROVE, MAXIMUS), as well as the supervision of Master and Doctoral theses. This area was strengthened through collaboration with João Madeiras Pereira, especially after the merger of research groups in late 2007.

Research Groups

The research work was carried out at INESC until 2000 in the Interactive Environments in Visualization and Learning Group (*GAIVA*). In July 2000 the growing scientific activity justified the creation of an autonomous Intelligent Multi-Modal Interfaces (IMMI) group. Particular attention was paid to the recruitment and training of new researchers, with IMMI having a research team, which included in 2006, in addition to his own, a doctorate, five doctoral students, eight master's students and over twenty-five undergraduate students. perform final course work. After the merger with DigraSys group, the research team has expanded substantially into the VIMMI group in 2018 with seven PhD researchers, one *post-doc,* eight doctoral students and more than thirty master students on an annual basis. This has now become the Area of Graphics and Interaction at INESC-ID, with over 12 PhD research staff in late 2019.

International project coordination

2015 - 2016 A-MOP Molecular Visualization and Simulation, UT / Austin-Portugal (PI)

2001 - 2004 *SmartSketches* - 5th Framework Program (EC) ref. IST-2000-28169

This project included a ten entities consortium including two University (FEUP, ISEP), two Research (INESC-ID, Fraunhofer Gesellschaft) and six industrial (ItalDesign, FIAT, CENTIMFE, Barski Design, MIND, ICEM) three countries (Italy, Germany, Portugal) in a global financing 1, 35M € for a period of 30 months. The project aims to develop new interaction techniques based on Calligraphic Interfaces applied to product *design* and engineering. INESC-ID Lisboa participated in this project as *prime contractor*. Following a proposal submitted to the 5th Framework Program (5th call for submissions) on 31 October 2000, it was approved in April 2001 and the research agreement was signed in November 2001. The project was formally started. in January 2002.

2001 - 2003 Alpha - INETGAM (EC) ref. II-0072-A

Proposed by a consortium of seven universities (IST / UTL, Manchester, Darmstadt Technical, Polytechnic of Catalonia, National Autonomous of Mexico, Simón Bolívar (Venezuela) and Sao Paulo, Brazil. The project, led by DEI / IST aimed to develop pedagogical resources using information technologies for the distance learning of Computer Graphics and Multimedia Approved in April 2001 with a global funding of 187 K €.

Participation in international projects

2019 - 2022 Catalyst Grant (New Zealand) 120 K NZ$

2010 - 2014 GALA (NoE). Games and Learning

2010 - 2013 TARGET (IP 7th EC Framework Program)

2008 - 2011 MAXIMUS (STREP 7th EC Framework Program)

FhG / IGD-led consortium dedicated to research in mixed and augmented reality visualization systems. INESC-ID participates in the consortium through João Pereira, Bruno Araújo and Joaquim Jorge. Proposal submitted to the 1st *Call for proposals* of the FP7 EC. Global value of participation INESC_ID 150K €

2006 - 2009 SATIN (STREP 6th EC Framework Program)

Following an application submitted in April 2006, this project was approved in September 2006 and started in October 2006. This project led by the Polytechnic Institute of Milan has the participation of INESC-ID in a consortium that combines 5 SMEs and 4 research institutions within a 36-month time horizon. Overall value of the INESC-ID participation 120 K €

2004 –EUROTOOLING21 (FP6 / EC Integrated Project 6)

Following application submitted in April and October, the project was approved in November 2003, having been celebrated d the contract in October 2004. This project led by CENTIMFE, with the participation of IST (DEI and DEM) and the University do Minho in a consortium that combines 24 SMEs and research institutions over a 48-month time horizon. Value of the IST participation of 280 K € of which 140 attributed to the team led by Manuel João Fonseca.

2004 - 2007 IMPROVE (Project 6 FP / EC) ref. IST-2003-004785.

Subtitle: Improving Display and Rendering Technology for Virtual Environments - FhG / IGD-led consortium dedicated to research in virtual environments and mixed and augmented reality visualization systems. INESC-ID participates in the consortium through two teams led by João Pereira and Joaquim Jorge. Proposal submitted to the 2nd EC Call for proposals. Contract signed in September 2004. Overall value of INESC-ID's participation of around 89K €.

1987 - 1988 CTS-2 / CGI - (EC)

Coordinator of INESC project team until departure to the USA. The project was intended to develop ISO CGI graphics package compliance testing.

National project coordination

2023-2026 Xavier - Explainable AI and Virtual Reality for Improving xRay Diagnostics. Global funding 249 k€ (PI)

2018-2022 GameCourseNext Improving College Learning with Gamification Global funding of **237 K €.**

2018-2021 ARCADE Augmenting Rehabilitation Centers with Context-Aware Digital Environments Global funding of 239 K €.

2018-2019 STREACKER Skeletal TRacking Enhanced with Anatomically Correct Kinematics for Exergames and Rehabilitation Global funding of 93,5 K €.

2015 - 2019 IT-MEDEX – Information Technologies for Medical Applications. Global funding **150K€** ongoing project focusing on application of Virtual and Augmented Reality in medical contexts, including minimally invasive surgery training and planning.

2011-2014 CEDAR – PTDC/EIA-EIA/116070/2009 CEDAR - Collaborative Engineering Design And Review - proposes to advance the state of the art in this field. The main aim of our research approach was to combine the power of novel interaction paradigms with results from ethnographic observations of real-world engineers and evaluations with different versions of the system. Partners include INESC-ID, Universidade da Madeira, PUC-Rio (BR) and Petrobras. The project combined tablets, PowerWalls, Tables with inexpensive depth cameras to provide a distributed collaborative experience. Excellent results, including Scientific output (3 Journal papers, 20 international conference papers, 1 international journal special issue and 2 dedicated workshops) advanced degrees (3PhD completed and 3MSc Theses completed) not to mention the fruitful international collaboration between Univ. Lisboa, Madeira and PUC-Rio. Global funding of **163 K €.**

2011 - 2013 MIVIS: PTDC/EIA-EIA/104031/2008 Modeling and Interactive Visualization of Implicit Surfaces - Funded by the Portuguese Foundation for Science and Technology, Global funding of 45 K €. Excellent results due to international collaboration: 4 international conferences organized (SBIM 2011, INTERACT 2011, VRCAI 2011, ACM IUI 2012), 3 International Journal Publications, 10 conference papers, 3 PhD and 3 MSc theses.

2007-2008 HP *Technology for Teaching* **- MobyMedia Project** - this activity stemmed from HP Computer funding of about USD 75000 (**50K€** at the time), materialized in USD 15000 funding and USD 60000 equipment for use by laptops (*Tablet PCs*) in the classroom. This equipment and its funding are being used in the teaching activity (eLearning) of two courses at IST in the second half of 2007/2008.

2000-2004 BIRD (FCT - POSC / EIA / 59022/2004) Title: Biographical Information for Interactive Document Retrieval. Approved under the Knowledge Society Operational Program (POSC) of the Foundation for Science and Technology (FCT). Beginning in April 2005. Proposed by the IMESC group of INESC-ID. Global funding of **95 K €.**

2005- 2009 DecorAR (FCT - POSC / EIA / 59938/2004) Augmented Decoration: Combining Augmented Reality and NPR. Approved under the Knowledge Society Operational Program (POSC) of the Foundation for Science and Technology (FCT). Beginning in May 2005. Consortium includes INESC-ID and ADETTI. Global financing **90 K €.**

2000- 2004 SmartSketches (FCT - POSI / SRI / 34672/2000) Approved under the Science and Technology Information Operational Program (POCTI) of the Foundation for Science and Technology (FCT). Beginning June 2000. Proposed by consortium comprising INESC and FEUP. Its purpose was the development of Calligraphic Interfaces for application to Mold design and Architecture. Overall financing of 75K €.

1996-2000 SAGRES - Digital Publishing (FCT / PRAXIS XXI /2/2.1/TIT/1676/95) Beginning in May 1997. Concluded in May 2000. Consortium established by the Faculty of Sciences - Department of Informatics and INESC. Global funding of **50 K €.** Resulted in three master's theses, and published in international scientific conferences, in addition to the development of several prototypes.

Participation in national projects

2013 - 2015 TECTON3D - PTDC/EEI-SII/3154/2012 https://tecton3d.wordpress.com Current architectural visualization software based on virtual environments (VEs) supports mainly 3D animation and automatic navigation. Despite the growing popularity of VEs, they still need to go a longways to replace or even augment desktop CAD systems in the modeling of 3D scenes. The project aimed to create a new design framework combining stereoscopic viewing in VR with modeling, simulation and reactive content. It featured a collaboration between professional Architects, Universities and Computer Scientists. Global Funding **250K€,** of which **100K** where ascribed to INESC-ID.

2007— 2011 Ciência Viva Lousal Center Project - This project aims at the constitution of a Ciência Viva network center in the former mining of Lousal. The project, estimated at about € 1.5M, includes a large-scale viewing surface with four large screens commanded by twelve high definition and bright Barco projectors for recreational and research purposes. Joaquim Jorge participated in the drafting of the proposal, a consortium led by the Sapec Foundation that included teams from ADETTI/ISCTE, Faculty of Sciences of the University of Lisbon and Architecture Workshop.

2004-2006 InStory - (FCT POSI / SRI / 45786/2002)
Approved under the FCT Information Society Operational Program (POSI). Begun in February 2004. Proposed by consortium comprising UNL and INESC-ID. Multimodal Interfaces for Mobile and Ubiquitous Computing. Overall funding of € 86952 of which € 21K for INESC-ID.

2003-2004 Lisaction - CSF III development project - collaborated with Lourenço Fernandes and Guilherme Silva Arroz in the preparation of project proposal. The overall amount of funding obtained was **450 K €** for R&D in the context of *TagusPark*.

2000-2001 Lusa S2I (Integrated Information System) - **IC / PME (**Innovation Agency **- AdI)**
IST, Novabase and Lusa participated in this consortium in order to develop an information system for the electronic commerce of news from the Archive of Lusa. The project lasted 18 months, starting in January 2000, framing a Master's thesis and two research grants from IST. IST participation is documented in the technical reports.

1985-1987 CORTE System - JNICT. Computer-aided design for the clothing industry - INESC technical team member and deputy coordinator. This project involved two academic institutions (INESC and GEIN - FEUP Group of Engineering and Industrial Management) in collaboration with a consortium of six textile and apparel companies and *Sorefame* - Maia. This project, besides allowing the formation of human resources (two end-of-course works and embryo of the master's thesis by João Carlos Martins Bernardo), is also in the indirect genesis of a major activity of national *software* development for traditional industries (clothing industry). and footwear). Members of this project team formed two companies (MIND and *Priberam*) that today carry out significant activity, highlighting the ShoeCAD system developed and marketed by MIND whose evolution goes back to the team that developed the interactive editing and automatic placement components of this project. The project has generated considerable publishing activity at national [NC63, NC62], international [NC61, IC159] and internal [R7] level.

Since the completion of his PhD, he formally began supervising various advanced training works, complementing a co-orientation activity of academic work dating back to 1985.

PhD Theses		Masters Theses		Capstone Projects	Internship Supervision	
Completed	Ongoing	Completed	In progress	Supervised	Completed	Ongoing
17	5	76	6	50	11	-

PhD theses completed

1. Beatriz Peres, Univ. of Madeira, Rehabilitation Co-advisor with Pedro Campos, 2019-2024
2. António Maurício Lança Tavares de Sousa, IST/UL Remote Proxemics, Sep 2015-Mar 2020 *summa cum laude*.
3. Daniel Pires de Sá Medeiros, High-Fidelity Locomotion in VR (co-advisor: Alberto Raposo, PUC-Rio), IST/UL, February 2014-April 17, 2019.
4. Daniel Tavares Mendes, 3D Interaction, 2013-2018 Defense July 24, 2018, *summa cum laude*.
5. Vasco Alexandre da Silva Costa, Grid-Based Acceleration Techniques for Real-Time Ray Tracing, IST/UL, co-Advisor w / João Pereira, 23 March 2015
6. Gustavo Santos, IST/UL, Interoperable Frameworks for and e-Learning, Sep 2011 - Oct 2014.
7. Bruno Rodrigues de Araújo, Direct Interactive 3D Modeling in a Semi-Immersive Environment, IST/UTL, February 2008 - 9 July 2013.
8. Hugo Miguel Aleixo Nicolau, Disabled R All, IST / UTL November 2008 - 25 February 2013.
9. Luís Bruno, Walking in Place, co-advisor w/ João Pereira, DEI/IST/ UTL, 8 Feb 2013.
10. Tiago João Vieira Guerreiro, User-Sensitive Mobile Interfaces: Accounting for Individual Differences Among the Blind, IST / UTL, Sep 2008 - 7 Sep 2012 co-advisor w / Daniel Gonçalves.
11. Ricardo Jota Costa, Understanding the Effect of User Position in Pointing Techniques for Large Scale Displays, IST / UTL, 12 September 2011.
12. Alfredo Ferreira Jr., with Manuel João Fonseca (Advisor), Sketch and Image Based Retrieval of Technical Drawings, July 2009
13. Maria Alexandra Rentróia Bonito, Usability and Predictive Assessment in e-Learning, IST/UTL, September 2002 to July 31, 2008.
14. Lisha Zhang, Research on Sketchy Symbol Recognition Methods, Department of Computer Science and Technology, Nanjing University, Nanjing, China, December 2007, co-supervision with Sun Zhengxing.
15. Daniel Jorge Viegas Gonçalves, Narrative Interfaces for Personal Document Retrieval, IST/UTL, September 2001 to 3 of July of 2007.
16. Manuel João Caneira Monteiro da Fonseca, *Sketch-Based Retrieval in Large Sets of Drawings,* IST/UTL (September 1999 to July 19, 2004).
17. João Paulo Pereira, Calligraphic Interfaces for Modeling, FEUP, co-advisor with Nunes Ferreira (September 1999 to April 30, 2004).

Doctoral theses in progress

1. Niranjana, UTSydney, Responsible AI, Co-supervisor with Catarina Moreira, 2025-
2. Tenente do Exercito Português (MSc com a. esteves) proposto à FCT
3. José Neves, IST/UL, Medical Data Mining and Machine Learning for VR-Based Diagnostics, 2023-
4. Kamal Hussein (IST/UL), VR and AI for CXR Diagnostics, Jan 2024-
5. Mona Zavichi Tork, VR for Medical Applications, Feb 2024-
6. Saad Khan, VUW, Wellington New Zealand, Co-Supervisor with Craig Anslow, 2024-

Master theses completed.

1. Afonso Miguel Martins Andrade Dias, SuperFacial: Enhancing Facial Expressions Using Avatar Distortions to Improve Collaboration in Virtual Environments, IST/UL, 5, Nov 2024
2. António Maria Cruz Azevedo Bastos Salgueiro, LARACROFT - Laparoscopy with augmented reality adaptations for a collaborative framework, IST/UL, 22, Oct 2024

3. João Pedro Fernandes Torres, Artificial Intelligence for Literature Reviews, IST/UL, June 2024
4. André Gonçalo Silvestre dos Santos, Advanced UIs for XR, IST/UL, June 2024
5. Diogo Barata, (MSc in CS), Eyegaze Analysis for improving CXR Diagnostics, IST/UL, 2023
6. Vasco Piussa, (MSc in CS), Virtual Reality in the Reading Room + Eye Tracking, IST/UL, 2023
7. João Limeiro, A greener future with blockchain: Incentivize and Certificate net-zero cities, IST/UL, 2023
8. Miguel de Sousa Almeida Infante Mota, BlockChain and Green Certificates IST/UL 2023
9. Gonçalo Almeida, (MSc in CS), Generating Explainable Diagnostics from ML for CXR, IST/UL, 2023
10. João Serras, VR and Eye-tracking for Virtual Colonography, IST/UL 2023
11. Victor Lukoki, Analysing the use of decentralized finance as a tool for SMEs financial inclusion compared to traditional financing methods: A systematic literature review, IST/UL Jun 28, 2023
12. João Simões, SURI: Stretching User References for Interaction - Multi-user collaboration with shared perspective, IST/UL 2023
13. Pedro Fernandes Lopes Belchior Simões, VR for Anatomy teaching, MEIC IST/UL, 2023
14. Alice Horta Dourado, GameCourseNext (co-advisor), IST/UL Oct 2022
15. Margarida Lima, Estimating Body Shape from Measurements, IST/UL, Oct 2022
16. André Luís (MSC in DataScience), Eyetracking and XAI for Chest Xray Diagnostics, IST/UL 2022
17. Diogo Alvito (MSC in DataScience), Multimodal Analysis for CXR, IST/UL 2022
18. Tiago Gonçalves, Predicting Motion Sickness in VR Games, IST/UL, Oct 2022
19. João Galveias, Augmentative Communication in VEs, IST/UL, Oct 2022
20. Catarina Fidalgo, MAer, Collaboration in VEs Oct. 2020
21. José Miguel Gomes, METI, Multimodal Interfaces for Laparoscopy, Nov 2019
22. Ricardo Santos e Silva, Dynamic Occlusion Handling for Real-Time AR Applications, IST/DEI, MEIC 14-11-2018
23. Tiago Jerónimo Silva, ImplantAR - Augmented Reality for Surgical Planning of Dental Implants, IST /DEI, 14-06-2018, co-advisor with Daniel Lopes
24. André Filipe Pinto Domingues (co-advisor w / Daniel Lopes), Kinect-based biofeedback interfaces for upper limb rehabilitation, MEIC, IST 30-10-2017
25. Filipe Baptista Marques (69636), DEI / IST, Measurement of imperceptible breathing movements from Kinect Skeleton Data, 16-11-2017, Co-advisor w / Carlos Sousa, Daniel Lopes and Alexandre Bernardino)
26. Pedro Flores Brazil Gomes Borges (co-advisor w / Daniel Lopes), CAVE COLON - Cave-like Virtual Reality Environments for CT Colonography, MBE / IST, 22-11-2017
27. Francisco Venda, Browsing within Virtual Environments Immersive in Obstacles and Limited Size Physical Spaces, MEIC 26-06-2017
28. André Maurício Baltazar (co-advisor w Daniel Gonçalves), SmartBoards, MEIC IST, Nov-2016
29. João Tiago Pião Martins, Preoperative planning software for corrective osteotomy in cubitus varus and cubitus valgus, MEBiom, IST Nov. 2016
30. Ricardo Jorge da Silva Pinto Ferreira (Co-Advisor w / Alfredo Ferreira), Interaction Techniques for CSG Modeling in VR, MEIC-T, IST, November 2016
31. André Mendes Duarte, New Space Interaction Techniques, MEEC, IST, November 2016, 18v
32. Vasco Monteiro Salvador Pires (co-advisor c Daniel Lopes), Interactive Tablets for Collaborative 3D Image Exploration, MEIC IST Nov 2016
33. Joao Alberto Freire da Rosa Baptista de Almeida, Live Classroom, MEIC IST November 2016.
34. Arthur Alves Reis Leite Gonçalves, Efficient Contact Detection for Game Engines and Robotics: The approach with non-smooth convex polygonal objects, (co/advisor with A Bernardino and Daniel S Lopes) MEEC 2015
35. Pedro Duarte Parreira, Voxel Data Explorer: Interactive Exploration of 3D Images, MEBiom 2015,
36. Ana Rita Monteiro Mendes, Transfer Function Design for Three-Dimensional Medical Images Using Sketches, MEBiom, IST 2015,
37. João Félix Vieira, SleeveAr: Augmented Reality for Rehabilitation Using Realtime Feedback, (co-advisor: Artur Arsénio), MEIC, November 16, 2015

38. Pedro Miguel Gato Soldado, Toolkit For Gesture Classification Through Acoustic Sensing, MEIC, IST November 2015
39. João Miguel Pataca dos Santos Delgado Oliveira, VI-TRUST: "Visualization and Interaction on project Transitions to the Urban Water Services of Tomorrow", MEIC, IST Nov 2014
40. Mauricio Tavares de Sousa, Remote Proxemics for Collaborative Virtual Environments, MEIC, IST November 2014, (c / o Alfredo Ferreira Jr).
41. Daniel Filipe Domingos Simão, GeoCake: Issued Modeling Land and Basements with Interaction Based on Gesture s, MEIC, IST, November 2014 (c / o Daniel Simões Lopes).
42. Vasco Rodrigues, Manipulations of 3D Models in Space in (Semi-) Immersive Virtual Environments, (c/s Alfredo Ferreira), MEIC Oct 2014,
43. Sérgio Azevedo, 3-D Sound Enhanced Presence in Virtual Environments, IST / UTL, June 2013 1
44. Maria Teresa Gama, Rehab and Games, IST, Feb 2012.
45. Miguel Alexandre dos Santos Moreira da Silva, TouchBoard: Collaborative work on Multitouch surfaces, IST / UTL, 08-06-2011
46. Luís Miguel Saraiva Lopes, Virtual Modelist, IST / UTL, 07-06-2011
47. Luís Quelhas da Silva Marques, Kinetic Architecture, Co-Advisor, DECivil / IST / UTL, October 2010
48. Jorge Sepúlveda, Usability on Mobile Screen Readers: A Critical View, MEIC, IST / UTL, 10-11-2010,
49. Rita Tavares Carreiro Pereira, Computer Assisted Rehabilitation, IST / UTL, 03-11-2010
50. Andreia Pinheiro, Multimodal Sleeve, DEI / IST, 2008-2009.
51. João Nuno Domingos Pacheco, Tracking People and Activities in Video Recordings of Classroom Presentations, IST / UTL, October 10, 2009, 17 points.
52. Filipe Dias, Sketch-Based Input of 3D Shapes, IST / UTL, 12 December 2008. (Pre-Bologna Regime)
53. David Grace, EasyControl: Ambient Control for Tetraplegics, DEI / IST, October 20, 2008, 16 points.
54. Tiago Trindade, Cameraphone, DEI / IST, November 3, 2008, 16 values.
55. Hugo Sousa, Interaction with large-scale displays in public spaces, DEI / IST.
56. Ruben Filipe Miranda Ferreira, eCassNote ta ker, DEI / IST, Nov 12, 2008, (c/s Daniel Gonçalves).
57. José Pedro Dias, UrbanSketch - Expedited Introduction of Urban Landscapes via Multimodal Interfaces, DEI / IST, November 12, 2008.
58. Manuel Nascimento, Sketch-On- Video: Video Annotation with Tablet PCs, DEI / IST, 11/11/08,
59. Pedro Santana, Mobile Text Input, IST November 11, 2008.
60. Paulo Lagoá, BloNo: Mobile Accessibility for Users with Special Needs, IST November 11, 2008
61. Nuno Nunes, MibBlob - Medical Data Visualization and Segmentation, IST Nov 10, 2008.
62. Hugo Nicolau, Blobby: Mobile Guide for the Blind, DEI / IST, 20 Oct 2008.
63. Filipe Mendes Marques Dias, Sketch-Based Modeling, 2008
64. Tiago João Vieira Guerreiro, Myographic Mobile Accessibility for Tetraplegics, IST/UTL, July 2008.
65. Bruno Rodrigues de Araújo, Curvature-Dependent Polygonization of Implicit Surfaces, IST, February 2008.
66. Raquel Duarte, TiViVa - Virtually Interactive Television, IST 200 6-2007.
67. Ricardo Gambôa, Body Mnemonics, IST October 26, 2007.
68. Vera Rivotti, Non-Realistic Lighting Techniques Applied to Architectural Models, IST, July 2007.
69. João Proença, Stylized Representation of Implicit Surfaces, IST / DEI, July 2007.
70. Frederico Figueiredo, Virtual Communities and Digital Publishing, IST, June 28, 2007.
71. Alfredo Ferreira Jr., Sketch & Image Based Retrieval of Technical Drawings, IST/UTL, 20 July 2005.
72. Pedro Santos, Marker-Based Single Camera Tracking by Iterative Pose Estimation, IST, 5 July 2005.
73. Paula Alexandra Silva, User-Centered Analysis, Design and Evaluation for the World-Wide Web, DEEC / FEUP, July 17, 2002.
74. Maria Albuquerque, Interactive Document Drawing Using Sketches, DI-FCUL, co-advisor w/ João Cunha, FCUL, 9 March 2001.
75. Sebastião Barata, Calligraphic Interfaces for Architectural Design, IST / UTL, 10 February 1998.
76. Carla Gonçalves, Interactive Composition of Multimedia Documents, IST / UTL, February 12, 1997.

Masters theses in progress

1. Sebastião Limbert da Piedade, LLAMA-VROOM Large Language Model Analysis of Radiologist Reports and Eye Tracking Data. 2024-
2. Afonso Águas, VR Interface for Colon Diagnoses, 2024-
3. António Salgueiro (MSc in CS), AR for Laparoscopy, IST/UL 2023-
4. David Correia (METI), Eye-Tracking and Depth focus 2024-
5. Afonso Sousa, Interaction with Emotions and Facial Expressions, IST/UL 2023-
6. Ricardo Subtil Sousa, LLMs for Teaching Digital Anatomy, IST/UL 2023-

Capstone Projects (ended in 2006)

1. Pedro Ventura, Publix - Interactive Advertising, IST, October 10, 2007.
2. Miguel Figueiredo and Alexandra Ribeiro, Markerless Virtual Taping, DEI / IST, 2005-2006.
3. Bruno Chu and José Rosado, Virtual Classes, DEI / IST, 2005-2006.
4. André Martins, ePresence, DEI / IST, 2005-2006.
5. Pedro Tiago Cruz Coelho, Virtual Potter, DEI / IST 2005-2007.
6. Paulo Lagoá and Pedro Santana, Notepad for the Visually Impaired, DEI / IST, 2005-2006.
7. Bruno Gonçalves and Rui Figueira, Interface for Content Manager, DEI / IST, 2005-2006.
8. Renata Marin, Virtually Real Documents (co-adv w/ Daniel Gonçalves, DEI / IST, 2005-2006.
9. Vera Rivotti, INFORMA - Non-Realistic Lighting Techniques Applied to Architectural Models, DEI / IST, 2005-2006.
10. Nuno Ferreira, eLearning in Organizations, DEI / IST 2005-2006.
11. João Proença, RESINA - Stylized Representation of Implicit Surfaces, IST / DEI 2005-2006.
12. José Calado and Paulo Ribeiro, SmartPhones Text Input and Navigation Interface for People with Visual Impairment, DEI / IST, 2004-2005.
    13. Filipe Garcia Pereira, JavaSketchit2, DEI / IST, 2004-2005.
14. Carlos Rodrigues and Luís Rodrigues, Personal Biographer, and / c Daniel Gonçalves, DEI / IST 2004-2005.
15. Storytelling for way finding, Paulo Tavares and Rui Mendes, DEI / IST, 2003-2004.
16. Nuno Gonçalves and Rodrigo Machado, Content Manager for Digital Public Actions, DEI / IST, 2004-05.
17. Carlos Xavier and Sérgio Filipe Dias, P IMBECEL (Context and Location Based Multimedia Research), and / c Daniel Gonçalves, DEI / IST 2004-2005.
18. António Simão and Ricardo Ramião, ArchFinder - research and recovery of architectural plans, and / c Manuel João da Fonseca, DEI / IST 2004-2005.
19. Virtual Taping, Rodrigo Filipe, DEI / IST and Darmstadt Technical University 2003-2004.
20. Decosketch - Calligraphic Interfaces for Interior Decoration, Tiago Brito and Tiago Sousa, DEI / IST, 2002-2004.
21. Teddy ++: Calligraphic Interfaces for Modeling, José Alberto Seabra de Almeida and Carolina Freitas Antão, DEI / IST, 2003-2004.
22. Location of Indoor People, Pedro Sousa and Vera Saraiva, DEI / IST, 2003-2004.
23. Virtual Curricula, Pedro Ponte and Marcelo Peixoto, DEI / IST / UTL, 2003-2004.
24. Recognition of Mathematical Expressions, Vasco Rolão Gervásio, 2002-2003.
25. Gides ++ - Calligraphic Interfaces for Modeling, Nelson Faria and Tiago Cardoso, 2002-2003.
26. BajaVista (e / c Manuel João da Fonseca) - retrieving drawings by content, Bruno Barroso and Pedro Ribeiro 2002-2003. Paper presented at the conference internationa ions.
27. 3GM - Text Introduction for the visually impaired, André Campos and Pedro Branco, 2002-2003. Distinguished work with the awards Eng. Jaime Filipe (2003) and Fujitsu-Siemens (2004)
28. Webclipping II, (e / c Daniel Gonçalves), Ricardo Carreira and Jaime Crato, 2002-2003, paper presented at an international conference.
29. Caliedit (e/c Daniel Gonçalves and Lourenço Fernandes), Pedro Coelho and Gonçalo Faria 2002-2003. Paper presented at the National Conference.

30. Blobmaker - Calligraphic Interfaces for Freehand Modeling, Bruno Araújo, 2002-2003, paper presented at an international conference and a national conference.
31. Electronic Commerce and Scholastic Digital Publishing, IST / UTL, Frederico Figueiredo and Sónia Assunção, 2001-2002. Part of this work was presented at an International Workshop.
32. Mobile Guide for the Visually Impaired, IST / UTL, 2001-2002.
33. Webclipping, (e/c. With Daniel J. Gonçalves) Clipping Service for Mobile Computers, IST / UTL, 2000-2001, paper presented at an international meeting.
34. JavaSketchit, (e/c. With Manuel João Fonseca) Calligraphic Editors for Interface Design, IST / UTL, 2000-2001, paper presented at international conferences.
35. Universal Remote, IST / UTL, 2000-2001.
36. Community-oriented Digital Publishing, IST / UTL, 1999-2000.
37. Calligraphic Interfaces for Gestural Surface Modeling, (e / c. With Manuel João Fonseca) Vladimiro Colaço IST / UTL, 1999-2000, paper presented at an international conference.
38. Interactive Modeling of Game Scenes, (e / c. With Manuel João Fonseca) IST / UTL 1999-2000.
39. Talking Face Synthesis, IST / UTL, (e / c. With Luís C. Oliveira) October 2000.
40. Chinese Character Recognition, Susana Novais Santos, IST / UTL, 1997-98.
41. EDDY: Multimodal Editors for 3D Design, 1997-98. Paper presented in con fe national ence.
42. Multimodal editor for 2D drawing, IST / UTL 1996-97.
43. Publication of Personalized Journals via the Internet, (e / c. Mário R. Gomes) IST / UTL, 1996-97.
44. Calligraphic Editors for Schematic Drawing, (e / c. Mário R. Gomes) IST / UTL 1995-1996.
45. Automatic Formatting of Multimedia Documents, (e / c. Mário R. Gomes) IST / UTL, 1995-1996.
46. GKS Device Driver for Tektronix Terminals, (e / c. Mário R. Gomes) 1986-87.
47. Parametric Interface for Numerical Command Machines (e / c. Mário R. Gomes) 1986-87.
48. Carlos Amaral, Automatic Component Placement in PCB, (e / c. Mário R. Gomes) 1985-86.
49. PCI Component Placement and Tracking (e / c. Mário R. Gomes) 1985-86.
50. Publisher for PCB Design, (e / c. Mário R. Gomes) 1984-85.

Supervision of internships of invited scientists

1. Sabbatical License by Ezequiel Zorzal, Assoc. Prof at UNESP (SP; Brazil), 2019-2020
2. Post-Doctorate by Daniel Simões Lopes, PhD in Bio-Mechanical Engineering at IST 2014 -2018.
3. Sabbatical License from Faramarz Samavati, Associate Prof. with the University of Calgary, between the months of April to June 2008 under a sabbatical grant by FCT. The internship focused on Computer Graphics and modeling using multiresolution methods, in which Prof Samavati is a recognized international expert.
4. Postdoctoral Internship by Pauline Jepp, PhD in Computer Graphics at the University of Calgary, from April 2008 to Feb 2010.
5. May 2006 -May 2011 Isabel Valverde co-supervised postdoctoral internship at the Intelligent Multimodal Interfaces Group on multimodal interfaces and performing arts.
6. Internship by Joan Mas Romeu, PhD Student at the Autonomous University of Barcelona, from November 2006 to January 2007. Study and development of a calligraphic interface analyzer. The internship gave rise to a conference publication (GREC'2007), a LNCS book chapter, and article in International Journal.
7. From September 15 to December 15, 2005, internship supervision of Luciano Pereira Soares, under a postdoctoral fellowship awarded by FCT. The work focused on calibration and control of multi-projector display systems, leading to a conference publication (SVR'07) and two tutorials (Eurographics'08 and IEEE VR'08) as well as a revised article (IJVR'08).
8. From 1 March to 31 May 2003, supervision of Pavel Žikovský sabbatical, PhD student at the University of Prague Technical University under the ERASMUS program. The joint work dealt with multimodal interfaces, XML and use of the XSL language and its transformations to address the problem of adapting the dynamics of modalities and dialogs according to the context.
9. From December 15, 2001 to April 30, 2002, internship by Ferran Naya Sanchis, Industrial Engineer of the Polytechnic University of Valencia (UPV), who is preparing a PhD in Calligraphic Interfaces,

as part of a scholarship. from UPV. This internship resulted in two technical communications to international conferences.

10. Between September 1995 and March 1996 sabbatical collaboration with Dragos-Alexandru Vaida, Prof. Professor at the University of Bucharest, Romania on the application of Heterogeneous Algebras and Diffuse Logic to the Specification of Visual Languages under a JNICT Guest Scientist scholarship. This work resulted in several articles and technical contributions published in international conferences.

11. In 1988 collaborated in the orientation of the internship at INESC of Diplom-informatiker (TH Darmstadt) Alfons Spigelhauer under the project "Theseus-X".

ORGANIZATION OF SCIENTIFIC EVENTS

The work carried out in this area has been particularly fruitful since 1997 and has, on the one hand, created a remarkable added value and a solid basis for cooperation with internationally relevant groups. The organization or participation of international conferences within the Eurographics Association takes place. Of note was the organization of the EUROGRAPHICS'98 conference which was considered a success from an academic, scientific and financial point of view, contributing in a large way to the development of activities in the national Computer Graphics scientific community. These activities include:

1. **Co-Chair**, IEEE AIxVR 2025 Lisboa, Portugal, Jan 2025
2. **Co-Chair**, Frontiers Workshop on VR and AI, 50th ACM/SIGGRAPH, Los Angeles, Aug 2023
3. **Conference Co-Chair,** International Conference on CAD/CG, Shanghai, PRC, August 2023
4. **Co-Chair IEEE VR 2022, Christchurch, New Zealand, March 2022 (Virtual)**
5. **Conference Co-Chair IEEE VR 2021**, Lisbon, Portugal March 2021 (Virtual)
6. **Co-Chair, ACM** ISS 2020, Lisbon, Portugal, 6 Nov 2020 (Virtual)
7. **Journal Papers Committee Co-Chair**, IEEE VR 2020, Atlanta, GA, March 2020
8. **Co-Program Chair**, IEEE AIVR 2019, San Diego, CA, USA, Dec 9-11, 2019
9. **Co-Chair**, Workshop on VR and AI, SIGGRAPH Asia Brisbane, Australia, Nov 2019
10. Symposium Co-Chair, ACM VRCAI 2019, Brisbane, Australia, 14-16 Nov 2019
11. **Conference Co-Chair**, IEEE/Eurographics Eurovis 2019 Porto, Portugal June 2019
12. **Co-chair**, Expressive 2019, Genoa, Italy, May 2019
13. Member, IEEE VR 2019 Best Dissertation Award Committee
14. **Co-Program Chair**, SIBGRAPI 2018, 31st Conference on Graphics, Patterns and Images, Foz do Iguaçu, Brazil 2018
15. **Co-Chair Shape Modeling International 2018, 6-8 June Lisbon Portugal**
16. **Co-Chair** International Conference on CAD and Graphics, Changshan China August 2017.
17. **Honorary Conference Chair,** Edutainment 2017, 26-28 June Bournemouth 2017
18. Full Papers Advisory Board, **Eurographics 2017,** 24-28 April, Lyon France 2017
19. **Co-Program Chair,** Eurographics 2016 (Lisbon, Portugal)
20. Conference Co-Chair Edutainment 2016, Hangzhou, 14-16 April 2016
21. **Chair,** 31st Spring Conference on Computer Graphics (SCCG) Smolenice, Slovakia 21-24 Apr 2015
22. **Co-Chair** International Conference on CAD and Graphics, Xi'an China 26-28 August 2015.
23. Co-Chair of the Education Subcommittee, Eurographics 2014, Strasbourg, France.
24. **Co-Chair** Joint Conf SMI & SIAM Solid and Physical Modeling, HKUST, Hong Kong, Oct 2014
25. **Co- Chair Workshops and Tutorials**, ACM ITS, Interactive Tabletops and Surfaces 2013, St Andrews Scotland, 6-9 Oct 2013
26. **Co-Chair International Program Committee,** International Conference on CAD and Graphics, Hong Kong China Nov. 2013
27. **Best paper Award Committee Chair, Eurographics 2013** Girona, May 2013.
28. **IEEE VR 2012 Co-Chair Tutorials**
29. **Co-Chair of** the **ACM IUI 2012** Program **Scientific Committee,** International Conference on Intelligent User Interfaces, Lisbon, Portugal, February 2012.
30. **Co-Chair,** ACM VRCAI 2011, Hong Kong, Dec 2011
31. **Co-Chair IFIP INTERACT** 2011, Lisbon, Portugal September 2011 (500 participants)

32. **Co-Chair** Education Subcommittee, Eurographics 2011, LLandudno, United Kingdom, April 2011.

33. *Session Chair, Eurographics 2009,* Munich, Germany

34. **Co-Chair,** *European Conference on Cognitive Ergonomics,* Madeira, Funchal, September 2008.

35. **Chair,** *Eurographics Symposium on Computational Æstethics 2008,* Lisbon, June 2008.

36. Member ACCESSIBILITY Award Committee, INTERACT'07, Rio de Janeiro, September 2007.

37. President Session (*Session Chair*), *Eurographics 2007,* Prague, Czech Republic.

38. **Scientific committee Co-chair,** HCI Educators Conference 2007 Creativity3: Education and Design for Mundane Things 29-30 March 2007, Aveiro.

39. **Chair, SBM'06,** *Eurographics Workshop on Sketch-Based Interfaces and Modeling,* Vienna 1-2 September 2006.

40. **Steering Committee** Member *Eurographics Symposium on Computational Æstethics* 2006-11.

41. **Conference Chair,** *Eurographics Symposium on Virtual Environments,* (*in cooperation with ACM / SIGGRAPH*), Lisbon, 8-10 May 2006. The conference had 50 participants registered.

42. **Conference Chair,** EUROVIS '06 - Joint Eurographics / IEEE TCVG Symposium on Visualization, Lisbon, 8-10 May 2006. <www.eurovis.org> 100 participants from 20 countries.

43. **Program Committee Chair, GRAPP 2006,** International Conference on Computer Graphics Theory and Applications, <www.grapp.org> *Setúbal*, February 2006.

44. **President of the Organization, SBM'05,** *Eurographics Workshop on Sketch-Based Interfaces and Modeling,* Dublin August 29-30, 2005. 35 participants from twelve countries.

45. *Session Chair, Eurographics'2005, Dublin, Ireland.*

46. Co-Chair Special Interest Groups (SIGS) of INTERACT '2005, Rome, Italy September 2005.

47. Member, *Best Paper Award Committee,* ACM Intelligent User Interfaces (IUI'05) San Diego, USA, January 2005.

48. **Co-chair Program Committee,** *EGMM2004* (*7 th Eurographics Workshop on Multimedia),* Nanjing, China, October 2004.

49. **Chair,** *Eurographics Workshop on Sketch-Based Interfaces and Modeling,* Grenoble 31 August and 1 September 2004.

50. Member of the International Committee SIGGRAPH'2004, Los Angeles, August 2004, USA.

51. Co-organizer, Interaction 2004, July 2004, responsible for editing the minutes.

52. local organization of the **ACM** Intelligent User Interfaces Conference (IUI'04) Funchal, Madeira, January 2004.

53. Co-organizer, 12th Portuguese Meeting Computer Graphics, Porto, October 2003, responsible for editing the proceedings.

54. **IPC Chair,** *10 th Workshop on the Design, Specification and Verification of Interactive Systems,* DSV-IS'2003, Funchal, Portugal June 2003.

55. Member of the International Committee SIGGRAPH'2003, San Diego, USA.

56. *Session Chair,* Eurographics'03, Granada, Spain.

57. **Founder** and co-organizer of SIACG (*1st Ibero-American Symposium on Computer Graphics),* July 2002 at the University of Minho (Guimarães), in a joint organization of the Spanish and Portuguese local chapters of Eurographics with the collaboration of Brazilian Society of Computing. The event was supported by ACM / SIGGRAPH, Eurographics and IEEE (Brazilian section).

58. *Co-organizer and chairman of the* EGMM2001 *Program* Committee (*6th Eurographics Workshop on Multimedia* Manchester, UK, 8-9 September 2001). The *workshop* brought together 30 international experts including Michael Bove and Glorianna Davenport from MIT MediaLab. Springer-Wien publisher.

59. Co-organizer, 10th Portuguese Meeting of Computer Graphics, responsible for editing the minutes.

60. *Co-Chair,* **EC / NSF Strategic *Workshop*** on Universal Access and Ubiquitous Computing, Portugal, 22-25 May 2001 in Portugal (Alcácer do Sal). The *workshop* was attended by 26 internationally renowned participants; the proceedings were published by ACM Press and led to multiple outreach activities including a panel of experts at the ACM/SIGCHI 2002 conference.

61. Eurographics Organization 2001, EG *Conference Monitoring Officer,* Manchester, UK, September 2001. Responsible for Budget Control and all aspects of organization of the conference representing the Eurographics Association.

62. Co-organizer of the 9th Portuguese Computer Graphics Meeting, Marinha Grande, February 2000, with the participation of 120 national speakers. This meeting was characterized by the adoption of a new costume, leaving the university *campus* to be held in the technological center of the mold industry, a bet that was crowned with success.

63. Member, *Best Paper Award Committee,* Eurographics'99, Milan, Italy, September 1999.

64. ***Co-chair,* Eurographics'98** *(with David Duce),* Calouste Gulbenkian Foundation, Lisbon, 31 August to 4 September 1998. The conference brought together around 300 participants from 24 countries in the area of Computer Graphics.

PARTICIPATION IN SCIENTIFIC, PROGRAM AND EDITORIAL BODIES

Through the intense scientific and professional activity of the last years has been invited to collaborate in multiple publications and conferences of national and international scope. Highlights include contributions to the Computer Graphics Forum, as a member of the Editorial Board and more recently as Editor-in-Chief of Computers and Graphics (Elsevier) journal, since 2007. In this mandate, the journal has doubled the impact factor, achieving 2.5 for the first time in 2022 and significantly reduced decision time from 24 weeks to 21 days in 2023 to an average volume of 1199 annual submissions with an acceptance rate of less than 25%

Collaboration in scientific and pedagogical journals and publications

1. **Associate Editor**, SpringerNature HCIS Book Series, Since 2022.

2. ***Editor-in-Chief,*** *Computers and Graphics (Elsevier),* January 2007-, member of the ***Editorial Advisory Board,*** August 1999-December 2006 <http://www.elsevier.com/locate/cag>

3. ***Associate Editor,*** *Virtual Reality,* Springer, November 2021-.

4. **Associate Editor**, Electronics Letters (IET) 2017-2019.

5. Member, Committee on Publication Ethics, www.publicationethics.org, since 2009.

6. *Member of the **Editorial Board,** International Journal of Virtual Reality,* in September 2006 - 2011.

7. *Member of the **Editorial Board,** Journal of WSCG [ISSN 1213-6972] since September 2007.*

8. *Computer Graphics Forum, **Editorial Board,** Online Publishing, August 2000-December 2007. < http://www.blackwellpublishing.com/journal.asp?ref=0167-7055 >*

9. Member of the ERCIM Editorial Board Set 2011 - Sep 2015.

10. *Member of the **Editorial Advisory Board,** International Journal of Interactive Technology and Smart Education,* Jan. 2004 -Jan. 2008. <http: // www.troubador.co.uk/itse>

11. *Member of the Editorial Board IJMBL - International Journal of Mobile and Blended Learning, since February of 2008.*

12. *Computer Graphics Educational Materials Source,* Founder and Co-Editor in Chief with Frank Hanisch, July 2003-Oct 2016 The Journal now appears on Eurographics & SIGGRAPH DLs

also served as scientific reviewer in the following newspapers and publications:

1. Elsevier Future Generation Computer Systems, June 2017

2. ACM Computing Surveys, 2011, 2015-16, 2019

3. International Journal of Human-Computer Studies (Elsevier), 2016, 2021

4. IEEE TPAMI - Transactions on Pattern Analysis and Machine Intelligence, 2014

5. International Journal of Arts and Technology (IJART), Inderscience, 2010

6. *Springer Journal of Computer Science and Technology (*ISSN: 1000-9000), *2006, 2008.*

7. *Elsevier Journal of Computer Aided Design*, 2006-2009, 2016.

8. Springer *Journal of Real-Time Image Processing*, (ISSN: 1861-8200), 2007.

9. *Springer International Journal on Universal Access in the Information Society* (UAIS) http://link.springer.de/journals/uais/, special issues on *"Guidelines, Standards, Methods and Processes for Software Accessibility"* and *"Design Principles to Support Older Adults"*, February and April 2003.

10. *International Journal of Document Analysis and Recognition* on several occasions.

11. *IEEE Computer Graphics and Applications*, several occasions between 2004 and 2016.

12. *IEEE Multimedia Magazine, special issue on Multimedia and Distance Education,* March 2001

13. *IEEE Transactions on Multimedia.*

14. *HCI Special Issue, Journal of Research and Practice in Information Technology*, Australian Computer Society, May 2001.

15. Intl. Journal of Image and Graphics (IJIG), World Scientific Publishing, ISSN: 0219-4678

16. Intl. Journal of Computational Engineering Science, World Scientific, ISSN: 1465-8763

17. Pedagogical Book Reviewer for the Portuguese McGraw-Hill Publishing Co., 1999.

Participation in international program scientific committees

1. **IEEE ISMAR 2025, Daegu, Korea**
2. **IEEE VR 2025, St Malo France, Program Committee**
3. **IEEE ISMAR 2024, Senior Program Committee**
4. **ACM VRST 2024, Program Committee**
5. **IEEE VR 2024, Orlando Florida**
6. **ACM IUI 2024, Senior Program Committee**
7. **Area Chair, IFIP** Internet of Things (IoT) Conference, Aveiro, Portugal, 18-20 September 2023
8. **ACM VRST 2023, Associate Chair**
9. **IEEE ISMAR 2023, Senior Program Committee**
10. **ACM IUI 2023, Senior Program Committee**
11. **ACM IUI 2022, Senior Program Committee**
12. **ACM IUI 2021, Senior Program Committee**
13. **ACM IUI 2020, Cagliari, Italy, Senior Program Committee, March 17-20, 2020**
14. Cyberworlds 2019, Japan
15. **ACM VRST 2019,** November, Sydney, Australia
16. **ACM IUI 2019**, Los Angeles, CA, March 17-20 2019.
17. **Area Chair,** Multimedia and Vision, IEEE MIPR 2019, 2nd IEEE International Conference on Multimedia Information Processing and Retrieval (http://www.ieee-mipr.org/), March 28 - 30/2019. San Jose, CA, USA
18. **IEEE VR 2019**, Osaka, Japan, March 23-27, 2019
19. **ACM VRST 2018,** Tokyo, November 28-Dec 1, 2018.
20. **IEEE AIVR 2018**
21. **IEEE ISMAR 2018,** International Symposium on Mixed and Augmented Reality, October 2018
22. **IFIP** Internet of Things (IoT) Conference, Poznan, Poland, 18-20 September 2018
23. Cyberworlds 2018 S i ngapore, 201 September 8
24. ECCE 2018, Utrecht University, 5-7 September 2018
25. **ICPR 2018,** Beijing China, 20-24 Aug 2018, Track 4: Biometrics and Human Computer Interaction
26. ACM / Eurographics Expressive 2018, Victoria, BC August 2018
27. CompIMAGE 2018, Cracow, Poland, July 2-5 2018
28. DMSVIVA 2018, 24 th Intl. DMS Conf. on Visualization and Visual Languages, Redwood City, CA, June 29-30, 2018
29. **GMP** 2018, **Aachen,** Germany, April 09-11, 2018
30. **IEEE VR** 2018, Reutlingen, Germany, March 18-22, 2018
31. **ACM IUI** 2018, Senior IPC Member, Tokyo, Japan, March 7 - 11 2018
32. **ACM VRST** 2017 - Gothenburg, Sweden, 8-10 Nov 2017
33. **ACM ISS 201 7 -** Interactive Surfaces and Spaces, Brighton, UK Oct 2017
34. **SVR 201 7 -** XIX Symposium on Virtual and Augmented Reality, 1 - 4 November 201 7.
35. **IEEE ISMAR 2017,** International Symposium on Mixed and Augmented Reality, October 2017
36. **ECCE2017**, 35th Intl. Conference on Cognitive Ergonomics, September 19-22, 2017 Umeå, Sweden.
37. **ACM EICS 2017,** Lisbon Portugal, June 2017
38. **CYBERWORLDS** 2017, October, Chester UK
39. **SMI** 2017 - International Conference on Shape Modeling 2017, Berkeley CA USA, June 2017
40. **GMP'17** - 11th Geometric Modeling and Processing Conference
41. **ACM IUI 2017,** Limassol, Cyprus March 13 - 16, 2017.
42. **ICPR'16 -** 23rd International Conference on Pattern Recognition, 4-8 Dec 2016 Cancun Mex i co
43. **ACM VRST** 2016 - Symposium on Virtual Reality Software & Technology, Munich, Germany 2-4 Nov 2016
44. **VASE'16,** ECCV'16 Workshop on Visual Analysis of Sketches, Amsterdam, 9-16 Oct 2016

45. **SMI'16 - Berlin, Germany, June 2016**
46. **GMP'16** - 10th Geometric Modeling and Processing Conference 201 6, April 11-13, San Antonio, Texas
47. Chair Co-Area"Multimedia Interface", 17th **IEEE** International Symposium on Multimedia, Dec 14-16 2015, Miami, Florida USA, http://www.ieee-ism.org/
48. **ACM ITS 2015,** Interactive Tabletops and Surfaces, November 15-18 2015, Madeira, Portugal
49. **ACM** SIGGRAPH Asia 2015 Symposium on Education, 2 - 5 November 2015, Kobe, Japan
50. **ACM VRST 2015,** Nov 13th to Nov 15th in Beihang University, Beijing, China
51. **GREC** 2015, 11th International Workshop on Graphics Recognition
52. **CGI'2015** - Computer Graphics International, Strasbourg, France
53. GMP'15– 9th Geometric Modeling and Processing Conference, Lugano, CH June 1-3 2015
54. **IEEE VR2015,** Camargue, France, 23-27 March 2015.
55. **ACM IUI 2015,** Atlanta, GA, USA from March 29 to April 1 2015.
56. DSAI'2015, 6th International Conference on Software Development and Technologies for Enhancing Accessibility and Fighting Info-Exclusion, June 10-12, 2015 - Fraunhofer FIT, Sankt Augustin, Germany
57. **Eurographics 2015,** Zurich, Switzerland May 2015
58. **SMI 2014,** Hong Kong, October 2014
59. **Pacific Graphics** 2014, Seoul, Korea, October 8-10, 2014
60. 4th CompIMAGE (http://jessicaz.me.cmu.edu/CompImage2014/), Sept. 3-5, 2014 Pittsburgh, USA
61. **SIBGRAPI** 2014, Rio de Janeiro Brazil, August 27-30 2014
62. **ICPR 2014,** International Conference on Pattern Recognition, 24-28 August 2014, Stockholm Sweden
63. VLC 2014, Symposium on Visual Languages and Computing, The 20th International Conference on Distributed Multimedia Systems, 27-29 August 2014, Pittsburgh, PA
64. **GMP'14** - 8th Geometric Modeling and Processing Conference, Singapore, Jun 29-Jul 1, 2014
65. SVR 2014 12-15 May 2014 Salvador / BA - Brazil
66. Sketch: Pen and Touch Recognition Workshop, Posted with IUI 2014, Feb, 2014 Haifa, Israel
67. **Eurographics 2014, Strasbourg, France, May 2014.**
68. **ACM IUI 2014, Feb 24 - 27, 2014 Haifa, Israel**
69. PhyCS 2014, Intl Conference on Physiological Computing Systems, 7-9 Jan 2014 Lisbon.
70. IHC2013 (XII Brazilian Symposium on Human Factors in Computing Systems), Oct 8-11, 2013
71. **Pacific Graphics 2013,** October 7-9, 2013, Singapore
72. GraphiCon'2013, 23rd International Conference on Computer Graphics and Vision, September 16-20, 2013, Vladivostok, Russia
73. SIBGRAPI 2012 - Conference on Graphics, Patterns and Images, Arequipa, Peru August 5-8, 2013.
74. Expressive 2013, Anaheim, CA 19-21 July 2013.
75. VLC 2013, International Workshop on Visual Languages and Computing, Brighton, United Kingdom, August 8-10, 2013.
76. **INTERACT 2013**, South Africa, September 2013.
77. GREC 2013, Tenth IAPR International Workshop on Graphics Recognition, Lehigh University, Bethlehem, PA, USA - August 20-21 2013.
78. **CGI** - Computer Graphics International, 11 - 14 June 2013 • Hannover, Germany
79. **SVR 2013 -** XV Symposium on Virtual and Augmented Reality, 27-30 May 2013.
80. **Eurographics 2013**, Girona, Spain 6-10 May 2013.
81. **SIGGRAPH Asia 2012** Technical Briefs Committee, Singapore Nov. 2012.
82. 3rd CompIMAGE Conference - Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications, Rome (Italy) 5-7 September 2012
83. SIBGRAPI 2012 - Conference on Graphics, Patterns and Images, Ouro Preto, Brazil, 22-25 August 2012.
84. **Pacific Graphics 2012,** Hong Kong, China Nov. 2012
85. VLC2012 International Workshop on Visual Languages and Computing, Miami Beach, USA, Aug 2012
86. International Symposium on Visual Computing (ISVC '12), July 16 - 18, 2012 Rethymnon, Crete, Greece
87. WSCG'12, June 25-28 2012 Plz Czech Republic
88. Expressive 2012 (SBIM 2012, NPAR 2012, CA 2012) June 2012, Annecy, France
89. ICIAR 2012, June 25-27, 2012, Aveiro, Portugal
90. **SMI 2012** - International Conference on Shape Modeling and Applications, Texas, May 2012

91. **IEEE VR2011,** March 2011, Singapore.
92. **Pacific Graphics 2011,** Hong Kong, 2011
93. SBIM 2011, NPAR 2011, CAe 2011, Vancouver, BC, Canada
94. **SMI 2011** - International Conference on Shape Modeling and Applications, Israel, June 2011
95. GraphiCon 2010, September 20-24, 2010, St.Petersburg, Russia.
96. **Associate Chair MobileHCI 2010**, Lisbon, Portugal, September 7-10 2010.
97. IHC - Symposium on Human Factors in Computing Systems (Brazilian Conference on HCI), Belo Horizonte, Brazil, 5-8 October 2010.
98. **ICPR 2010**-20th International Conference on Pattern Recognition, Istanbul, Turkey, 23-26 August 2010.
99. **SMI 2010** - International Conference on Shape Modeling and Applications, Aix-en-Provence, France, June 2010.
100. EG SBIM'10-Eurographics Workshop on Sketch-Based Interfaces and Modeling, Annecy, France, June 2010.
101. **NPAR 2010** Non-Photorealistic Animation and Rendering, Annecy, France, June 2010.
102. **IEEE *VR 2010*,** *IEEE Virtual Reality Conference,* Boston, USA, March, 2010.
103. WSCG'10 - 18 th *International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision,* Plz, Czech Republic, February, 2010.
104. CAD / Graphics 2009 - 11th IEEE International Conference on Computer-Aided Design and Computer Graphics, Yellow Mountain City, China, August 19-21, 2009
105. EG SBIM'09 - *Eurographics Workshop on Sketch-Based Interfaces and Modeling,* New Orleans, USA, Jul 2009
106. GREC'2009 - Eighth IAPR International Workshop on Graphics Recognition, La Rochelle, France, 22-223 July 2009
107. **INTERACT 2009,** Uppsala, Sweden, July 2009.
108. **SMI 2009** –International Conference on Shape Modeling and Applications, Pequim, China, June 200 9.
109. **Eurographics 2009,** Munich, Germany, April 2009.
110. **IEEE *VR 2009*,** *IEEE Virtual Reality Conference,* Reno, Lafayette, Louisiana, USA 16-18 March, 200 9.
111. IUI Workshop on Sketch Recognition, Sundial Beach and Golf Resort, Sanibel Island, Florida, February 2009
112. WSCG'09 - 17 th *International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision,* Plz, Czech Republic, February, 2009.
113. **ICPR 2008** - 19 th International Conference on Pattern Analysis and Recognition, Tampa, Florida, USA, 8-11 December 2008.
114. IHC'2008 - 8 th Brazilian Symposium on Human Factors and Computing Systems, Porto Alegre, Brazil from 22 - 24 October 2008.
115. **ACM VRST 2008** - Symposium on Virtual Reality Software & Technology, Bordeaux, France 27-29 Oct. 2008
116. HCSE08 - 2 nd *Conference on Human -Centred Software Engineering,* Pisa, Italy, September 2008
117. **ACM Hypertext 2008,** 19-21 June, 2008 - Pittsburgh, Pennsylvania, USA
118. AMDO2008 - 5th International Conf. on Articulated Motion and Deformable Objects, Puerto de Andratx, Mal lorca, Spain, 9-11 July, 2008
119. ICIAR - International Conference on Image Analysis and Recognition, 25-27 June 2008, Póvoa do Varzim, Portugal
120. EG SBIM'08 -EG Workshop on Sketch-Based Interfaces and Modeling, Annecy, France, June 2008.
121. CADUI'08 - Computer-Aided Design of User Interfaces, Albacete, Spain, June 2008.
122. SVR'08 - *X Symposium on Virtual and Augmented Reality,* Brazil - João Pessoa 13-16 May 2008.
123. **IEEE *VR 2008*,** *IEEE Virtual Reality Conference,* Reno, Nevada, USA March 8-12, 2008.
124. **ACM DIS'08** - Conference on Designing Interactive Systems, Cape Town, South Africa, 25-27 Feb 2008
125. WSCG'08 - Plz, Czech Republic, February, 2008.
126. **ACM IUI 2008,** International Conference on Intelligent User Interfaces, Canary Islands, 13-16 January 2008.
127. CAD / Graphics 2007 - 1 0th International Conference on Computer-Aided Design and Computer Graphics, Beijing, China, 15-18 of October of 2007
128. **VRST** - ACM Symposium on Virtual Reality Software & Technology, California, USA Nov. 5-7 2007
129. GREC - IAPR International Wkshop on Graphics Recognition, Curitiba, Brazil, 20-21 September, 2007.
130. Eurographics 2007 Education program, Prague, Czech UBLI ca Czech, September 2007.
131. ICEE 2007 International Conference on Engineering Education, Coimbra, Portugal, 3- 7 September 2007.

132. ***Program co-chair* ICIG'2007** *International Conference on Image and Graphics,* 22-24 August 2007, Chengdu, China.

133. **INTERACT *2007*** - Rio de Janeiro, Brazil, September 2007.

134. SBIM - Eurographics Workshop on Sketch-Based Interfaces and Modeling, Riverside, CA, 1-3 Aug 2007.

135. CAe 2007 - *International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging,* 20–22 June 2007 *Banff, Alberta, Canada*

136. **NPAR 2007** - 5 ᵗʰ International Symposium on Non-Photorealistic Animation and Rendering, San Diego, USA, 4-5 August 2007.

137. ICIAR2007 International Conference on Image Analysis and Recognition, 22-24 Aug 2007, Montreal, Canada

138. EGUK07 - *Theory and Practice of Computer Graphics '07, University of Bangor, Wales,* 13-15 June 2007.

139. **SMI 2007** - IEEE International Conference on Shape Modeling and Applications, Lyon, France, May 2007.

140. ***Program co-chair* HCI Educators Conference 2007,** Creativity3: Education and Design for Mundane Things, Aveiro, 29-30 March 2007.

141. EHCI-HCSE-DSVIS07 - *Engineering Interactive Systems 2007,* joint IFIP WG2.7 / 13.4 10th Conference on Human Computer Interaction Engineering, IFIP WG 13.2 1st Conference on Human Centered Software Engineering, DSVIS - 14th Conference on Design Specification and Verification of Interactive Systems, University of Salamanca, Spain, March 22-24, 2007

142. ***IEEE VR 200 7,*** *Charlotte, North Carolina, March 14 - 17, 2007.*

143. EuroIMSA 2007 - *IASTED International Conference on Internet and Multimedia Systems and Applications,* Chamonix, France, in March of 2007.

144. **IUI'07,** *ACM Intelligent User Interfaces Conference,* Hawaii, January 28 - 31, 2007.

145. SIBGRAPI 2006, *19 ᵗʰ Brazilian Symposium on Computer Graphics and Image Processing, Manaus, Brazil,* October 8-11, 2006.

146. **ICIAR 2006,** 18-20 September, Póvoa de Varzim, Portugal.

147. ***Eurographics'06,*** *Vienna, Austria, 4-8 September 2006.*

148. *CONVR 2006 - 6th International Conference on Construction Applications of Virtual Reality, Sheraton World Resort, Orlando, Florida, USA, 3-4 August 2006.*

149. DSV-IS 2006, *12ᵗʰ Workshop on Design, Specification and Verification of Interactive Systems, University of Newcastle-upon-Tyne,* UK, 13-15 July, 2006.

150. SIACG-3ʳᵈ Ibero-American Symposium on Computer Graphics, Santiago de Compostela, Spain, Jul 2006.

151. 6 ᵗʰ International Conference CADUI'2006 - 5-8 June 2006, Bucharest, Romania.

152. IRMA'06 - *Information Resources Management Association International Conference,* Washington DC, USA, 21-24 May 2006.

153. *IADIS International Conference Applied Computing 2006, San Sebastián, Spain, 25-28 February 2006.*

154. ***Program Chair* GRAPP 2006** 25-28 February 2006, Setúbal.

155. EuroIMSA 2006, 13-15 February, 2006, Innsbruck, Austria

156. ***Program co- chair* WSCG'06** - Plz, Czech Republic, February, 2006.

157. **IUI'06,** *ACM Intelligent User Interfaces Conference,* Sydney, Australia 29 January - 1 February 2006.

158. ISVC 2005 - *International Symposium on Visual Computing,* December 5-7, 2005, Lake Tahoe, NV / CA, USA.

159. GRAPHITE'2005 *International Conference on Computer Graphics and Interactive Techniques in Australasia and South East Asia* - Dunedin, New Zealand November 29 - December 2, 2005.

160. *SIBGRAPI 2005, 18 ᵗʰ Brazilian Symposium on Computer Graphics and Image Processing, Natal, Brazil,* October 9-12, 2005.

161. ICIAR 2005, September 28-30, 2005, Toronto, Canada.

162. *INTERACT '2005, Rome, Italy September 2005.*

163. *eCAADe 2005 : education and research in COMPUTER AIDED ARCHITECTURAL DESIGN in Europe, September 21-23, Lisbon.*

164. *CONVR 2005 - 5th International Conference on Construction Applications of Virtual Reality, Durham, UK, 12-13 September 2005.*

165. ***Eurographics'05,*** *Dublin, Ireland, 31 August - 2 September 2005.*

166. *SBM'05 - Eurographics Workshop on Sketch-Based Interfaces and Modeling, Dublin, Ireland, 29-30 August 2005.*

167. *IAPR GREC'2005 - City University of Hong Kong, China, 25-26 August, 2005.*

168. DSV-IS 2005 12 ᵗʰ *Workshop on Design, Specification and Verification of Interactive Systems, University of Newcastle-upon-Tyne,* UK, 13-15 July, 2005.

169. Mobile Work Employs IT (MoWeIT) Workshop: Mobile Computing Meets Knowledge Management, *Czech Technical University, Prague,* July 2005.

170. GraphiCon'2005, 15th International Conference on Computer Graphics and Vision, Novosibirsk Akademgorodok, Russia, 20-24 June 2005.
171. m-ICTE05 *3rd International Conference on Multimedia & ICTs in Education,* Cáceres, Spain 8-10 June 2005
172. IRMA'05, *San Diego,* California, May 15-18, 2005.
173. *IADIS International Conference Applied Computing 2005, Algarve, Portugal, 22-25 February 2005.*
174. *EuroIMSA 2005 - Grindelwald,* Switzerland 21-23 February 2005.
175. WSCG'05 - Plz, Czech Republic, February, 2005.
176. **IUI'05,** *ACM Intelligent User Interfaces Conference,* San Diego, California, January 2005.

177. ***Program co-chair*** **EGMM'04,** *8 th Eurographics Workshop on Multimedia,* Nanjing, October 2004.
178. *VII Symposium on Virtual Reality,* Sao Paulo, SP, Brazil, 19-22 October 2004.
179. SIACG'04 - *2 nd Ibero-American Symposium on Computer Graphics,* Curitiba, Brazil, October 2004.
180. CONVR 2004 - *Conference on Construction Applications of Virtual Reality,* September 2004, Lisbon.
181. GraphiCon'2004, 14 th International Conference on Computer Graphics and Vision, Moscow, Russia, 6-10 Sep 2004.
182. VIIP'2004, IASTED *International Conference on Visualization, Imaging and Image Processing,* Marbella, Spain 6-8 September 2004.
183. ***Eurographics'04,*** Grenoble, France, 1-3 September 2004, *senior reviewer.*
184. DSV-IS 2004, Hamburg, Germany, July 11-13, 2004.
185. CGE'04, Eurographics / SIGGRAPH *Workshop on Computer Graphics and Education,* Hangzhou, China, Jun 2004.
186. GRAPHITE'04, Singapore 15–18 June 2004.
187. ICIMADE'04, *International Conference on Intelligent Multimedia and Distance Education,* Utica, NY, USA, June 2004.
188. WSCG04, Plz, Czech Republic, 2-6 February, 2004.
189. **IUI'04,** *ACM Intelligent User Interfaces Conference,* Funchal, Madeira, January 2004.

190. *Europrix* Scholars Conference, Tampere, Finland, November 2003.
191. SIBGRAPI'03, *16th Brazilian Symposium on Computer Graphics and Image Processing,* Oct. 2003.
192. GraphiCon'2003, 13 th Intl. Conf. on Comp. Graphics and Vision, Moscow, Russia, September 2003.
193. ***Eurographics'03,*** *Granada,* Spain, September 2003, *topic chair, Multimodal Interaction* and *Educational Program Committee reviewer.*
194. **IFIP INTERACT'03,** Zurich, Switzerland, September 2003.
195. **ACM Hypertext '03,** Nottingham, UK, 26-30 August 2003.
196. TIDSE 2003 *1 st International Conference on Technologies for Interactive Digital Storytelling and Entertainment,* Darmstadt, Germany, 24-26 March, 2003.

197. *Europrix* Scholars Conference, Tampere, Finland, November 2002.
198. *RPD2002 - Int'l Symp. on Rapid Product Development,* Marinha Grande, Portugal, October 2002.
199. SIBGRAPI 2002, *15 th Brazilian Symp. on Computer Graphics and Image Processing,* October 2002.
200. *IFIP World Computer Congress, Stream Usability: Gaining a Competitive Edge,* Montreal, Canada, 25-30 August 2002.
201. ***Program chair*** **CGE'02,** *Workshop on Computer Graphics and Education,* Bristol, July 2002.
202. SIACG - *1 st Ibero-American Symposium on Computer Graphics,* Minho, in July 2002.
203. WSCG02, Plzen, Czech Republic, February 2002.

204. SIBGRAPI *2001, 14 th Brazilian Symp. on Computer Graphics and Image Processing,* October 2001.
205. ***Program co-chair*** **EGMM'01,** *7 th EG Workshop on Multimedia,* Manchester, September 2001.
206. *Multimedia and Telecommunications Workshop,* EUROMICRO'2001, Warsaw, 4-6 September 2001.
207. IFIP **INTERACT** 2001, Japan, July 2001.
208. ICIMADE'01, *Intl. Conf. on Intelligent Multimedia and Distance Education,* Nebraska, June 2001.
209. WSCG01, Plzen, Czech Republic, February 2001.
210. 4 th ECDL - *European Conference on Digital Libraries,* Lisbon, September 2000.
211. 10th Spanish Congress of Computer Graphics (CEIG'00), Castellón, June 2000.
212. *Joint Conference on Information Sciences,* New Jersey, February 2000.
213. WSCG2000, Plzen, Czech Republic, 7-11 February 2000.

214. *Europrix Scholars Network Conference,* Tampere, Finland, November 1999.
215. IFIP INTERACT'99, Edinburgh, Scotland, September 1999.
216. EGMM99 - *6 th Eurographics Workshop on Multimedia,* Milan, Italy, September 1999.
217. ISIMADE'99, *International Symposium on Intelligent Multimedia and Distance Education,* Baden-Baden, Germany, August 1999.
218. CEIG'99, 9th Spanish Congress of Computer Graphics, Jaén, Spain, June 1999.

219. GraphiCon'98, *8 th Intl. Conf. on Comp. Graphics and Vision,* Moscow, Russia, 7-11 September 1998.

220. 1st Luso-German Meeting on Computer Graphics, Lisbon, October 1988.

Reviewer of contributions to international conferences

- *ACM SIGGRAPH 2008, 2009, 2010, 2012, 2013, SIGGRAPH Asia 2012, 2013, 2021, 2022,2025*
- ACM UIST'91, UIST'2007, UIST'2011, UIST'2015
- ACM SIGCHI 1997-98, 2000-2006, 2015, 2017
- Europar 2005 - *Distributed and High-Performance Multimedia,* Lisbon, 30 August to 2 September 2005.
- ICIAR 2004 - International Conference on Image Analysis and Recognition, Porto October 2004
- ICDAR'01 - *International Conference on Document Analysis and Recognition,* Seattle, USA, Sep. 2001.
- HCUK2000 - *2 nd International Symposium on Ubiquitous Computing and Handheld,* UK, Sep. 2000.
- GREC'2003 - Guest enumerator of post-conference proceedings published by *Springer LNCS.*

Participation in national scientific and program committees

- 21st Portuguese Meeting of Computer Graphics and Interaction (EPCGI), Lisbon, October 2018.
- 20th Portuguese Computer Graphics Meeting (E P CGI), Braga, October 2017.
- 19th Portuguese Computer Graphics Meeting (ECGI), Coimbra, October 2016
- 18 the Portuguese Conference on Computer Graphics (EPCG) in 2014, Leiria, November 2014
- Interac tio the 2013 November 2013
- 17 the Portuguese Conference on Computer Graphics 2012, October 2012.
- Interaction 2010 - 4th Conference on Personal Sound Machine Interaction, Braga, October 2010.
- 16 the Portuguese Conference on Computing Graphic, 2009.
- Interaction 2008 - 3rd Conference on Person-Machine Interaction, Braga, October 2008.
- 15th Portuguese Meeting of Computer Graphics, TagusPark, Oeiras, October 2007
- Interaction 2006 - 2nd Conference on Person-Machine Interaction, Braga, October 2006.
- CSMU 2006 - Conference on Mobile and Ubiquitous Systems, Guimarães, 29-30 June 2006.
- 13th Portuguese Meeting of Computer Graphics, UTAD, October 2005
- Interaction 2004 - **1st Conference** on Person-Machine Interaction, Lisbon, July 2004.
- Artec 2004 - 1st Luso-Galaic Digital Arts Workshop, Lisbon, July 2004.
- CGME'03, *Workshop on Computer Graphics and Multimedia in Education,* Porto, October 2003.
- CoopMedia'03, *Workshop* on Multimedia and Cooperative Information Systems, Porto, 8/10/2003
- 12th Portuguese Meeting of Computer Graphics, ISEPP, Porto, October 2003.
- 10th Portuguese Meeting of Computer Graphics, ISCTE, 1-3 October 2001.
- 9th Portuguese Meeting of Computer Graphics, Marinha Grande, 16-18 February 2000.
- CGME'99, *Workshop on Computer Graphics and Multimedia in Teaching,* ESTG, Leiria, Feb. 1999.
- 8th Portuguese Meeting of Computer Graphics, Coimbra, February 1998.
- 1st Portuguese Meeting of Computer Graphics, Lisbon, July 1988.

COLLABORATION WITH EXTERNAL INSTITUTIONS

Since the return of the USA in 1994, he has developed a consistent activity of collaboration with both national and international educational and research institutions. National institutions include the University of Porto, University of Minho, University of Aveiro, Classical University of Lisbon and New University of Lisbon. Among the international institutions stand out The Victoria University of Wellington and Auckland Universities in New Zealand, the University of Toronto Canada, Vienna Technical University of Austria, University of Calgary in Canada, University of Zhejiang, University of Hong Kong and Nanjing in China, Technical University of Darmstadt and the FhG / IGD in Germany, the Valencian Autonomous Polytechnic University of Barcelona, Spain, as well as the Pontifical Catholic University of Rio de Janeiro and the University of São Paulo in Brazil. Other Institutions include IMATI / CNR (Genoa, Italy) and the Champalimaud Foundation (Portugal). These activities include the co-supervision of master and doctoral theses, organizing national and international conferences, lectures and postgraduate courses and carrying out joint projects among others. He has been a speaker at the ACM *Distinguished Speaker Program* (DSP) since September 2015. Since 2022, he holds the UNESCO Chair of

AI & XR at the University of Lisboa, coordinating a network of 35+ academic and research institutions world-wide.

Keynote talks	Invited Talks	Invited Classes / Seminars	Panels	Tutorials	Courses
23	51	24	10	9	10

Keynote talks

1. Distorting Reality for Enhanced Collaboration in XR, Keynote to XRIOS workshop, IEEE VR25, Saint Malo, France, March 2025
2. XAVIER: eXplainable Artificial intelligence and VIrtual reality for Enhanced Radiology, 3rd **IEEE** International Conference on Intelligent Reality (ICIR 2024), Coimbra, Portugal Dec. 4-6 2024
3. Distorting reality for enhanced Collaboration in XR, Winter School on the Psychology of XR at the University of South Australia in Adelaide, July 2024
4. The Future of Media Interfaces, India HCI 2021, 12th Indian conference on HCI, Design and Research, November 19th-21st, 2021 (virtual)
5. Approaches and challenges to virtual and augmented reality in health care and rehabilitation. J Jorge, International XR Workshop, Wellington, NZ 18-21 Fev 2020
6. The Future of Multimodal Interfaces, IHC / Espírito Santo Brazil, October 21, 2019
7. Full Contact - Beyond 2D Interactive Surfaces, Keynote Talk, IEEE ICIIP 2017, *Solan*, India, 21 Dec 2017.
8. Full Contact - Beyond 2D Interactive Surfaces, Keynote talk, SIBGRAPI, *Florianópolis*, Brazil, 17 Oct 2017
9. Challenges and Approaches to Interactive 3D Visualization in Clinical Settings, Invited Keynote, Joaquim Jorge & Daniel Lopes, International CiiEM Congress - Interdisciplinary Research Center *Egas* Moniz June 12, 2017
10. Full Contact: VR for Design and Review, PennState University, Symposium on VR and Applications, State College, PA, Oct 31, 2016
11. The Future of Multimedia Interfaces, The International Conference on Engineering & IS, Agadir 22-24 September 2016
12. Full Contact: Beyond 2D Interactive Surfaces, ACM / Collaboration meets Interactive Surfaces, CmIS workshop, Funchal, Madeira 15 November 2015
13. Game over? New Approaches to Teaching Engineering Courses, SIGGRAPH / Asia Education Symposium, Kobe, Japan, 2 November 2015
14. Game over? New Approaches to Teaching Engineering Courses, 9th International Conference on Computer Graphics, Visualization, Computer Vision and Image Processing, Las Palmas de Gran Canaria, Spain, 22–24 July 2015
15. Multimodal Interfaces for Content Creation, 31st Spring Conference on Computer Graphics (SCCG), April 2015, Smolenice, Slovakia 21-24 April 2015
16. Touching more than three dimensions: having fun with surfaces, EPCG 2014, Portuguese Computer Graphics Meeting, Leiria, Portugal, 13 November 2014
17. Having Fun with Surfaces: Adding new dimensions to Graphical Interfaces, CGVCVIP 8th Computer Graphics Conference, Visualization, Computer Vision and Image Processing, Lisbon 17 July 2014.
18. The Future of Multimedia Interfaces, Guest Lecture, Visual Computing Trends 2013 - Symposium, January 30th, 2013, Tech Gate Vienna, Donau-City-Straße 1, 1220 Wien, Austria
19. Having Fun with Tables: Research into novel interfaces - two dimensions and above, 16 th European Seminar on Computer Graphics, April 29, 2012, Smolenice, Slovakia. (85 pp)
20. *Graphical Modeling and Calligraphic Interfaces: Gestures and Haptics in CAD systems,* International Conference on CAD / Graphics 2007, Beijing, China, October 16, 2007
21. *Implicit modeling Surfaces, VIPIMAGE 2009* - Conference on Computational Vision and Medical Image Processing, 21-23 October 2009, FEUP, Porto, Portugal
22. *From Gestures to Calligraphic Interfaces - Bridging the Usability Gap in CAD Systems,* Gesture Workshop ' 07 May 2007 Lisbon, Portugal

23. Implicit Surfaces and Graphic Modeling, National Meeting of Scientific Visualization, *Espinho* September 17, 2005.

24. *Smart Sketches - from Design to Engineering*, ACM South-Western European Programming Context, FEUP, Porto 17 Nov. 2002

Invited lectures and presentations

1. Challenges and Opportunities in XR and AI for Health Applications, September 6, 2024, Empathic Computing Lab, University of Auckland, NZ

2. Distorting Reality for Enhanced Collaboration in XR, University of South Australia Winter School on the Psychology of XR, July 2024 Adelaide, Australia

3. Approaches and challenges to virtual and augmented reality in health care, Matera Summer School on AI&VR July 2023, Matera, Italy

4. Approaches and challenges to virtual and augmented reality in health care and rehabilitation. J Jorge, ACM ISS Conference, Wellington, NZ 18-21 Nov 2022

5. Anatomy Studio: A tool for virtual dissection through augmented 3D reconstruction, Invited Talk @ Shift Medical 2021 Virtual Congress and Expo, September 2021

6. Approaches and challenges to virtual and augmented reality in health care and rehabilitation. J Jorge, University of Otago, Dunedin, NZ 14 Fev. 2020

7. Approaches and challenges to virtual and augmented reality in health care and rehabilitation. J Jorge, University of Wellington, NZ 26 Nov. 2019

8. Game over? New Approaches to Teaching Engineering courses, SIGGRAPH Canadian Chapter Nov 2019

9. *O Futuro das Interfaces de Mídia*, *Instituto de Matemática e Estatística, Univ Estadual RJ, Brazil,* 30 Oct 2019

10. Virtual and Augmented Reality for Oil and Gas, 5th Galp Petroleum and Energy Open Days, *Museu do Oriente*, Lisbon 2/3 July 2018.

11. Game over? New Approaches to Teaching Engineering courses, University of Aveiro 7 June 2017

12. Multimodal interfaces for Shape Exploration: Beyond 2D Sketching, Inv. Talk, DGP Univ. Toronto, 26 Jan 2017

13. Game over? New Approaches to Teaching Engineering Courses, Invited talk, PennState, State College, PA 1 Nov 2016

14. Full Contact: Beyond 2D Interactive Surfaces, *Bogota* ACM SIGGRAPH, Colombia, 13 October 2016

15. Challenges and Approaches to 3D Interactive Visualization in Clinical Applications, Joaquim Jorge, Daniel Simões Lopes, Invited Lecture: UBI, F Health Sciences 20 May 2016 (70pp)

16. Panel: Affordable eLearning and technology as possible, @ IES, Polytechnic Institute of Leiria, December 11, 2015.

17. Challenges and Approaches to Interactive 3D Visualization in Clinical Applications, Invited Keynote, Joaquim Jorge & Daniel Lopes, International Congress of CiiEM - Interdisciplinary Research Center Egas Moniz November 28, 2015

18. Multimodal interfaces are Exploration Shape: Beyond 2D Sketching, Modeling Symposium on Expressive: New Advances towards the Seamless Content Creation of 3D, Organized by Marie-Paule Cani, College de France (110+ p w) www.college-de-france.fr /site/en-marie-paule-cani/symposium-2014-2015.htm, 8 -6-2015

19. Adding a New Touch to Interaction with Surfaces, PlayNESTI, University of the Azores, Ponta Delgada, March 18, 2015,

20. Adding More Than Two Dimensions to Tabletop Interfaces. University of Macau, 31 October 2014

21. Spatialization of Tactile Interfaces, Polytech'Lille, Univ. Lille 1, IRCICA / CNRS, 14 Oct 2013 (25pp)

22. Adding More Than Two Dimensions to Tabletop Interfaces. Is Tony Stark Home? INPG Grenoble, 23 September 2013

23. Having Fun with Tables: Adding more than two dimensions to interfaces DI / PUC Rio, 23 Aug ' 13

24. Having Fun with Tables: Adding more than two dimensions to interfaces, UFRJ, RJ 21 August 13

25. Having Fun with Tables: Adding more than two dimensions to interfaces, USP, SP, 19 August 13

26. Having Fun with Tables: Adding more than two dimensions to interfaces, IMPA, RJ 14 August ' 13

27. Having Fun with Tables: Touching Two Dimensions and Above, Univ. Bergen, Norway, Jun 25 ' 13

28. Touching Four Dimensions: Novel Graphical Sound Interfaces for Tabletops, University of Calgary, Computer Science Department Invited Talk, March 20, 2013, Calgary AB, Canada

29. Having Fun with Tables: Research into novel interfaces - two dimensions and above, National University of Singapore, 30 November 2012.

30. Touching more than two dimensions: sound novel graphical interfaces for tabletops, University of Hong Kong, November 23, 2012

31. Touching Four Dimensions: Novel Graphical Sound Interfaces for Tabletops, Graz University, November 16, 2012

32. Touching more than two Dimensions: Augmenting Surfaces with Sound, Linz University, November 13, 2012

33. Funny Tables: Research into novel interfaces - two dimensions and above, Lecture to VRVisForum # 96, 25 October 2012. http://www.vrvis.at/research/events/vrvisforum/vrvisforum-96-25.10.2012

34. Having Fun with Tables: Touching More Than Two Dimensions, University Vienna, April 27, 2012.

35. *Multimodal Interfaces for VR,* Guest *Lecture, International Conference on Computational Modeling and Simulation for the Petroleum Industry,* April 22 and 23, 2010, *Armação Hotel - Porto de Galinhas*, Pernambuco, Brazil.

36. *Calligraphic Approaches to Illustration,* Illustravis Workshop, Bergen, Norway 3-4 June 2009.

37. *Graphical Modeling and Calligraphic Interfaces,* Lecture, Microsoft Research China (Graphics Lab), October 12, 2007, Beijing, China.

38. *Guest lecture,* Multimedia Seminar, *Mirandela* School of Technology and Management *(by WebCast), May 24, 2007.*

39. *Calligraphic User Interfaces: towards more usable CAD systems,* University of Newcastle, UK, 26 January 2007.

40. *Graphical Modeling and Calligraphic Interfaces: towards more usable CAD systems,* University of Tübingen, Germany, 10 November 2006.

41. *Reduced Instruction Set Calligraphic Interfaces,* City University of Hong Kong, August 23, 2005.

42. Seminar "*Conceptual Design in Collaborative Processes*", integrated in the course *Integrated Product Development and Processes in Collaborative Engineering,* Universidad Internacional Menéndez Pelayo, Castellón, Spain, 7 July 2005

43. *Reduced Instruction Set Calligraphic Interfaces,* University of Calgary Interactive Systems Group, December 1, 2004.

44. *Interactive Computer Graphics for surface editing,* Group of Computer Graphics at the University of Calgary, November 1, 2004.

45. Server of educational materials for CG, Presentation Invited to the Spanish Congress of Computer Graphics (CEIG), July 4, 2003, La Coruña, Spain.

46. *Calligraphic* Interfaces - Design to Engineering, Dep. Computer Science, Univ. Évora, 9 May 2003.

47. *Reduced Instruction Set Calligraphic Interfaces,* University of North Carolina at Chapel Hill, USA, April 25, 2002.

48. "*The Good, The Bad and the Ugly: An Outlandish Look at Graduate Education and Research in Portugal*", Guest Presentation, 3rd Forum of Portuguese Researchers, University of Algarve, *Campus* de *Galambas*, Faro, 7-9 April 2001.

49. Guest Lecture, Department of Computer Science, Technical University of Vienna, *Calligraphic Interfaces: From Design to Engineering* 30 March 2001.

50. Guest Presentation, *Virtual Congress of Computo* 2000, Univ. Autonomous of Mexico, Mexico City, 16-20 October 2000.

51. Visual Languages and Calligraphic Interfaces, Guest Lecture, Univ. Minho, May 1997.

Tutorials (Peer Reviewed)

1. Interaction Design for Extended Reality, Joaquim Jorge & Mark Billinghurst, IEEE VR25 Saint Malo, March 2025.

2. Approaches and Challenges in XR and AI for Health Applications, Joaquim Jorge, Catarina Moreira, Anderson Maciel, João Pereira, Regis Kopper, SIGGRAPH Asia 2023, Dec. 2023

3. *Approaches and Challenges to Virtual and Augmented Reality in Health Care and Rehabilitation, Joaquim* Jorge, Daniel Lopes and Pedro Campos, *SIGGRAPH Asia 2020, Virtual Conference, November 2020.*

4. *Approaches and Challenges to Virtual and Augmented Reality in Health Care and Rehabilitation,* *Joaquim* Jorge, Daniel Lopes and Pedro Campos, *SIGGRAPH Asia 2019, Brisbane Australia, November 2019*

5. *Designing immersive VR systems: from bits to bolts,* Luciano Soares, Miguel Sales Dias, Joaquim Jorge, Alberto Raposo and Bruno Araújo, IEEE VR **tutorial** March 2012, Irvine, USA

6. *Designing multi-projector VR systems: from bits to bolts,* Luciano Soares, Miguel Salles Dias, Joaquim Jorge, Alberto Raposo and Bruno Araújo, **tutorial** at SIBGRAPI 2010, April, Gramado, Brazil, August 30, 2010.

7. *Designing multi-projector VR systems: from bits to bolts,* Luciano Soares, Miguel Salles Dias, Joaquim Jorge, Alberto Raposo and Bruno Araújo, **tutorial** to Eurographics 2010, April, Norrkoping, Sweden.

8. *Designing multi-projector VR systems: from bit to bolts,* Luciano Soares, Miguel Salles Dias, Joaquim Jorge Alberto Raposo and Bruno Araujo, **tutorial** IEEE VR'10, March 2010, Boston, Mass, USA

9. *Designing multi-projector VR systems: from bits to bolts,* Luciano Soares, Miguel Salles Dias, Joaquim Jorge, Alberto Raposo and Bruno Araújo, **tutorial** on Eurographics 2008, April, Crete.

10. *Designing multi-projector VR systems: from bit to bolts,* Luciano Soares, Miguel Salles Dias, Joaquim Jorge Alberto Raposo and Bruno Araujo, **tutorial** IEEE VR'08, March 2008 Nevada, Reno, USA

Invited classes and seminars

1. Touching More than Two Dimensions: Having Fun with Tables, Workshop on Natural User Interaction: Current Challenges and Future Perspectives, DSAI 2012, Douro 19/22 July.

2. "SOUND, HAPTICS, and VIDEOtape", Touching the 3rd Dimension, Dagstuhl Workshop April 2012.

3. Using Sound in Multimodal User Interfaces, Presentation to the Singapore HCI Symposium, 27 Feb. 2012, Interactive and Digital Media Institute (IDMI), National University of Singapore.

4. Lecture on Calligraphic Interfaces, master's in computer graphics and Virtual Reality, University of Minho, June 8, 2006 (by Video Conference).

5. *Usability and Person-Machine Interfaces, One-day Seminar on the Postgraduate Information Systems (POSI) Course, IST / UTL February 12, 2005.*

6. *Building the World-Wide Community of Computer Graphics Educators*. SIGGRAPH 2004 Debate Forum, Los Angeles, California, USA, August 2004.

7. Guest lecture, Finals week of the Degree in Computer Graphics and Multimedia of ESTG, Viana do Castelo, April 27, 2004.

8. *Birds-of-a-feather meeting on Computer Graphics Education Materials Server,* SIGGRAPH'03, San Diego, California, USA, July 2003.

9. *"New User Interface Technologies for Mold Design",* guest talk**,** Molds Portugal 2002 International Conference, CENTIMFE, Marinha Grande 11 October 2002.

10. SIGGRAPH'02, *Birds-of-a-feather meeting on Resources for Computer Graphics Educators,* San Antonio, Texas, July 2002.

11. *Co-organizer, **Panel** on Universal Access and the Elderly "When I'm 64"* - Laura Leventhal, Rachelle Heller, Joaquim Jorge, CHI 2002, April 22, Minneapolis, MN.

12. Guest speaker, **Panel** on Education and Computer Graphics, Eurographics'2001. Manchester, United Kingdom, September 2001.

13. Lecture given at *EuroPrix Summer Academy,* Multimedia Interfaces and Product Design, Salzburg, Austria, 14 July 1999.

14. "Digital Publishing: Challenges and Techniques", Invited Seminar Master's Degree in Management and Information Systems, ISCTE, September 1997.

15. Organizer of the seminar "Computer Networks and Multimedia Technologies: The Future of Books and Libraries", inserted in Convent Conferences, Arrábida, October 1995.

Short courses and vocational training

2012-2013 Invited Professor Technical University of Vienna, Master Course on **Multimedia User Interfaces,** 1st October 2012 to 31st January 2013

2012 Multimedia Contents, Joaquim Jorge and Daniel Gonçalves, Specialization Course, POSTIT, DEEC / IST, May-June 2012

2010 Multimedia Contents, Joaquim Jorge and Daniel Gonçalves, Specialization Course, POSTIT, DEEC / IST, May-June 2010

2000 Organizer of the Course "Logistics, Transport and Information Technologies", *Vimeiro*, 4 and 5 February.

1999-2000 Invited Professor, Faculty of Engineering, University of Porto, Master Course on User Interfaces, September 1999 to July 2000.

1999 Visiting Professor, Technical University of Darmstadt (*Technische Universität Darmstadt),* Germany, where he taught postgraduate courses in Multimodal Interfaces at the University's Department of Informatics from April to July 1999.

1987 Co-author and teacher *Fundetec* course, "CAD & Computer Graphics", organized by Mário Rui Gomes.

1986 Conception and teaching of *Fundetec* course "Introduction to the UNIX Operating System", in collaboration with João Paulo Lopes da Cunha.

1984 Co-author and teacher of the *Fundetec* course, "Principles, Methods, Programs and Equipment in CAD / CAM Activities", by João Carlos Lourenço Fernandes.

1984 Collaborated in teaching the "Electronic Office" module of the course "The Manager and the Computer" attended by the entire CTT / TLP Board of Directors in 1984. This course was repeated three times in 1984 and nine times in 1985 for staff. both companies.

Scientific and pedagogical dissemination activities

- Roundtable APDC, Lisboa 2025
- Presentation Dell Meeting April 2025
- Presentation at CMS, AI and the Future of Labor Markets, February 2025
- Invited presentation to the Digital Geography Conference 2004, Lisbon, 14th July 2004.
- Guest Presentation at DEI / *Taguspark* Seminars on Research at IST, 25 Jan. 2004.
- Member of the Evaluation Jury of the Journalism Award promoted by *Fujitsu-Siemens Computers* of Portugal, 5th November 2003.
- Moderator, panel on "The future of user interfaces", 2nd Annual Forum on Information and Telecommunications Technologies, Santa Maria da Feira, Porto, May 20, 2003.
- President of the Organizing Committee of Multimedia XXI, and / or Portuguese Association for the Development of Communications (APDC), Lisbon, 7 November 2002.
- Member, Fujitsu-Siemens Journalism Award Evaluation Jury, 23 May 2002.
- Member of the Scientific Program Committee of MIUP'2001, Inter-University Programming Marathon, under the ACM SWERC (ACM Southwest Europe Competition), organized by the UP < `http://acm.up.pt/miup` > in 2001.

PROFESSIONAL ASSOCIATION AFFILIATIONS

One of the most significant strands of activity has been active participation in professional associations. The fruits of this activity have been particularly rewarding not only in terms of promotion, visibility and personal enhancement, but especially in terms of projection, visibility and collaboration between national and international groups in the areas of computer graphics, interactive systems and multimedia.

- Member of the Eurographics Association since 1986, co-opted for the Executive *Board* and *Publications Board* since September 1997, and part of the *Executive Board* since September 1999, actively participating in the Association's management and strategic definition activities. Among other activities, he represented the *Conference Monitoring Officer* with the organization of Eurographics'2001. **Elected to the Executive Committee** for two terms of three years in September 2000 and 2003 was *Online board Chair*, January 2001 to January 2002. Participated in workgroup Multimedia chaired by Nuno Correia (UNL). Co-founder with Marie-Paule Cani, John Hughes, Brian Wyvill and Takeo Igarashi of *Sketch-Based Interfaces and Modeling* Working Group he has chaired since 2004.
- ACM / SIGGRAPH and SIGCHI (since 1989). *Senior Member* since June 2007, **Distinguished Member since 2017**. Associate Member of the SIGGRAPH *Symposia Committee* in 2001, by

invitation of then Vice President Alan Chalmers. From March 2004 until 2011 f and z of the Committee on Education (*Educational Committee)* of SIGGRAPH, performing the liaison functions with the CGEMS project team, as directed by Colleen Case, chairman of the committee. Member of SIGGRAPH *Specialized Conferences Commitee* since 2008 and Chairman of the same committee since September 2014. Elected member of the ACM Europe Council since July 1, 2015-2020.

- President of the Portuguese Computer Graphics Group (GPCG) which he helped to create in 1988, being a member of the board from 1998 to 2000 and Chairman of the Board from February 2000 to October 2008. Under its influence and due to the work done, the group increased in number (from 12 members in 1997 to 67 in 2008), influence and projection. Noteworthy was the holding of EUROGRAPHICS'98, the staging of the 1st Iberian-American Computer Graphics Symposium (SIACG) in July 2002 in Guimarães, as well as the Computational Aesthetics conference in 2008 and Eurographics 2016 in Lisbon, as well as well as EG/IEEE Eurovis conference in 2019 in Porto.

- National Delegate to the *International Federation for Information Processing* (IFIP) Technical Commission 13 (TC13) *(Human-Computer Interaction) area* since June 2000. Member of *Working Group* 13.3 (Accessibility) February 2001 - December 2013. Noteworthy is the organization of INTERACT 2011 in Lisbon (conference co-chair). In 2014 it received the IFIP *Silver Core Award* for service to TC13.

- Institute of Electrical and Electronic Engineers (IEEE) / Computer Society since 1983, elevated to Senior Member in March 2000. **Distinguished Contributor (2022), Distinguished Visitor (2021).** Member of the Portuguese IEEE section in 2001. Member of the Visualization and Graphics Technical Committee since 2012. Elected member of IEEE/CS Board of Governors (2023-2025)

- European Association of Cognitive Ergonomics, 2007 -2009.

- APDSI - Association for Promotion and Development of the Information Society 2007-14.

- International Association for Pattern Recognition IAPR TC-10 (Graphics Recognition) and Portuguese Pattern Recognition Association (APRP) since 1999.

- International Unix Users Association (Usenix) (1991-2001).

- Portuguese Computer Association (API) - 1984–2001.

- European Academy of Digital Media 2001.

- International Forum of Portuguese Researchers 2001.

AWARDS AND DISTINCTIONS

- **IEEE Fellow 2025**
- **IEEE** Computer Society **Golden Core Award 2024**
- *Elected Member Libre,* French National Academy of Surgery 2022
- **IEEE** Distinguished Visitor, 2022
- **IEEE** Distinguished Contributor, 2021
- **Scientific Publication Award** University of Lisboa / Caixa Geral de Depósitos 2020
- Co-Author: "Magic Carpet: Interaction Fidelity for Flying in VR", IEEE Transactions on Visualization and Computer Graphics, **2020 José Encarnação Award** for the best article published in an International Journal, Eurographics Portuguese Chapter
- Co-author: "A Survey on 3D Virtual Object Manipulation: From the Desktop to Immersive Virtual Environments", Computer Graphics Forum, **2018 José Encarnação Award** for the best article published in an International Journal, Eurographics Portuguese Chapter, **2018**
- *Honorable Mention*, Soraia Paulo et al, 3D Reconstruction of CT Colonography Models for VR/AR Applications using Free Software Tools, MICCAI 2018 Educational Challenge, Granada, Spain
- *ACM Distinguished Member* since 2017.
- Pedro Duarte Parreira, MSC Thesis: "Voxel Data Explorer: Interactive Exploration of 3D Images", Fraunhofer Challenge 2016 Winner
- Co-author: "Accelerating Occlusion Rendering on a GPU via Ray Classification", (IJCICG) 6 (2). 2016 José Incarnation Prize for the best article published in International magazine, Eurographics Portuguese Chapter, 2016
- **ACM Distinguished Speaker** (dsp.acm.org) September 2015 -September 2023.
- **IFIP Silver Core Award** Jan 2014.

- *Best Paper Award* "Engaging Engineering Students with Gamification", VS-GAMES 2013**.**
- *Ivan Petrovic Best Paper Award* eCAADE, Prague, Sep 2012.
- *Best Paper Award,* IEEE Computer Graphics and Applications 2011.
- Co-author *Best Student Paper Award,* ACM ASSETS 2011
- Co-Author Peoples' Choice *Best Student Paper Award,* IFIP INTERACT 2011
- Co-author, *Best Student Paper Award* ASSETS 2010
- *Fellow,* **Eurographics Association,** April 2010.
- Co-author, *Best Student paper Award,* 17th Portuguese Computer Graphics Meeting, October 2009
- Honorable Mention, *Best Paper Award, Fraunhofer Institute for Computer Graphics,* 2007.
- *Senior Member* of **ACM** since June 2007.
- Fujitsu-Siemens Prize for best course work awarded to students André Campos and Pedro Branco for their 3GM work in March 2004.
- Jaime Filipe Award (Accessibility) Portuguese Ministry of Social Security, to him and students André Campos and Pedro Branco for their 3GM accessible phone touch keyboard in November 2003.
- Honorable Mention in Fujitsu-Siemens Prize for Best capstone project in the Computer Graphics and Multimedia Area awarded to TFC *JavaSketchit,* IST, 2002.
- Biography published in *Marquis Who's Who in the World,* editions 2001- 2012, *Who's Who in Science and Engineering,* 2005-2012 and *Who's Who in European R & D,* KG Saur Verlag GmbH.
- *Senior Member* of **IEEE** since March 2000.
- Best article and young researcher award for article co-authored with Manuel João Fonseca, 9th Portuguese Meeting of Computer Graphics, *Marinha Grande,* Feb. 2000.
- JNICT (Portuguese Science Fund) PhD scholarship to the USA (Science program), 1988.

PEDAGOGICAL ACTIVITY

He was an Assistant Intern at the Instituto Superior Técnico from April to September 1997. He obtained equivalence to the Doctorate degree from UTL in July 1997. He has been a Professor at Instituto Superior Técnico since September 1997, with a permanent appointment in October 2002. foundation of the Department of Computer Engineering (DEI) in 1998 where coordinates the scientific area of Computer Graphics and Multimedia.

The educational activity highlights the redesign of the *curriculum* of Computer Graphics Degree in Computer Science and Computer (LEIC), which promoted the use of new base modeling tools to the in VRML a practical level and theoretical aspects where he determined, together with the other professors in the area, to focus on three-dimensional computer graphics to the detriment of traditional aspects of 2D computer graphics and window management systems.

Noteworthy was the creation of a Master's degree course in Intelligent Multimodal Interfaces and the renewal of the Human Machine Interfaces (HMI) chair of which he was responsible from 1999 to 2001, guiding the curriculum in the direction of User-Centered Design and Usability as User Experience engine, in line with the latest developments in the area of *Human-Computer Interaction*. He also participated in the redefinition of objectives and strategy of the area, action described in the article "Restructuring Computer Graphics & Visualization Curriculum at IST" and in the communication "The Teaching of Computer Graphics at *Instituto Superior Técnico*". He also participated in the definition of the Undergraduate degree on multimedia and interactive systems' curriculum, in May and June 2000.

Another important strategic aspect is the full adoption of the *World-Wide Web* as a vehicle of support and pedagogical diffusion in all the disciplines of Computer Graphics and Multimedia, evident in the places of support for the various chairs in the area he taught, as well as adopting a consistent and homogeneous brand image. Since 1998, the Computer Graphics and HMI courses have been using this medium to communicate with students, in a strategic orientation that was one of the main drivers. The process of curricular maturation in the field of CG is currently at a new stage with the elaboration of a textbook, in collaboration with other teachers in the area [1] scheduled for completion in 2002. The strategic orientation in teaching in the area of CG and Multimedia has seen new impetus with the beginning of a collaborative project with Universities from six other countries (England, Spain, Germany, Brazil, Venezuela and Mexico) with emphasis on distance learning and pedagogical development through Information Technologies

Courses Created

- Virtual Reality in master's in information and Computer Engineering (MEIC) of the Instituto Superior Técnico in the 1st Semester of 2018-2019. 45 students enrolled.
- Multimedia Content Production, taught to LEIC 4th Year students at TagusPark (Multimedia Systems branch), 2nd Semester 2003/2004 (DEI / IST). The mixed-type subject (Master and Bachelor) was taught to 13 undergraduate and three master students. This course also had the particularity of using multimedia (audio, video and synchronized slides) as teaching and archival materials in a pioneering experience at national level.
- Intelligent Multimodal Interfaces, subject taught to Master and 5th Year students, LEIC, 1999/2000 (DEI / IST). The Mixed-type subject (Master and Bachelor) was taught to six students in 2000. The 2001 edition was attended by ten students from LEIC and four from MEIC. The 2002 and 2003 editions had 12 and 14 students respectively.

Restructured Courses

- Computer Graphics, LEIC, 3rd Year, 1999 (DEI/IST), Curricular reformulation in both practical and theoretical classes. Responsible for the discipline on the restructuring front, where he taught to 120 LEIC 2nd Year students in the 2nd semester of 2001.
- Computer Graphics, LEIC, 2nd and 3rd year 2001. Lecturing of theoretical and practical classes (Laboratory). Teaching of practical classes in 2003 (2nd Semester).
- Responsible for the Human Machine Interface Chair (DEI / IST), 4th Year, LEIC, 1999 and 3rd Year, 2000, 2001, 2002 and 2003, teaching theoretical and laboratory classes. The course, now called Human-Machine Interfaces (*IPM* in Portuguese), was attended by 305 students in 2003, when it was first taught horizontally at LEIC.

Subjects taught

- Introduction to Programming, LEIC, 1st Year, 98/99 (DEI / IST), conducted by João Pavão Martins. It supported the restructuring of the curriculum in the first year the Scheme programming language was used.
- Object Oriented Programming, LEIC, 2nd Year, 1st Semester 98 (DEEC). Regent: J. Delgado.
- Database Project, LEIC; 3rd Year, 2nd Semester 97/98 (DEEC). Regent: Pedro Sousa.
- Information Systems and Databases, 2nd Semester 96/97 (DEEC). Regent: Pedro Sousa.

ACADEMIC MANAGEMENT ACTIVITIES

After an initial period as a professor of the Department of Electrical and Computer Engineering (DEEC), first as a trainee assistant and later as an assistant professor, he moved to the Computer Science Department (DEI), upon its founding at the invitation of Mário Rui Gomes integrating the area of Computer Graphics and Multimedia. Academic management activities from 1998 to 2000 were directed to the organization and structuring of the area. In 2000, at the invitation of the then president of DEI, José Alves Marques, he prepared a proposal for the regulation of the doctoral program. In October 2000, he was elected to the executive committee of the DEI. From 2000 to 2002, he became involved in the growth and consolidation of the Department, participating in various working committees, as part of an ambitious program of activities proposed by the then president of DEI, José Tribolet. These initiatives have been consolidated between 2002 and 2003 under the chairmanship of João Pavão Martins.

- Member of the Scientific Committee of MISE - Master in Business Information and Systems (Open University (UAb) + IST) May 2013-May 2023. MISE is an innovative initiative in Distance Learning in partnership with IST and UAb which he was one of the key drivers.
- Member of the Scientific Committee of the Doctorate in Computer and Computer Engineering 2010-
- Member of the Scientific Committee of the Master's in informatics and Computer Engineering 2010-2014
- Coordinator of Computer Graphics and Multimedia area at DEI / IST since January 2007.
- Elected member of the UTL Senate between 2010 and 2013.
- DEI Vice President for <u>Bachelor and Masters Degrees, January 201 1 - September 2012.</u>
- DEI Vice-President for <u>Scientific Postgraduate, between January 2008 and December 2010.</u>
- <u>Member of the EIO Executive Committee</u> responsible for Infrastructure, Jan 2007 / Dec 2008.

- Member of the Executive Committee of DEI as Coordinator of the Scientific Postgraduate Program, from October 2002 to September 2004.
- Elected member of the DEI Executive Committee from October 2000 to October 2002, and from February 2005 to December 2006, representing the Computer Graphics and Multimedia area. He has participated in nine working committees, actively engaging in the department's administrative and academic structuring, with particular attention to postgraduate training, improvement of teaching conditions and curriculum innovation.
- DEI / IST Doctoral Program Coordinator, October 2000 - September 2004. Responsible for drafting Regulation and creation of the new DEI doctoral program. This regulation includes, besides a curricular component, the presentation of a formal thesis proposal and the constitution of thesis work monitoring committees. The program admitted 20 applicants in 2001. In 2002 a protocol was signed with the Orient Foundation as part of an internationalization initiative for this program.
- Coordinator of DEI 's Master's Degree Program in Computer and Computer Engineering from October 2000 to September 2004, leading the restructuring of the program, which reduced the number of scientific areas to three and simplified the curricular structure. Supervised the process of admission of new candidates for the academic year 2001/2002. The master's degree was remarkably successful with the submission of 53 applications in 2001, of which 37 were withheld. In 2002, the number of applications exceeded *numerus clausus* for the first time: with 68 candidates, of which 56 were accepted.
- Member of the Senate of the Scientific Council of IST, as Coordinator of the DEI Masters and Doctoral Programs between October 2000 and September 2004.
- He participated in the study committee of the new Degree in Information Systems and Multimedia Engineering (LESIM) from DEI, between May and June 2000, collaborating in the definition of LESIM's Interactive and Multimedia Systems branch. The degree began activities in October 2001 with 120 students and was renamed LEIC-Taguspark in 2002/2003.
- Coordinator of the RNL / IST Laboratory Improvement Team, conducting negotiations with suppliers (Microsoft, Compaq, Fujitsu-Siemens, Siemens and Sun Microsystems) and telecommunications operators (TMN, OniWay, Vodafone) to provide equipment for sponsorship. These resulted in agreements totaling **€ 30** in December 2001, renewable for three years to provide computer and network equipment to IST's New Alameda and TagusPark Campus Network labs for a total of **€ 80K.** reached in 2003. In 2002, equipment was provided by SUN for **300 K €,** for the equipment of LEIC laboratories in TagusPark and Alameda thanks to the activity developed in conjunction with Lourenço Fernandes.

SERVICES TO THE ACADEMIC AND SCIENTIFIC COMMUNITY

Thanks to the scientific activity he has been developing and also in recognition of the competence in the area of Computer Graphics and Multimedia and also in the scope of collaborative activities with national groups in other universities, he has been invited, both as a voting member and as leading discussant, to participate in many national (30+) and international (15) academic theses committees, with emphasis on international activities where he has often been asked to advise on promotion and tenure committees (29 to date). He has also been asked to produce 30 individual assessments on Visa Applications, Tenure and Promotion for US, UK and European Universities.

Participation in international theses and doctoral evaluation committees

1. **External Member,** Pedro Moreira, Universidade de Trás os Montes e Alto Douro, January 2025
2. **External Member,** Tara Butler, Ecole Polytechnique, Paris, Sept 2023, Supervisor: Marie-Paule Cani
3. **Chair,** Francisco Afonso Raposo, IST/UL, Lisboa, Portugal, June 29, 2022
4. **External Member,** Hugo Brument, PhD defense, Université de Rennes, Dec 3, 2021, Supervisor: Ferrán Argelaguet
5. **Chair**, Pradeeban Kathiravelu PhD Doctoral Jury, Software-Defined Systems for Network-Aware Service Composition and Workflow Placement. Advisor: Luís Veiga, IST/UL Portugal, and Peter Van Roy, *UCLouvain*, Belgium July 2019
6. **External Member**, Eduardo Castro e Costa, Pennsylvania State University, University Park, USA, 4-12-2017

7. **External Member** PhD Rorik **Hendrickson** (Sup. Karan Singh), CS Dept **Univ. Toronto,** 25 Janeiro 2017

8. **External Rapporteur,** thesis by Alexandra Bonnici, **University of Malta,** December 2015

9. *External, PhD Thesis by Rémi Brouet, Multi-point Gestational Interactions and Deformable Gender for 3D Rendering on Tactile Screen, **University of Grenoble,** 12 March 2015*

10. **External Member,** Doctoral Thesis by Yosra Rekik, **Université de Lille I,** 10 December 2014

11. **External**, PhD Thesis of Hongmin ZHU, **University of Macau,** 31 October 2014

12. **External Member,** PhD Jury of Rui HU, Faculty of Engineering and Physical Sciences, **University of Surrey,** UK, 2 July 2013.

13. **External Member,** Endre MØlder Lidal, **University of Bergen,** Norway, June 25, 2013.

14. **External Member** Doctoral Jury of Aurélie Cohé, **Université de Bordeaux** I, 16 December 2012.

15. **External Assessment** on the PhD proposal of François Beuvens, *Université Catolique de Louvain,* Louvain, Belgium, November 2010 (Advisor: Jean Vanderdonckt)

16. *President,* PhD Committee of Joan Mas Romeu, *Universitat Autònoma de Barcelona,* June 2010.

17. **External assessment** on the Doctoral Thesis of Francisco Javier Melero Rus, **University of Granada,** August 2007

18. *External, PhD Thesis "Mobile Computing and Multimodal Interfaces", Pavel Žikovský, **Czech Technical University of Prague,** Prague, Czech Republic, 16 March 2007.*

19. *External, "Artificial Perception of Linear Drawings", Ana Piquer Vicent, Department of Technology, **Univ. Jaume I of Castellón,** Spain, 7 November 2003*

Project proposal and grant application reviewing

1. International Evaluator, PhD fellowships strategic basic research, Research Foundation - Flanders (FWO), Brussels, Belgium, seven years from 2018- 2024

2. Proposal Evaluator for Ministry of Business Innovation and Economy (MBIE) New Zealand, 2022,

3. Proposal Evaluator for National Innovation Agency, AnI, Lisbon, March 2019.

4. Expert evaluator "la Caixa" Doctoral fellowships, Spain March 2018

5. European Research Council Proposal Evaluator (ERC Consolidator Grants) June 2017.

6. Expert Evaluator, KILLAM Research Fellowship, Canada Council for the Arts, Dec 2016.

7. European Research Council (**ERC** Starting Grants) Proposal Evaluator May 2016.

8. Portuguese Science Foundation (**FCT**) Project Reviewer (Final Implementation Reports), July 2014, 2015 and 2016

9. FCT PhD Scholarship Evaluation Panel, Lisbon, November 2013.

10. Portuguese National QREN Project Reviewer, October 2013

11. Evaluation of FCT Cooperation Bilateral Actions, October 2012.

12. FWF Austrian Science Fund, February 2012. Review of project proposals

13. FCT Cooperation Bilateral Actions Evaluator, October 2011.

14. Invited Reviewer at the *European Research Council,* September 2011.

15. FCT PhD Scholarship Evaluation Panel, Lisbon, July / Oct 2010, July / Oct 2009, July / Oct 2007.

16. First Call for Projects evaluator of the 7th EC Framework Program, Brussels, June 2007.

17. Israel Science Foundation *(ISF) (http://www.isf.org.il)* Guest Evaluator in the field of Personal Information Management (PIM), June 2005.

18. The Technology Foundation STW *(http://www.stw.nl)* Guest Evaluator of the Dutch funding agency for Technology Research, March 2005.

19. *USA National Science Foundation* (NSF) in 2000, 2001 and 2003 under the ITR program

Advisory Boards

XTREME Project (Horizon 2030) – European Project on VR for Performative Arts, 2023-
Swissinnovationvalley.com, an initiative to support technology startup incubation.

PROFESSIONAL AND RESEARCH ACTIVITY

In parallel to the university career he pursued since 1996, he has been working as a researcher at INESC-ID in Lisbon and as a scientific and technical consultant for various national and international organizations and companies. This activity, which began in 1984, presents the most relevant initiatives, with special emphasis on activities such as project manager, appraiser and consultant.

2018- 2024 Senior Researcher Graphics and Interaction Research Group

After a restructuring in 2017, the Graphics and Interaction group went to twelve PhD researchers: Joaquim Jorge, Daniel Gonçalves, João Pereira, Alfredo Ferreira, Sandra Gama, Anderson Maciel, João Moreira, António Leitão, Catarina Moreira, Inês Caetano, Diego Nehab and Francisco Fernandes. Jorge was elevated to IEEE Fellow in 2024. He has been a member of the advisory board of the XTREME project since 2023.

2015- 2017 Representative of the Intelligent Interactive Systems Action Line at CCIL

In December 2015, the Intelligent Multimodal Visualization and Interfaces group went to eight PhD researchers: Joaquim Jorge, Daniel Gonçalves, João Pereira, Alfredo Ferreira, Sandra Gama, Hugo Nicolau, Daniel Lopes and Francisco Fernandes (post-doc). the activity of science around medical applications visualization and interactive computer graphics. He is a member of the Advisory Board of Swissinnovationvalley.com, an initiative to support technology startup incubation.

2008-current Coordinator of the Visualization and Intelligent Multimodal Interfaces Group (VIMMI), INESC-ID, Lisbon

In November 2007 the Intelligent Multimodal Interfaces group merged with Professor DiGrasys group João António Madeiras Pereira, reinforcing scientific competences in visualization and interactive virtual environments. From two PhDs at the end of 2006, the group went on to five PhDs after Daniel Gonçalves's PhD, the merger and hiring of Pauline Jepp in post-doc regime, with the corresponding expectation of increasing scientific production and strengthening the international visibility of the novel group, which acquires greater expressiveness with the component of visualization, virtual environments and simulation, complementing the valences of the research group IMMI.

2000– 2007 : Coordinator of the Intelligent Multimodal Interface Group (IMMI), INESC-ID Lisboa.

In July 2000 and in recognition of the autonomy of the scientific area, INESC-ID Lisboa was created, the Intelligent Multimodal Interfaces group under the direction of Joaquim Armando Pires Jorge. In addition to projects already underway or starting in the area of multimodal interfaces, other initiatives deserve mention:

- First Call for Projects evaluator of the 7th EC Framework Program, Brussels, June 2007.
- Guest Participant, IST-FET Workshop on"Presence and Interaction in Mixed-Reality Environments", Darmstadt, 24 February 2004.
- Evaluator and Rapporteur of the Evaluation Committee of the 2nd Call for Projects of the eContent Program (Multilingual Program), Luxembourg, February 2002.
- Member of the Coordinating Committee of the Scientific Council of INESC-ID Lisboa from January 2002 to June 2003.
- At the end of 2001, participates in the formation of the Collaborative Virtual Environments Laboratory within the scope of INESC-ID Lisboa, integrating the executive committee. This research unit brings together twelve PhD researchers aiming to create critical mass in the areas of Intelligent Environments and Mobile and Ubiquitous Computing with a strong Software Engineering component. The unit has been formally in existence since November 2001.
- European Commission invited evaluator for the IST program (CPA 2 - personalization and multimedia content), February and November 2001.
- ITR Guest Reviewer, National Science Foundation, Alexandria, VA, February 2001 in the area of Human-Computer Interaction.

1999–2000: FhG-IGD Consultant (Fraunhofer-gesellschaft - Institute of Computer Graphics), Darmstadt, Germany.

- Guest Evaluator of the EC IST (eContent) Program, 17-22 July 2000.
- Invited Participant, *Workshop and* Call *Preparation* 2001 *Meeting* under the EC 5th Framework Program. (*IST Consultation workshop),* Brussels, 26 May 2000.
- Guest participant, *IST Personalization Consultation meeting,* Luxembourg, 19 May 2000.

- Visiting Evaluator of *National Science Foundation* ITR Program Proposals, Alexandria, VA, USA, February-May 2000. *Human-Computer Interaction area,* where he evaluated project proposals up to $ 10 million.
- Founding Member, EuroPrix Scholars Network, 1999.
- Member of the Executive Board of Eurographics Association (September 1999 - January 2002) and Monitoring Officer (Eurographics 2001).
- Member of the Board of the Portuguese Computer Graphics Group since February 1998. Chairman of the Board since February 2000.
- Member of the Europrix MultimediaArt99 Jury, Salzburg, Austria, July 1999.

1995 - 1998 Researcher, INESC (Institute of Systems and Computer Engineering)
- Member of the Executive Board of the Eurographics Association since September 1997 - 2006, *Publications Board (October 1996 - January 1999).*
- Portuguese expert in the EUREKA Community Program - Multimedia Initiative, 1997.
- Project Coordinator of Internet Multimedia Publishing (SAGRES).
- Guest Evaluator of the Community Program INFO2000 (Information Engineering and Telematic Applications), Luxembourg, September 1996.
- Member of the Europrix MultimediaArt98 Jury, Salzburg, Austria July 1998.
- Organizer of the seminar "Computer Networks and Multimedia Technologies: The Future of Books and Libraries", inserted in Convent Conferences, Arrábida, October 1995.
- Business Consultant in the fields of electronic catalogs, multimedia publishing and Internet information systems. Project preparation and monitoring in these areas.
- Organizer and Editor-in-Chief of the first professional e-publishing magazine in Portugal (`http://virtual.inesc.pt`)

1989–1994 Postgraduate studies, *Computer Science Department,* Rensselaer Polytechnic Institute, Troy, NY, USA.
- Defense of the Doctoral Thesis 22 December 1994, to be published in May 1995.
- Participation in the organization of the *Joint Conference on Information Sciences,* Pinehurst, NC (October 1993).
- Collaborated as a local assistant and facilitator on the graduate course"*Designing User Interfaces*", led by Michael Danchak of the *Rensselaer Polytechnic Institute.* The course was taught by distance learning from Hartford, CT, to five geographically dispersed locations in New York and Connecticut (IBM, GE, RPI, HGC) using teleconferencing and teleprocessing equipment (PictureTel) during the spring. of 1993.
- Assistant to Ephraim Philip Glinert in the course"*Computer Graphics & User Interfaces* "during the spring semester of 1992 in meeting the postgraduate teaching experience requirements.
- Administrator of lusa-net and pt-net, two e-mail networks for Portuguese postgraduate students abroad, since its inception in 1989 (lusa-net) and pt-net (replaced Pedro Veiga in 1993) to date.

1984–1988 Researcher, INESC
- Development of Graphic Standards Conformity Testing (ISO-CGI) (1987-1989) under the EEC CTS-2 program. Participation in the multinational project as head of INESC's research team in the early stage of specification and development, until departure to the US. The project was successfully completed in 1991.
- Participation in standardization activities at ISO JTC1 / SC24 / WG4 meeting as national representative, CGI: Computer graphics - Interfacing techniques for graphical devices, Tucson, Arizona, July 1988.
- Participation in the program / organization committee of the 1st Portuguese Computer Graphics Meeting (July 1988).
- Visiting Researcher at the Computer Graphics Center in Darmstadt, Germany (ZGDV) (October - November 1987), where he studied the adaptation of a Human Machine Interface (THESEUS) management system for Unix using X-window version 11.
- Responsible, CAD System Design and Development project for the Clothing Industry (CORTE project), (1985-1987) including the functions of mold design / scaling, stripe editing (manual and automatic). The project was developed in C language, using DBMS Informix / SOL and X-window in

Unix / System V environment. He headed the development team (five programmers) as lead researcher. The prototype system was used between 1987 and 1992 in a northern garment factory.

- Unix system adaptation to an Intel 8086 microprocessor-based computer (1986), in collaboration with elements of the ELENA project. Intel microprocessor under XENIX operating system used as development platform.
- System Support: minicomputer Data General MV / 8000 under AOS / VS operating system and various compu ta the res under UNIX operating system, namely DG / UX, IBM RT / PC under AIX 2.1 and Sun under SunOS.
- Development of a package of graphic device interface routines (1985) for COBA SA. The subroutine package allowed engineering drawings to be previewed on inexpensive graphical terminals and later generated to 1: 1 scale on a pen plotter.
- Development of electronic component schematic graphics editors (1984) in PL / 1 using a Data Core / Reddog-compliant graphics subroutine package as an end-of-course project.
- Adaptation / Development of CAD programs for Printed Circuit Boards (PCB) (1984-1986) Schematic including editors for electronic circuits, components placement (*Placement*), conductive tracks forwarding (*routing*) Generation and masks for fabricating the PCB. Modules written in PL / I language on the MV / 8000 computer under the AOS / VS system. The mask generation component issued a command set for a Gerber CNC photoplotter. The system described was used in the production of the first multi-layer printed circuit board designed and developed in Portugal.

1983 Consultant / Programmer National School of Public Health, Lisbon.

- Development of real-time electrocardiogram (ECG) data collection applications using a microcomputer and pattern recognition techniques for heart rate measurement in occupational health experiments. The experimental set was later adapted to work on an Apple II computer at the Faculty of Medicine, University of Paris VI.

1982 Interdisciplinary Complex **Consultant / Programmer** at Instituto Superior Técnico

- Development of programs for X-ray diffractometer control used to determine the crystal structure of materials. FORTRAN programming and step-by-step electric motor control machine code using an Intel 8080-based microcomputer. As part of the same work, he adapted several FORTRAN IV data analysis programs written from CDC / 6600 to an IBM 360/ 44 computer.

1980-1984 Student Consultant Calculation Center of the Universities of Lisbon (CCUL)

- Programming Language Consultant (FORTRAN 66-77, Basic, PL / I) for users of CCUL computer equipment (IBM 360/44) under the EDOS / 360 operating system.

Patents

"Multifunctional and multimodal touch interface for entering text on portable devices for the visually impaired or vocal.", Pedro Branco, André Campos and Joaquim Jorge, **PT 103062 of 21/2,** submitted January 2004. Industrial Property Bulletin N 10/2004.

The activity of scientific publication has become an important element in curricular terms especially after the assumption of academic career consistently and consequently in recent years. The results obtained from the research work have allowed to validate some of the ideas still prior to the doctorate and that only the progress of computer equipment has made it possible to approach in interactive terms in recent years. This is especially true of calligraphic interfaces where the computability of personal computers has only recently allowed the development of robust applications, both effective and efficient. Publication activity has focused on international scientific conferences, as can be seen from the publications summary table, which has considerably increased the projection and visibility of research results. The impact of publications is evident on the Google Scholar page, which lists 12000+ citations, 192 publications with more than 10 citations and 56 publications with 56 or more citations.

PUBLICATION SUMMARY: h-index 56 h-10 index: 203 (12500+ citations Google Scholar)

Journal + Archival Papers			Conference Proceedings		Books			Inv. Talks	Tutorials
International	LNCS	Spec. Issues	International	Workshop	Author	Edited	Chapters		
J91	**L27**	**5**	**176**	**37**	**4**	**20**	**17**	**50**	**10**

References

Articles in scientific journals

J1. Zavichi, M.; Santos, A.; Moreira, C.; Maciel, A.; Jorge, J. Gaze–Hand Steering for Travel and Multitasking in Virtual Environments. Multimodal Technol. Interact. 2025, 9, 61. https://doi.org/10.3390/mti9060061

J2. Torres, J.; Mulligan, C.; Jorge, J.; Moreira, C. PROMPTHEUS: A Human-Centered Pipeline to Streamline Systematic Literature Reviews with Large Language Models. Information 2025, 16, 420. https://doi.org/10.3390/info16050420

J3. Hussain, K.; Moreira, C.; Pereira, J.; Jardim, S.; Jorge, J. A Comprehensive Literature Review on Modular Approaches to Autonomous Driving: Deep Learning for Road and Racing Scenarios. Smart Cities 2025, 8, 79. https://doi.org/10.3390/smartcities8030079

J4. Chihcheng Hsieh, Catarina Moreira, Isabel Blanco Nobre, Sandra Costa Sousa, Chun Ouyang, Margot Brereton, Joaquim Jorge, Jacinto C. Nascimento, DALL-M: Context-aware clinical data augmentation with large language models, Computers in Biology and Medicine, Volume 190, 2025, 110022, ISSN 0010-4825, https://doi.org/10.1016/j.compbiomed.2025.110022

J5. Fidalgo Catarina G. , Yan Yukang , Sousa Mauricio , Jorge Joaquim , Lindlbauer David, Exploring AR hand augmentations as error feedback mechanisms for enhancing gesture-based tutorials, Frontiers in Virtual Reality, Volume 6 – 2025, https://doi.org/10.3389/frvir.2025.1574965

J6. Intelligent systems in healthcare: A systematic survey of explainable user interfaces, João Cálem, Catarina Moreira, **Joaquim Jorge**, Computers in Biology and Medicine, V180, September 2024, 108908, https://doi.org/10.1016/j.compbiomed.2024.108908

J7. Extended Reality and Artificial Intelligence's Ethical Crossroads: From Sensory Manipulation to Creative Disruption, **J Jorge**, W Hürst, Computer 57 (9), 14-20, 2024 https://doi.org/10.1109/MC.2024.3426548

J8. SelfReDepth: Self-Supervised Real-Time Depth Restoration for Consumer-Grade Sensors, A Duarte, F Fernandes, JM Pereira, C Moreira, JC Nascimento, **J Jorge**, Journal of Real Time Image Processing (SpringerNature) July 2024 https://doi.org/10.1007/s11554-024-01491-z

J9. Studying how social relationships affect peer assessment in an E-learning environment, F Sousa, T Alves, S Gama, **J Jorge**, D Gonçalves, Learning Environments Research, June 2024, https://doi.org/10.1007/s10984-024-09505-0

J10. Benchmarking Instance-Centric Counterfactual Algorithms for XAI: From White Box to Black Box, C Moreira, YL Chou, C Hsieh, C Ouyang, J Pereira, **J Jorge**, ACM Computing Surveys, June 2024 https://doi.org/10.1145/3672553

J11. Immersive Virtual Colonography Viewer for Colon Growths Diagnosis: Design and Think-Aloud Study, J Serras, A Duchowski, I Nobre, C Moreira, A Maciel, **J Jorge**, Multimodal Technologies and Interaction 8 (5), 40 2024, https://doi.org/10.3390/mti8050040

J12. EyeXNet: Enhancing Abnormality Detection and Diagnosis via Eye-Tracking and X-ray Fusion, C Hsieh, A Luís, J Neves, IB Nobre, SC Sousa, C Ouyang, **J Jorge**, C Moreira, Machine Learning and Knowledge Extraction 6 (2), 1055-1071 2024, https://doi.org/10.3390/make6020048

J13. Online Fake News Opinion Spread and Belief Change: A Systematic Review, F Altoe, C Moreira, HS Pinto, **JA Jorge**, Human Behavior and Emerging Technologies 2024, https://doi.org/10.1155/2024/1069670

J14. How Personality Traits Affect Peer Assessment in Distance Learning, T Alves, F Sousa, S Gama, **J Jorge**, D Gonçalves, Technology, Knowledge and Learning 29 (1), 371-396, 2024 https://doi.org/10.1007/s10758-023-09694-2

J15. Shedding Light on AI in Radiology: A Systematic Review and Taxonomy of Eye Gaze-Driven Interpretability in Deep Learning, Neves, J., Hsieh, C., Nobre, I. B., Sousa, S. C., Ouyang, C., Maciel, A., Duchowski, A., **Jorge, J.**, & Moreira, C., European Journal of Radiology, 172, 111341. 2024 https://doi.org/10.1016/j.ejrad.2024.111341

J16. A Research Agenda for NFTs, C. Mulligan, T. Silva and **J. Jorge**, IEEE *Computer*, vol. 56, no. 12, pp. 80-90, Dec. 2023, https://doi.org/10.1109/MC.2023.3271021

J17. How Personality Traits Affect Peer Assessment in Distance Learning, Alves, T., Sousa, F., Gama, S. et al. Tech Know Learn 29, 371–396 (2024). https://doi.org/10.1007/s10758-023-09694-2

J18. Representing uncertainty through sentiment and stance visualizations: A survey, Bárbara Ramalho, **Joaquim Jorge**, Sandra Gama, Graphical Models, Volume 129, 2023, 101191, https://doi.org/10.1016/j.gmod.2023.101191.

J19. A Survey on Remote Assistance and Training in Mixed Reality Environments, Catarina Fidalgo, Yukang Yan, Hyunsung Cho, Maurício Sousa, David Lindlbauer, **Joaquim Jorge**, IEEE Transactions on Visualization and Computer Graphics, February 2023

J20. Saliency detection for large-scale mesh decimation, Rafael K dos Anjos, Richard A Roberts, B Allen, **J Jorge**, Ken Anjyo, Computers & Graphics, February 2023

J21. Sticks and STONES may build my bones: Deep learning reconstruction of limb rotations in stick figures, Francisco Fernandes, Ivo Roupa, Sérgio B. Gonçalves, Gonçalo Moita, Miguel Tavares da Silva, João Pereira, **Joaquim Jorge**, Richard R. Neptune, Daniel Simões Lopes, Pattern Recognition Letters, Volume 165, 2023, Pages 138-145, https://doi.org/10.1016/j.patrec.2022.12.012

J22. Towards VR in VR: Assessing Engagement and Social Interaction in a Virtual Conference, C Moreira, FPM Simões, MJW Lee, ER Zorzal, RW Lindeman, JM Pereira, Kyle Johnsen, **Joaquim Jorge**, IEEE Access, Dec. 2022

J23. Early Prediction of Students' Final Grades in a Gamified Course. Nabizadeh, A.H., Goncalves, D., Gama, S. and **Jorge, J**. *IEEE TRANSACTIONS ON LEARNING TECHNOLOGIES*, *15*(3), pp.311-325. 2022 https://doi.org/10.1109/TLT.2022.3170494

J24. Controlling camera movement in VR colonography, SF Paulo, D Medeiros, D Lopes, **J Jorge**, Virtual Reality, 2022. https://doi.org/10.1007/s10055-021-00620-4

J25. Towards Augmented Reality for Corporate Training, BR Martins, **JA Jorge**, ER Zorzal - Interactive Learning Environments, 2021, https://doi.org/10.1080/10494820.2021.1879872

J26. Counterfactuals and causability in explainable artificial intelligence: Theory, algorithms, and applications, YL Chou, C Moreira, P Bruza, C Ouyang, **J Jorge**, Information Fusion, December, 2021, https://doi.org/10.1016/j.inffus.2021.11.003

J27. How do Students Behave in a Gamified Course? A Ten-Year Study, AH Nabizadeh, **J Jorge**, S Gama, D Gonçalves, IEEE Access, vol 9, Mar. 2021, https://doi.org/10.1109/ACCESS.2021.3083238

J28. Laparoscopy with Augmented Reality Adaptations, Ezequiel R Zorzal, José M Gomes, Maurício Sousa, Pedro Belchior, Pedro G Silva, Nuno Figueiredo, Daniel S Lopes, **Joaquim Jorge**, Journal of Biomedical Informatics, 2020 https://doi.org/10.1016/j.jbi.2020.103463

J29. Enabling parametric design space exploration by non-designers, E Castro e Costa, **J Jorge**, AD Knochel, JP Duarte, AI EDAM-Artificial Intelligence for Engineering Design, Analysis and Manufacturing, Cambridge University Press, April 2020 https://doi.org/10.1017/S08900604200001

J30. Adaptive learning path recommender approach using auxiliary learning objects, AH Nabizadeh, D Gonçalves, S Gama, **J Jorge**, HN Rafsanjani, Computers & Education 147, 103777, Jan 2020 https://doi.org/10.1016/j.compedu.2019.103777

J31. The hip joint as an egg shape: a comprehensive study of femoral and acetabular morphologies, DS Lopes, SM Pires, CD Barata, VV Mascarenhas, **JA Jorge**, Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, Taylor & Francis, 10 Jan 2020 https://www.tandfonline.com/doi/abs/10.1080/21681163.2019.1709902

J32. Touchless interaction with medical images based on 3D hand cursors supported by single-foot input: A case study in dentistry, SF Paulo, F Relvas, H Nicolau, Y Rekik, V Machado, J Botelho, JJ Mendes, L Grisoni, **J Jorge**, DS Lopes, Journal of biomedical informatics v100, 103316, 1 Dec. 2019 https://doi.org/10.1016/j.jbi.2019.103316

J33. Extending medical interfaces towards virtual reality and augmented reality, Daniel Simões Lopes & **Joaquim A. Jorge** Annals of Medicine, Taylor and Francis, May 2019, https://doi.org/10.1080/07853890.2018.1560068

J34. Anatomy Studio: Virtual Dissection Through Augmented 3D Reconstruction Sessions, D Lopes, D Mendes, RK dos Anjos, SF Paulo, P Rodrigues, J Mendes, V Delmas, J-F Uhl, J Mogorrón, D Pires, **J A Jorge**, M Sousa, ER Zorzal, Computers and Graphics Special Section on SVR, Dec 2019, https://doi.org/10.1016/j.cag.2019.09.006

J35. "Magic Carpet: Interaction Fidelity for Flying in VR", Daniel Medeiros, António Sousa, Alberto Fox, **Joaquim Jorge**, IEEE Transactions on Visualization and Computer Graphics, March 2019, https://doi.org/10.1109/TVCG.2019.2905200

J36. "Usability studies on building early stage architectural models in virtual reality", Rui de Klerk, André Mendes Duarte, Daniel Pires Medeiros, José Pinto Duarte, **Joaquim Jorge**, Daniel Simões Lopes, Automation in Construction, V 103, July 2019, pp 104~116, https://doi.org/10.1016/j.autcon.2019.03.009

J37. ACM Europe Council's best paper awards, **J Jorge**, M Glencross, A Quigley, Communications of the ACM 62 (4), 44-44, https://dl.acm.org/doi/pdf/10.1145/3309952

J38. "Comparing Digital Tools for Implementing a Generative System for the Design of Customized Tableware", Eduardo Castro e Costa, **Joaquim Jorge**, José Duarte, Computer Aided Design and Applications, 2019, pp803-821, https://doi.org/10.14733/cadaps.2019.803-821

J39. "On a "Columbus' Egg" for the Shape of Asymptomatic, Dysplastic and Impinged Hip Joints", Daniel Simões Lopes, Sara M Pires, Vasco V Mascarenhas, Miguel T Silva, **Joaquim A Jorge** Medical Engineering & Physics v59 pp 50-55, Set. 2018 https://doi.org/10.1016/j.medengphy.2018.07.001

J40. "Assessing the usability of tile-based interfaces to visually navigate 3-D parameter domains," Daniel Simões Lopes, Rafael K dos Anjos, **Joaquim A Jorge**, International Journal of Human Computer Systems v118, pp 1-13, Elsevier, Oct. 2018. https://doi.org/10.1016/j.ijhcs.2018.05.005

J41. "A Survey on 3D Virtual Object Manipulation: From the Desktop to Immersive Virtual Environments", Mendes, Daniel; Caputo, Fabio; Giachetti, Andrea; Ferreira, Alfredo; **Jorge, Joaquim**, Computer Graphics Forum, 2018 https://doi.org/10.1111/cgf.13390

J42. "Explicit design of transfer functions for volume-rendered images by combining histograms, thumbnails and sketch-based interaction", Daniel S Lopes, Pedro F Parreira, Ana R Mendes, Vasco M Pires, Soraia F Paulo, Carlos Sousa, **Joaquim Jorge**, The Visual Computer Journal (Springer), 2017. https://doi.org/10.1007/s00371-017-1448-8

J43. "Design and Evaluation of a Novel Out-of-reach Selection Technique for VR using Iterative Refinement", Daniel Mendes, Mauricio de Sousa, Daniel Medeiros, Eduardo Cordeiro, Alfredo Ferreira & **Joaquim Jorge**, Computers and Graphics (Elsevier), v67 pp 95-102 October 2017 https://doi.org/10.1016/j.cag.2017.06.003

J44. "On the utility of 3D Hand Cursors to Explore Medical Volume Datasets with a Touchless Interface", Daniel Lopes, Pedro Parreira, Soraia Paulo, Vitor Nunes, Paulo Rego, Manuel Neves, Pedro Rodrigues and **Joaquim Jorge**, Journal of Biomedical Informatics (Elsevier), v72 pp140-149, July 2017 https://dx.doi.org/10.1016/j.jbi.2017.07.009

J45. "Geometric Detection Algorithms for Cavities on Protein Surfaces in Molecular Graphics: A Survey", Tiago Simões, Daniel Lopes, Sérgio Dias, Francisco Fernandes, João Pereira**, Joaquim Jorge**, Chandrajit Bajaj and Abel Gomes, Computer Graphics Forum, 2017 https://doi.org/10.1111/cgf.13158

J46. "Studying Student Differentiation in Gamified Education: A Long-Term Study", Gabriel Barata, Sandra Gama, **Joaquim Jorge**, Daniel Gonçalves, Computers in Human Behavior, July 2017 https://doi.org/10.1016/j.chb.2016.08.049

J47. "A benchmark study on accuracy-controlled distance calculation between superellipsoid and superovoid contact geometries", Artur Alves Gonçalves, Alexandre Bernardino, **Joaquim Jorge** & Daniel Simões Lopes, Mechanism and Machine Theory, Elsevier 2017 https://doi.org/10.1016/j.mechmachtheory.2017.04.008

J48. "Hip-directed walking-in-place using a single depth camera", Luís Bruno, Mauricio Sousa, Alfredo Ferreira, Joao Pereira, **Joaquim Jorge**, IJHCS - International Journal of Human-Computer Studies, 2017 http://dx.doi.org/10.1016/j.ijhcs.2017.03.006

J49. "Multi-GPU-based detection of protein cavities using critical points", S E Dias, Q T Nguyen, J A Jorge, A Gomes, Future Generation Computer Systems, Elsevier Feb.2017 http://doi.org/10.1016/j.future.2016.07.009

J50. "Early Prediction of Student Profiles based on Performance and Gaming Preferences", Gabriel Barata, Sandra Gama, **Joaquim Jorge**, Daniel Gonçalves, IEEE Transactions on Learning Technologies, Feb 2016. https://doi.org/10.1109/TLT.2016.2541664

J51. "Expeditious Illustration of Layer-Cake Models on and Above a Tactile Surface", DS Lopes, D. Mendes, M. Sousa, **J. Jorge**, Computers & Geosciences (Elsevier), 2016 https://doi.org/10.1016/j.cageo.2016.02.009

J52. Accelerating Occlusion Rendering on a GPU via Ray Classification, Vasco Costa, J Pereira, **J Jorge**, International Journal of Creative Interfaces and Computer Graphics (IJCICG) 6 (2). 2016 (Winner **José Encarnação Award 2016)** DOI: 10.4018/IJCICG.2015070101

J53. "A Survey on Implicit Surface Polygonization", Bruno Araujo, Daniel Lopes, Pauline Jepp, B Wyvill & **J Jorge**, ACM Computing Surveys, May 2015 https://doi.org/10.1145/2732197

J54. "Gamification for Smarter Learning: Tales from the Trenches", Gabriel Barata, Sandra Gama, **Joaquim Jorge** & Daniel Gonçalves, Journal of Smart Learning Environments, Springer, 2015 https://doi.org/10.1186/s40561-015-0017-8

J55. Clustering students based on motivation-to-learn: A Blended Learning Approach, Maria Alexandra Rentroia-Bonito, Daniel Gonçalves, **Joaquim Jorge**, International Journal of Mobile and Blended Learning, IGI Global 2015 DOI: 10.4018/IJMBL.2015070102

J56. "Combining EEG Data with Place and Plausibility Responses as an Approach to Measuring Presence in Outdoor Virtual Environments", Sérgio Azevedo, Pedro Campos and **Joaquim Jorge**, Tele-Presence at Virtual Operators, MIT Press, Jul. 2014 DOI: 10.1162/PRES_a_00205

J57. **"**Identifying Student Types in a Gamified Learning Experience", Gabriel Barata, Sandra Gama, **Joaquim Jorge** and Daniel Gonçalves. In IGI's International Journal of Game Based Learning 2014. Patrick Felicia, ed. IGI Global. DOI: 10.4018/978-1-4666-8200-9.ch026

J58. Mobile Text-Entry and Visual Demands: Reusing and Optimizing Current Solutions, Hugo Nicolau, Tiago Guerreiro, David Lucas, **Joaquim Jorge**, Universal Access in the Information Society, Dec 2013 Springer https://doi.org/10.1007/s10209-013-0319-y

J59. **"**Mobile Touch Screen User Interfaces: Bridging the Gap between Motor Impaired and Able-Bodied Users, H Nicolau, T Guerreiro**, J Jorge**, D Gonçalves, Universal Access in the Information Society, Sep 2013 DOI: 10.1109/TLT.2013.17

J60. "Interoperable Intelligent Tutoring Systems to Open Educational Resources", Gustavo Santos & **J Jorge**, IEEE Transactions on Learning Technologies, April 2013. DOI: 10.1109/TLT.2013.17

J61. "Mockup Builder: 3D Modeling the n and Above the Surface, "Bruno R. De Araujo, Géry Casiez, **Joaquim A. Jorge**, Martin Hachet, Computers and Graphics, Elsevier, 2013 https://doi.org/10.1016/j.cag.2012.12.005

J62. "Public Policy Activities in 2012 Related to Human-Computer Interaction: A 10-Country Discussion", Lazar, J., Abascal, J., Davis, J., Evers, V., Gulliksen, J., **Jorge, J.,** McEwan, T., Paterno, F., Persson, H., Prates, R., Von Axelson, H., Winckler, M., Wulf, V. ACM Interactions 19 (3) May 2012. https://doi.org/10.1145/2168931.2168947

J63. "Computer-Assisted Rehabilitation: Towards Effective Evaluation", Hugo Nicolau, Tiago Guerreiro, Rita Pereira, Daniel Gonçalves, **Joaquim Jorge**, International Journal of Cognitive Performance Support, Special Issue in Cognitive Ergonomics, January 2012. DOI: 10.1504/IJCPS.2013.053551

J64. "Fostering Collaboration in Kindergarten through an Augmented Reality Game", Pedro Campos and Sofia Pessanha and **Joaquim Armando Pires Jorge**, International Journal of Virtual Reality, 10, pp. 25-30. 33-39, Nov. 2011, IPI Press. https://hal.archives-ouvertes.fr/hal-01530554

J65. "NaturaSketch: Modeling from Images and Natural Sketches", Luke Olsen, Faramarz Samavati and **Joaquim Jorge**, IEEE Computer Graphics and Applications, October 2011 (**Best Paper Award**). DOI: 10.1109/MCG.2011.84

J66. **"**Foot-turistic multimedia: designing interactive multimedia installations for shoe shops", Pedro Campos, Miguel Campos, Paulo Freitas and **Joaquim Jorge**, Journal of Multimedia Tools and Applications, Springer, July 2011 https://doi.org/10.1007/s11042-011-0854-6

J67. "How High Can Expectations Go? Issues and Risks of Interactive Installations", Pedro Campos, Miguel Campos and **Joaquim Jorge**, ACM Interactions, 2011 DOI: 10.1145/1962438.1962448

J68. A syntactic approach based on distortion-tolerant adjacency grammars and a spatial-directed parser to interpret sketched diagrams, J. Mas, J. Llados, G. Sanchez, and **JAP Jorge**, Pattern Recognition, 2010, https://doi.org/10.1016/j.patcog.2010.07.003

J69. "An haptic-based immersive environment for shape analysis and modeling", Bruno Rodrigues De Araújo, Tiago Guerreiro, Manuel J. Fonseca, **Joaquim A. Jorge**, Joao Madeiras Pereira, Monica Bordegoni, Francesco Ferrise, Mario Covarrubias, Michele Antolini: J. Real-Time Image Processing 5 (2): 73-90 (2010) https://doi.org/10.1007/s11554-009-0139-8

J70. "IMMIView: a multi-user solution for real-time design review", Ricardo Jota, Bruno De Araujo, Luís C. Bruno, Joao Madeiras Pereira**, Joaquim A. Jorge**: J. Real-Time Image Processing 5 (2): 91-107 (2010) https://doi.org/10.1007/s11554-009-0141-1

J71. Real-time low-cost marker-based multiple camera tracking solution for virtual reality applications, PC Santos, A Stork, A Buaes, CE Pereira, **J Jorge**, Journal of Real-Time Image Processing 5(2), 121-128, 2010 https://doi.org/10.1007/s11554-009-0138-9

J72. Thesaurus-based 3D object retrieval with part-in-whole matching, A Ferreira, S Marini, M Attene, MJ Fonseca, M Spagnuolo, **JA Jorge**, B Falcidieno, International Journal of Computer Vision 89 (2-3), 327- 347, 2010   https://doi.org/10.1007/s11263-009-0257-6

J73. "Referred digital publication to support online communities", Frederico Figueiredo, **Joaquim Jorge**, Frank Hanisch, Colleen Case, International Journal of Web-Based Communities, Dec. 2009. Volume 6, Issue 1 (January 2010) pp. 62-7 5

J74. "Oversketching Snakes for Medical Image Segmentation", Vasco Gervásio, **Joaquim A Jorge**, International Journal on Tomography and Statistics - special issue on Image Processing, Winter 2010, Volume 13, Number W10, January 2010, pp. 72-88.

J75. **"**Sketch-based Retrieval of Complex Drawings using Hierarchical Topology and Geometry", MJ Fonseca, Alfredo Ferreira, **Joaquim Jorge**, Computer-Aided Design (Elsevier), 41 (12), pp. 1067: 81, Dec. 2009

J76. **"**Sketch-based modeling: A survey", Luke Olsen, Faramarz F. Samavati, Mario Costa Sousa and **Joaquim Jorge**, Computers & Graphics, Volume 33, Issue 1, February 2009, 85-103.

J77. "Assessing Electromyographic Interfaces", Tiago Guerreiro and **Joaquim A. Jorge,** Journal of Virtual Reality and Broadcasting, Vol. 5 (12), 01/2009

J78. **"**Evaluating Learning Support Systems Usability: An Empirical Approach", Maria A. Rentróia-Bonito, Tiago Guerreiro, André Martins, Vitor Fernandes, **Joaquim Jorge**, Communication & Cognition, Vol. 41, Nr. 1 & 2 ISSN: 0773-4182, 2008, 01/2009

J79. **"**Analysis Domain Model for Shared Virtual Environments", Manuel Oliveira and Joel Jordan and Joao António Madeiras Pereira **and Joaquim Armando Pires Jorge** and Anthony Steed, International Journal of Virtual Reality, 8 (4): 1-30, 01/2009

J80. **"**From Tapping to Touching: Making touch screens accessible to blind users", Guerreiro, T., Nicolau, H., Lagoá, P., Gonçalves, D., and **Jorge, J**.", IEEE Multimedia, Special Issue on Accessibility, Dec. 2008.   https://doi.org/10.1109/MMUL.2008.88

J81. **"**PC Clusters for Virtual Reality", Luciano P. Soares, Bruno Raffin and Joaquim A. Jorge   *The International Journal of Virtual Reality, 7 (1):* pp.67-80, March 2008.

J82. **"**IMPROVE: An innovative application for collaborative mobile mixed reality design review"**,** Pedro Santos, André Stork, Thomas Gierlinger, Alain Pagani, Céline Paloc, Iñigo Barandarian, Giuseppe Conti, Raffaele de Amicis, Martin Witzel, Oliver Machui, José M. Jiménez, Bruno Araujo, Joaquim Jorge and Georg Bodammer, International Journal on Interactive Design and Manufacturing, Springer Paris, ISSN 1955-2513 (Print) 1955-2505 (Online) , May, 2007 https://doi.org/10.1007/s12008-007-0010-8

J83. **"**Motivation to e-Learn within Organizational Settings: an Exploratory Factor Structure", MA Bonito, J Jorge, Claude Gahoui, International Journal of Distance Education Technologies 4 (3), pp24-35, July-September 2006. DOI: 10.4018/jdet.2006070103

J84. "An Integrated Evaluation Method for e-Learning: A Case Study", MA Rentroia-Bonito, F. Figueiredo, A. Martins, J. Jorge, and C. Ghaoui**,** International Journal of Distance Education Technologies (ITSE) 3 (1), Special Issue on Streaming Content Distribution Networks for e-Learning and e-Entertainment, Feb 2006. https://doi.org/10.1108/17415650680000053

J85. "Adaptive Polygonization of Implicit Surfaces", Bruno Rodrigues de Araújo and Joaquim Jorge, Computers & Graphics (C&G) 29 (5), October 2005. https://doi.org/10.1016/j.cag.2005.08.027

J86. **"**Pen-and-Ink for BlobTree Implicit Models", Kevin Foster, Pauline Jepp, Mario Costa Sousa, Brian Wyvill, Joaquim A. Jorge, Computer Graphics Forum, 24 (3), September 2005. https://doi.org/10.1111/j.1467-8659.2005.00851.x

J87. "Content-Based Retrieval of Technical Drawings", Manuel Fonseca, Alfredo Ferreira Jr. and J Jorge, International Journal of Computer Applications in Technology (IJCAT) on "Models and methods for representing and processing shape semantics", March 2005. https://doi.org/10.1504/IJCAT.2005.006467

J88. "Refereed Digital Publication of Computer Graphics Educational Materials", F. Figueiredo, J. Jorge, D. Eber, J. Jorge, in Computers & Graphics 28 (1), pp 119-124, February 2004. https://doi.org/10.1016/j.cag.2003.10.013

J89. "Content-Based Retrieval Towards of Technical Drawings through High-Dimensional Indexing," M J. Fonseca and J. A Jorge, Computers and Graphics, 27 (1), p 61–69, February 2003. https://doi.org/10.1016/S0097-8493(02)00244-3

J90. "Experimental Evaluation of an Online Scribble Recognizer", MJ Fonseca and Joaquim A Jorge, Pattern Recognition Letters Journal, v22 n12, pp 1311-1319 2001. https://doi.org/10.1016/S0167-8655(01)00076-9

J91. "Marker-Making Using Automatic Placement of Irregular Shapes for the Garment Industry," C. Amaral, J. Bernardo, J. Jorge, in Computers & Graphics 1990 Vol. 14 pp. 41-46. https://doi.org/10.1016/0097-8493(90)90007-K

Articles in archival publications

L1. "New Trends in Mechatronics, Diversity Gap in STEM, Laboratories in STEM Education at TEEM 2023", Joan Arnedo-Moreno, Carina González-González, Marc Alier, María José Casañ Guerrero, Daniel Amo Filvà, Juan A. Juanes Méndez, Samuel Marcos Pablos, **Joaquim Armando Jorge**, Clara Viegas, Natércia Lima, María Isabel Pozzo, José Gonçalves, José Lima, Paulo Costa, Alicia García-Holgado, Carina Soledad González-González, Angeles Dominguez, Arcelina Marques, Gustavo Alves & Juarez Bento da Silva, in: Trends on Gamification, Generative AI, Multidisciplinary Technological Resources, Engineering Education, In: Gonçalves, J.A.d.C., Lima, J.L.S.d.M., Coelho, J.P., García-Peñalvo, F.J., García-Holgado, A. (eds) Proceedings of TEEM 2023. TEEM 2023. Lecture Notes in Educational Technology. Springer, Singapore. 2024 https://doi.org/10.1007/978-981-97-1814-6_1

L2. "Interaction Techniques for Immersive CT Colonography: A Professional Assessment", Daniel Simões Lopes, Daniel Medeiros, Soraia Figueiredo Paulo, Pedro Brasil Borges, Vitor Nunes, Vasco Mascarenhas, Marcos Veiga, Joaquim Armando Jorge, Springer LNCS - MICCAI 2018

L3. "Blind People and Mobile Keypads: Accounting for Individual Differences", Tiago João Vieira Guerreiro, João Oliveira, João Benedito, Hugo Nicolau, Joaquim Jorge, Daniel Gonçalves. INTERACT (1) 2011: 65-82 (**best student paper award)**

L4. "BrailleType: Unleashing Braille on Touch Screen Mobile Phone", João Oliveira, Tiago João Vieira Guerreiro, Hugo Nicolau, Joaquim A. Jorge, Daniel Gonçalves. INTERACT (1) 2011: 100-107.

L5. "The Continuous Interaction Space: Interaction Techniques Unifying Touch and Gesture on and Above a Digital Surface", Nicolai Marquardt, Ricardo Jota, Saul Greenberg, Joaquim A. Jorge: INTERACT (3) 2011: 461-476

L6. "Interactive Installations: Tales from the Trenches", Pedro Campos, Miguel Campos, Joaquim A. Jorge, INTERACT (4) 2011: 450-453

L7. "Towards Mobile Touch Screen Including User Interfaces: Differences and Resemblances between Motor-Impaired and Able-Bodied Users", Hugo Nicolau, Tiago Guerreiro, Joaquim Jorge, and Daniel Gonçalves, In Proceedings of the 13th IFIP TC13 Conference on Human-Computer Interaction (INTERACT'11), Mobile Accessibility Workshop. Lisbon, Portugal, September, 2011

L8. "Investigating the Effectiveness of Assistive Technologies on Situationally Impaired Users", David Lucas, Hugo Nicolau, Tiago Guerreiro, and Joaquim Jorge, In Proceedings of the 13th IFIP TC13 Conference on Human-Computer Interaction (INTERACT'11), Mobile Accessibility Workshop. Lisbon, Portugal, September, 2011

L9. "Mnemonical Body Shortcuts for Interacting with Mobile Devices", Tiago Guerreiro, Ricardo Gamboa, Joaquim Jorge, Advances *in Gesture-Based Human-Computer Interaction and Simulation, Miguel Sales Dias, Sylvie Gibet, Marcelo Wanderley (Eds), Springer LNCS 2009 vol. 5085, pp 261-271*

L10. "Representing and Parsing Sketched Symbols using Adjacency Grammars and a Grid-Directed Parser", Joan Mas, Joaquim A. Jorge, Gemma Sanchez, Josep Llados, *Graphics Recognition: Recent Advances and New Opportunities (GREC2007 Post-Workshop Proceedings), Wenyin Liu, Josep Lladós and Jean-Marc Ogier (Eds), LNCS 5046 Springer 2008, pp* 169-180.

L11. **.** "IMPROVE: Designing Effective Interaction for Virtual and Mixed Reality Environments", Pedro Santos, André Stork, Thomas Gierlinger, Alain Pagani, Bruno Araujo, Ricardo Jota, Luis Bruno, **Joaquim Jorge,** Martin Witzel, Giuseppe Conti, Raffaele DeAmicis, Inigo Barandarian, Celine Paloc, Maylu Hafner, Don McIntyre, pp376-385 *Human-Computer Interaction. Interaction Platforms and Techniques,* Lecture Notes in Computer Science 4551, August, 2007, Springer.

L12. "IMPROVE: Advanced Displays and Interaction Techniques for Collaborative Design Review", Pedro Santos, André Stork, Thomas Gierlinger, Alain Pagani, Bruno Araujo, Ricardo Jota, Luis Bruno, **Joaquim Jorge,** Martin Witzel, Giuseppe Conti, Raffaele DeAmicis, Inigo Barandarian, Celine Paloc, Oliver Machui, Georg Bodammer, Jose Manuel Jimenez, Don McIntyre, *Virtual Reality,* Springer LNCS 4563, August 2007.

L13. "IMPROVE: Collaborative Design Review in Mobile Mixed Reality", Pedro Santos, André Stork, Thomas Gierlinger, Alain Pagani, Bruno Araujo, Ricardo Jota, Luis Bruno, **Joaquim Jorge,** John Woods Pereira, Giuseppe Conti, Raffaele DeAmicis, Inigo Barandarian, Celine Paloc, Oliver Machui, Georg Bodammer, Jose Manuel Jimenez, Don McIntyre, *Virtual Reality,* Springer LNCS 4563, August 2007.

L14. "BloNo: A New Mobile Text-entry Interface for the Visually Impaired", Paulo Lagoá, Pedro Santana, Tiago Guerreiro, Daniel Gonçalves, Joaquim Jorge, in C. Stephanidis (Ed.): Universal Access in HCI, Part II, HCII 2007, LNCS 4555, pp. 908–917, 2007.

L15. "Assisting Mold Quotation Through Retrieval of Similar Data", Manuel J. Fonseca, Elsa Henriques, Alfredo Ferreira, Joaquim A. Jorge, Rui Soares, Chapter in "Digital Enterprise Technology - Perspectives and Future Challenges", May 2007, Springer, ISBN 038749863X

L16. "Generic Shape Classification for Retrieval", Manuel João Fonseca, Alfredo Ferreira and Joaquim A. Jorge, Springer Lecture Notes in Computer Science (LNCS, 3926), Wenyin Liu and LLadós, Josep (eds.) 2006.

L17. **"**Tell Me a Story: Issues in the Design of Document Retrieval Systems," Daniel Gonçalves, Joaquim A Jorge, EHCI-DSVIS'2004 Conference, Hamburg, 11-13 July, 2004 Springer LNCS.

L18. Retrieving Vector Graphics Using Sketches, Manuel Fonseca, Bruno Barroso, Pedro Ribeiro, and Joaquim A. Jorge, SmartGraphics 2004, Springer LNCS vol. 3031, pp 66-76, May 22-24, 2004, Banff, Canada.

L19. Parametric Freehand Sketches, Second Technical Session on Computer Graphics and Geometric Modeling, Ferran Naya Sanchiz, Manuel Contero, Nuria Aleixo, Joaquim Jorge, TSCG'2004, Springer LNCS Volume 3044, pp. 613-621, Assisi, Italy, May 14-17, 2004.

L20. "Smart Sketch System for 3D Reconstruction-Based Modeling", M Contero, Ferrán Sanchiz, Pedro Company, J. Jorge, SmartGraphics 2003, Andreas Butz et al (eds.), LNCS vol. 2733, pp 58-68, July 2003.

L21. "An Integrated Courseware Usability Evaluation Method", Maria Alexandra Bonito, JA Jorge, KES'2003 - 7th International Conference on Knowledge-Based Intelligent Information & Engineering Systems, Oxford, England, Springer LNAI 2774, pp 208-214, September 2003.

L22. Calligraphic Interfaces: Mixed Metaphors for Design, John P. Pereira, Joaquim A. Jorge, Vasco A. White, F. Nunes Ferreira, Springer LNCS 2844, Interactive Systems: Design, Specification and Verification, DSV-IS 2003 Proceedings, pp. 154-170, Funchal, Portugal, 4-6 June 2003.

L23. "MIKE: The Multimodal Cinematographic Editor for Virtual Worlds", Joaquim Jorge, Bruno Araujo, Springer LNCS 2844, Interactive Systems: Design, Specification and Verification, DSV-IS 2003 Proceedings, pp 146-170, Funchal, Portugal, 4-6 June 2003

L24. "An Empirical Study of Personal Document Spaces", Daniel Gonçalves, Joaquim Jorge, Springer LNCS 2844, Interactive Systems: Design, Specification and Verification, DSV-IS 2003 Proceedings, pp 46-60 Funchal, Portugal, 4-6 June 2003.

L25. "CIGRO: a minimal instruction set calligraphic interface for sketch-based modeling", Manuel Contero, Ferrán Sanchiz, Joaquim Jorge, Julian Conesa, In Computational Science and Its Applications - ICCSA 2003, Springer LNCS Volume 2669 (Part III), pages 549- 558, 2nd International Workshop on Computer Graphics and Geometric Modeling, CGGM'2003, Montreal, Canada, 18-21 May, 2003.

L26. Experimental Evaluation of a Trainable Scribble Recognizer for Calligraphic Interfaces, César Pimentel, MJ Fonseca and Joaquim Jorge, Springer LNCS, vol.2390, Graphics Recognition: Algorithms and Applications, pp. 81-91, September 2002.

L27. "A Simple Approach to Recognize Geometric Shapes Interactively", Joaquim Jorge, Manuel J. Fonseca, Springer LNCS vol. 1941, Graphics Recognition: Recent Advances, p. 265-275, September 2000.

Books (author)

B1. Digital Anatomy: Applications of Virtual, Mixed and Augmented Reality, Jean-François Uhl, Joaquim Jorge, Daniel Lopes, Pedro Campos, Springer HCIS Book Series 135, I-XIV,1-385, ISBN: 978-3-030-61904-6 DOI: https://doi.org/10.1007/978-3-030-61905-3

B2. Collaboration Meets Interactive Spaces", Craig Anslow, Pedro Campo s & Joaquim Jorge, Springer ISBN: 2017 978-3-319-45853-3, 2017

B3. Sketch-based Interfaces and Modeling, Joaquim Jorge, Faramarz Famil Samavati, Springer, ISBN: 184882811X, 9781848828117, 2011

B4. Implicit Curves and Surfaces: Mathematics, Data Structures and Algorithms, Gomes, AJP, Voiculescu, I., Jorge, J., Wyvill, B., Galbraith, C. Springer, ISBN: 978-1-84882-405-8, 03/2009

Scientific conference books and proceedings (Editor)

CP1. Horace Ho-Shing Ip, Jean-Claude Paul, Qunsheng Peng, Jiaguang Sun, Bruno Levy, David Z Pan, Wenping Wang, Jun-Hai Yong, Hongbo Fu, **Joaquim A Jorge,** Bin Wang, Eugene Zhang, Oscar Kin-Chung Au, Proceedings, 18th International Conference on Computer Aided Design and Computer Graphics, GuangZhou, PRC, Hong Kong, 16 Nov 2013

CP2. Carlos Duarte, Luis Carriço, Joaquim A. Jorge, Sharon L. Oviatt, Daniel Gonçalves: 17th International Conference on Intelligent User Interfaces, IUI '12, Lisbon, Portugal, February 14-17, 2012 ACM 2012

CP3. Zhi-Qiang Liu, Joaquim A. Jorge, Zhigeng Pan, Xiaopeng Zhang, Oscar Kin-Chung Au, Weiming Dong (Eds.): Proceedings of the 10th International Conference on Virtual Reality Continuum and Its Applications in Industry, VRCAI 2011, Hong Kong, China, December 11-12, 2011. ACM, ISBN 978-1-4503-1060-4

CP4. Pedro F. Campos, TC Nicholas Graham, Joaquim A. Jorge, Nuno Jardim Nunes, Philippe A. Palanque, Marco Winckler: Human-Computer Interaction - INTERACT 2011 - 13th IFIP TC 13 International Conference, Lisbon, Portugal, September 5-9, 2011, Proceedings, Part I Springer 2011

CP5. Pedro Campos, TC Nicholas Graham, Joaquim A. Jorge, Nuno Jardim Nunes, Philippe A. Palanque, Marco Winckler: Human-Computer Interaction - INTERACT 2011 - 13th IFIP TC 13 International Conference, Lisbon, Portugal, September 5-9, 2011, Proceedings, Part II Springer 2011

CP6. Pedro Campos, TC Nicholas Graham, Joaquim A. Jorge, Nuno Jardim Nunes, Philippe A. Palanque, Marco Winckler: Human-Computer Interaction - Interact 2011 - 13th IFIP TC 13 International Conference, Lisbon, Portugal, September 5-9, 2011, Proceedings, Part III Springer 2011

CP7. Pedro Campos, TC Nicholas Graham, Joaquim A. Jorge, Nuno Jardim Nunes, Philippe A. Palanque, Marco Winckler: Human-Computer Interaction - INTERACT 2011 - 13th IFIP TC 13 International Conference, Lisbon, Portugal, September 5-9, 2011, Proceedings, Part IV Springer 2011

CP8. Creativity and HCI: From Experience to Design in Education, Paula Kotzé, William Wong, Joaquim Jorge, Alan Dix and Paula Alexandra Silva (Eds.), IFIP International Federation for Information Processing, Springer Boston, Volume 289/2009, Nov. 2008.

CP9. VISAPP and GRAPP 2006, CCIS 4, Jose Braz, Alpesh Ranchordas, Helder Araújo, and Joaquim Jorge (Eds.) © Springer-Verlag Berlin Heidelberg 2007. Compilation of selected articles.

CP10. Sketch-Based Interfaces and Modeling 2007, Michiel van de Panne, Eric Saund, Joaquim Jorge, AK Peters, Natick, MA, USA © 2008, ISBN: 1568814011 9781568814018

CP11. *Creativity3, Experience to Educate and Design - Proceedings of the BCS HCI 2007 International Educators Conference,* Paula Alexandra Silva, Alan Dix, Joaquim Jorge (eds), Aveiro, ISBN: 978-972-789-227-3, Aveiro, March 2007.

CP12. *Sketch-Based Interfaces and Modeling Workshop Proceedings,* Tom Stahovich, Mario Costa Sousa and Joaquim Jorge (editors), Eurographics Symposium Proceedings, ISSN 1812-3503, September 2006.

CP13. *Proceedings, GRAPP 2006 - First International Conference on Computer Graphics Theory and Applications,* ISBN 972-8865-39-2, José Braz, Joaquim Jorge, Miguel Dias and Aderito Marcos, Setúbal, Portugal, February 2006

CP14. *Sketch-Based Interfaces and Modeling Workshop Proceedings,* Takeo Igarashi and Joaquim A Jorge (editors), Eurographics Symposium Proceedings, ISSN 1812-3503, August 2005.

CP15. *Proceedings of 7 th Eurographics Workshop on Multimedia,* Nuno Correia, Teresa Chambel, Joaquim Jorge, Zhigeng Pa n (eds.), Eurographics Symposium Proceedings, October 2004.

CP16. *Sketch-Based Interfaces and Modeling Workshop Proceedings,* John F. Hughes and Joaquim Jorge (editors), Eurographics Symposium Proceedings, ISSN 1812-3503, September 2004.

CP17. *Interactive Systems: Design, Specification and Verification. Proceedings of DSV-IS 2003, Tenth Workshop on the Design Specification and Verification of Interactive Systems,* Joaquim Jorge, Nuno Jardim Nunes, João F and Cunha (eds.), Funchal, Madeira, 4-6 June 2003, Springer LNCS vol. 2844. Published October 2003.

CP18. *Proceedings, CGE02 - Eurographics / SIGGRAPH Workshop on Computer Graphics Education,* J. Jorge, A. Chalmers, M. Mihrmedi (eds.), Bristol, UK, July 2002.

CP19. *Proceedings of the EC / NSF Workshop on Universal Accessibility of Ubiquitous Computing: Providing for the Elderly,* ACM Press, May 2002, Joaquim A. Jorge, Rachelle Heller, Richard Guedj (editors).

CP20. *Multimedia 2001 Proceedings, 6 th Eurographics Workshop on Multimedia,* J Jorge, Nuno Correia, Huw Jones, Meera Blattner, eds. Springer-Wien, December 2001.

Book Chapters

BC1. Tridimensional Vectorial Modeling of the Human Body From Anatomical Slices: A New VR Learning Tool for Students, Jean François Uhl, Vincent Delmas, Rodolphe Burgade, Guillermo Daniel Prat, Barbara Constanza Lorea, Camillo Ruiz, Joaquim Armando Jorge, Technological Adoption and Trends in Health Sciences Teaching, Learning, and Practice, IGI Global 2022

BC2. Introduction to Digital Anatomy, J Jorge, Digital Anatomy, 1-10, 2021

BC3. A Tool for Collaborative Anatomical Dissection, ER Zorzal, M Sousa, D Mendes, SF Paulo, P Rodrigues, J Jorge, Digital Anatomy, 41-58, Mar 2021

BC4. 3D Reconstruction from CT Images Using Free Software Tools, SF Paulo, DS Lopes, J Jorge, Digital Anatomy, 135-157, 2021

BC5. From Anatomical to Digital Dissection: A Historical Perspective Since Antiquity Towards the Twenty-First Century, V Delmas, JF Uhl, PF Campos, DS Lopes, J Jorge, Digital Anatomy, 11-39

BC6. Interoperable Intelligent Tutoring Systems as SCORM Learning Objects, Gustavo Soares Santos1, Joaquim Jorge in Intelligent and Adaptive Educational-Learning Systems: Achievements and Trends, Smart Innovation, Systems and Technologies, v17 Springer, 201 3

BC7. Sketch-based Modeling and Assembling with Few Strokes, Aaron Severn, Faramarz F. Samavati, Joseph J. Cherlin, Mario Costa Sousa, in Sketch-based Interfaces and Modeling, J. Jorge and F. Samavati (eds.), Springer, 2011

BC8. Sketch-Based Retrieval of Vector Drawings, Manuel J. Fonseca, Alfredo Ferreira, Joaquim A. Jorge, in Sketch-based Interfaces and Modeling, J. Jorge and F. Samavati (eds.), Springer, 2011

BC9. Preface - Creativity and HCI: From Experience to Design in Education, Paula Kotzé, William Wong, Joaquim Jorge, Alan Dix and Paula Silva Alexandra, in Creativity and HCI: From Experience to Design in Education, Paula Kotzé, William Wong, Joaquim Jorge, Alan Dix and Paula Alexandra Silva (Eds.), IFIP International Federation for Information Processing Series, Boston Springer, Volume 289, Nov. 2008.

BC10. Conceptual Design and Prototyping to Explore Creativity, Manuel J. Fonseca, Joaquim A. Jorge, Mario R. Gomes, Daniel Gonçalves and Marco Vala, in Creativity and HCI: From Experience to Design in Education, Paula Kotzé, William Wong, Joaquim Jorge, Alan Dix and Paula Alexandra Silva (Eds.), IFIP International Federation for Information Processing Series, Boston Springer, Volume 289, Nov. 2008.

BC11. "Sketch-Based Interfaces for Parametric Modeling", Ferran Naya, Manuel Contero, Joaquim A. Jorge, in Advances in Human-Computer Interaction Aleksandar Lazinica (ed.), ISBN 978-3-902613-38-7, I-Tech Education and Publishing, 2008.

BC12. "Motivation to e-Learn: a quantitative design technique", Maria Alexandra Bonito, Joaquim A Jorge, Claude Ghaoui, Strategic Applications of Distance Learning Technologies, Vol 2. Advances in Distance Education Series, Idea Group 2008.

BC13. "Emotions in e-Learning Environments: An Exploratory Analysis", M Alexandra Bonito, C Gahoui, Joaquim Jorge, Encyclopedia of Networked and Virtual Organizations, Idea Group Publishing, 2007.

BC14. "An Overview of an Evaluation Framework for e-Learning", M Alexandra Bonito, Joaquim Jorge, C Gahoui, in "Encyclopedia of HCI", Claude Gahoui (ed), pp 441-450, Idea Group Publishing, 2005.

BC15. "Just-in-Time Approach to Learning: Arguing the Case for Cost-Effective Knowledge Dissemination Knowledge-Based Virtual Education", Maria Alexandra Rentróia-Bonito, Jose Manuel Tribolet, Joaquim Armando Pires Jorge and Claude Ghaoui, in Knowledge-Based Virtual Education, Ghaoui, Jain (eds.), Book Series : Studies in Fuzziness and Soft Computing, Volume 178/2005, pp 1-22, Springer-Verlag, January 2005.

BC16. "Modeling for E-Learning Systems," Maria Rentróia-Bonito and Joaquim Jorge, Encyclopedia of Information Science and Technology, Idea Group, ISBN: 1-59140-553-X, January 2005.

BC17. "Toward Predictive Models for e-Learning: What Have We Learned So Far?", Maria Alexandra Bonito, Joaquim A Jorge, in E-Education Applications: Human Factors and Innovative Approaches, Idea Group Publishing, Hershey, PA, Claude Ghaoui, ed. February 2004.

Special issues of scientific journals

SI1. Preface Message from the Program Chairs and Guest Editors, M Marchal, JL Gabbard, J Jorge, TW Kuhlen, A Steed, **IEEE TRANSACTIONS ON VISUALIZATION AND COMPUTER GRAPHICS 26** (5), VI-VI, 2021

SI2. Eurographics 2016 Conference Proceedings, Joaquim Jorge and Ming C. Lin, Computer Graphics Forum, 35 (2) May 2016

SI3. "Special Issue on Virtual, Augmented, and Mixed Reality Applications", Alberto B. Raposo, Joaquim AP Jorge, SBC Journal on 3D Interactive Systems, Jan. 2013. http://seer.ufrgs.br/jis/issue/view/1975

SI4. "Special Issue on Virtual Environments," Roger Hubbold, Joaquim Jorge and Ming Lin, guest editors, Computers and Graphics Journal, 31 (1), Elsevier, in January of 2007.

SI5. Sketch-Based Interfaces and Modeling, Joaquim A Jorge and Brian Wyvill, guest editors, Special Issue of Computers & Graphics Journal, 29 (6), Elsevier, December 2005.

SI6. "Calligraphic Interfaces: Towards a New Generation of Interactive Systems," Joaquim A Jorge, Ephraim P. Glinert, Guest Editors, Special Issue of Computers & Graphics Journal, 24 (6), Elsevier, December 2000.

Papers presented to international peer-reviewed conferences

IC1. B Peres, DS Lopes, J Jorge, PF Campos, Co-Designing Companions in Virtual Natural Environments for Enhanced Well-being: Insights from Dementia Informal Caregivers, NordiCHI 2024

IC2. J Simões, A Maciel, C Moreira, M Sousa, J Jorge, SPARC: Shared Perspective with Avatar Distortion for Remote Collaboration in VR, Computer Graphics International, July 2024

IC3. Joan Arnedo-Moreno, Carina González-González, Marc Alier, María José Casañ Guerrero, Daniel Amo Filvà, Juan A Juanes Méndez, Samuel Marcos Pablos, Joaquim Armando Jorge, Clara Viegas, Natércia Lima, María Isabel Pozzo, José Gonçalves, José Lima, Paulo Costa, Alicia García-Holgado, Carina Soledad González-González, Angeles Dominguez, Arcelina Marques, Gustavo Alves, Juarez Bento da Silva, Trends on Gamification, Generative AI, Multidisciplinary Technological Resources, Engineering Education, New Trends in Mechatronics, Diversity Gap in STEM, Laboratories in STEM Education at TEEM, International conference on technological ecosystems for enhancing multiculturality, 2024 https://doi.org/10.1007/9

IC4. Peres, B., Noronha, H., Lopes, D.S., Jorge, J., Campos, P.F. (2023). "I Miss Going to that Place": The Impact of Watching Nature Videos on the Well-Being of Informal Caregivers. In: Abdelnour Nocera, J., Kristín Lárusdóttir, M., Petrie, H., Piccinno, A., Winckler, M. (eds) Human-Computer Interaction – INTERACT 2023. INTERACT 2023. Lecture Notes in Computer Science, vol 14145. Springer, Cham. https://doi.org/10.1007/978-3-031-42293-5_2

IC5. João Simões, Anderson Maciel, Catarina Moreira, Joaquim Jorge, SPARC: Shared Perspective with Avatar Distortion for Remote Collaboration in VR, Computer Graphics International, July 2024

IC6. Comparing Visual Search Patterns in Chest X-Ray Diagnostics. Catarina Moreira, Diogo Miguel Alvito, Sandra Costa Sousa, Isabel Maria Gomes Blanco Nobre, Chun Ouyang, Regis Kopper, Andrew Duchowski, and Joaquim Jorge. 2023. In Proceedings of the 2023 Symposium on Eye Tracking Research and Applications (ETRA '23). Association for Computing Machinery, New York, NY, USA, Article 4, 1–6. https://doi.org/10.1145/3588015.3588403

IC7. C. G. Fidalgo et al., "MAGIC: Manipulating Avatars and Gestures to Improve Remote Collaboration," 2023 IEEE Conference Virtual Reality and 3D User Interfaces (VR), Shanghai, China, 2023, pp. 438-448, doi: 10.1109/VR55154.2023.00059

IC8. M. Negrão, J. Jorge, J. Vissoci, R. Kopper and A. Maciel, "Exploring Affordances for AR in Laparoscopy," 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), Shanghai, China, 2023, pp. 147-151, doi: 10.1109/VRW58643.2023.00037.

IC9. J. Serras et al., "Development of an Immersive Virtual Colonoscopy Viewer for Colon Growths Diagnosis," 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), Shanghai, China, 2023, pp. 152-155, doi: 10.1109/VRW58643.2023.00038.

IC10. A. Taweel, J. Jorge, A. Maciel, J. R. N. Vissoci and R. Kopper, "SURVIVRS: Surround Video-Based Virtual Reality for Surgery Guidance," 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), Shanghai, China, 2023, pp. 191-195, doi: 10.1109/VRW58643.2023.00047.

IC11. A. Luís et al., "Integrating Eye-Gaze Data into CXR DL Approaches: A Preliminary study," 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), Shanghai, China, 2023, pp. 196-199, doi: 10.1109/VRW58643.2023.00048.

IC12. G. Riva, W. Dores, A. Damasio, D. G. Cacione, J. Jorge and E. Zorzal, "Virtual Reality applied to medical education and training on Diabetic Foot," 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), Shanghai, China, 2023, pp. 174-177, doi: 10.1109/VRW58643.2023.00043.

IC13. Jiaheng Wang, Craig Anslow, Simon James Robertson Mccallum, Brian Robinson, Daniel Medeiros, and Joaquim Jorge. 2022. VR Games for Chronic Pain Management. In Proceedings of the 28th ACM Symposium on Virtual Reality Software and Technology (VRST '22). Association for Computing Machinery, New York, NY, USA, Article 4, 1–11. https://doi.org/10.1145/3562939.3565624

IC14. Estimating Body Shapes from Measurements, Margarida Lima, Joaquim Armando Pires Jorge, Joao Madeiras Pereira, 17th International Conference on Computer Graphics Theory and Applications, Jan 2022

IC15. Promoting Reality Awareness in Virtual Reality through Proxemics, D Medeiros, R dos Anjos, N Pantidi, K Huang, M Sousa, C Anslow, J Jorge, 2021 IEEE Virtual Reality and 3D User Interfaces (VR), 21-30

IC16. Safe Walking in VR, M Sousa, D Mendes, J Jorge, VRCAI-The 17th International Conference on Virtual-Reality Continuum and its Applications, Brisbane, Australia, Nov 2019

IC17. FEETICHE: FEET Input for Contactless Hand gEsture Interaction, D Lopes, F Relvas, S Paulo, Y Rekik, L Grisoni, J Jorge, VRCAI-The 17th International Conference on Virtual-Reality Continuum and its Applications, Brisbane, Australia, Nov 2019

IC18. Dynamic Occlusion Handling for Real-Time AR Applications J Jorge, RKD Anjos, R Silva, VRCAI-The 17th International Conference on Virtual-Reality Continuum and its Applications, Brisbane, Australia, Nov 2019

IC19. Negative Space: Workspace Awareness in 3D Face-to-Face Remote Collaboration, M Sousa, D Mendes, RK Anjos, DS Lopes, J Jorge, VRCAI-The 17th International Conference on Virtual-Reality Continuum and its Applications, Brisbane, Australia, Nov 2019

IC20. Adventures in Hologram Space: Exploring the Design Space of Eye-to-eye Volumetric Telepresence, RK Anjos, M Sousa, D Mendes, D Medeiros, M Billinghurst, C Anslow, 25th ACM Symposium on Virtual Reality Software and Technology, 1-5, Sydney, Australia, Nov 2020

IC21. Warping Deixis: Distorting Gestures to Enhance Collaboration, M Sousa, Angels RK, D Mendes, M Billinghurst, J Jorge, ACM SIGCHI 2019

IC22. Keep my head on my shoulders! Why third-person is bad for navigation in VR, Daniel Medeiros, Rafael Angels, Daniel Mendes, João Pereira, Alberto Raposo, Joaquim Jorge, VRST '1 8 : Proceedings of the 24 th ACM Symposium on Virtual Reality Software and Technology, Tokyo, Japan, Nov 2018

IC23. Interaction Techniques for Immersive CT Colonography: A Professional Assessment, Daniel Lopes, Daniel Medeiros, Soraia Paulo, Pedro Borges, Vitor Nunes, Vasco Mascarenhas, Marcos Veiga, Joaquim Jorge, International Conference on Medical Imaging and Computer-Assisted Intervention (MICCAI), 2018 - VCBM 2018, Granada, Spain, September 2018

IC24. 3D Reconstruction of CT Colonography Models for VR / AR Applications using Free Software Tools, SF Paulo Figueiredo, JA Jorge, DS Lopes, MICCAI, Granada, Spain Sep 2018

IC25. Using custom transformation axes for mid-air manipulation of 3D virtual objects, Daniel Mendes, Mauricio Sousa, Rodrigo Lorena, Alfredo Ferreira, Joaquim Jorge, VRST '17: Proceedings of the 23rd ACM Symposium on Virtual Reality Software and Technology, Gothenburg, Sweden, Nov 2017

IC26. "Creepy Tracker Toolkit for Context-aware Interfaces", Mauricio Sousa, Daniel Mendes, Rafael Kuffner Dos Anjos, Daniel Medeiros, Alfredo Ferreira, Alberto Raposo, Joao Madeiras Pereira and **Joaquim Jorge,** ACM International Conference on Interactive Surfaces and Spaces, pp 191- 200, ACM Press Oct, 2017

IC27. "VRRRRoom: Virtual Reality for Radiologists in the Reading Room", Mauricio Sousa, Daniel Mendes, Soraia Paulo, Nuno Matela, Joaquim Jorge & Daniel S Lopes, ACM CHI 2017, Denver May 2017

IC28. "PRECIOUS! Out-of-Reach Selection using Iterative Refinement in VR", D Mendes, D Medeiros, E Lamb, M Sousa, Ferreira, J Jorge, 2017 IEEE Symposium on 3D User Interfaces (3DUI), S Francisco, USA March 2017.

IC29. "Mid-Air Modeling with Boolean Operations in VR", D Mendes, D Medeiros, M Sousa, R Ferreira, A Raposo, A Ferreira, J Jorge, 2017 IEEE Symposium on 3D User Interfaces (3DUI), San Francisco, USA March 2017.

IC30. "Talaria: Continuous Drag & Drop on a Wall Display", H Rateau, Y Rekik, L Grisoni, J Jorge, ACM Interactive Spaces and Surfaces Conference, Niagara Falls, CA, Nov 2016

IC31. "Perceiving Depth: Optical versus Video See-through", D Medeiros, M Sousa, D Mendes, A Raposo, J Jorge, ACM Virtual Reality Software Technology (VRST) 2016, Munich, Nov 2016

IC32. "The Benefits of DOF Separation in Mid-air 3D Object Manipulation", D Mendes, F Relvas, Alfredo Ferreira, J Jorge, ACM VRST 2016, Munich, Nov 2016

IC33. "Effects of speed and transitions on Target-based travel techniques", D Medeiros, E Lamb, D Mendes, M Sousa, The Fox, The Ferreira, J Jorge, ACM VRST 2016, Munich, Nov 2016

IC34. "SleeveAR: Augmented Reality for Rehabilitation using Realtime Feedback", Mauricio Sousa, Joao Vieira, Daniel Medeiros, Artur Arsenio, Joaquim Jorge, ACM IUI March 2016

IC35. "From Τὲκτων to Τὲχνη : Going Back to the Classical Roots of Architecture using Virtual Reality", D Mateus, M Sousa, R de Klerk, S Gama, JA Jorge, J Duarte, eCAADE 2015, Vienna, Sep 2015

IC36. "Eery Space: Facilitating Virtual Meetings Through Remote Proxemics", Antonio Sousa, Daniel Mendes, Alfredo Ferreira, Joao Pereira, Joaquim Jorge, INTERAC T 2015, Bamberg, Germany, Sep 2015

IC37. "Efficient Grid Construction on Streaming Architectures", J Costa, J Pereira, J Jorge Computer Graphics International, June 2015

IC38. "Physio @ Home: Exploring visual guidance and feedback techniques for physiotherapy exercises", Richard Tang, Anthony Tang, Xing-Dong Yang, Scott Bateman, Joaquim Jorge, ACM CHI 2015, Seoul Korea.

IC39. "Relating Gaming Habits with Student Performance in a Gamified Learning Experience", Gabriel Barata, Sandra Gama, Joaquim Jorge and Daniel Gonçalves, In Proceedings of the 1st Symposium on Computer-Human Interaction in Play, CHI Play '14 Toronto. 19-22 Oct 2014. ACM Press.

IC40. "Interactive Two-Sided Transparent Displays: Designing for Collaboration", Jiannan Li, Saul Greenberg, Ehud Sharlin, Joaquim Jorge, In Proc. ACM Conference on Interactive Designing Systems - ACM DIS'2014. (Vancouver, Canada), June 21-25 2014.

IC41. "Let's Kick It: How to Stop Wasting the Bottom Third of Your Large Screen Display", Ricardo Jota, Pedro Lopes, Daniel Wigdor, Joaquim Jorge, CHI 2014, April 2014

IC42. "Physio @ Home: Design explorations to support movement guidance", R Tang, H Alizadeh, A Tang, S Bateman, JAP Jorge, CHI 2014 Extended Abstracts, 1651-1656

IC43. "Mid-air interactions above stereoscopic interactive tables", Daniel Mendes, Fernando Fonseca, Bruno Araujo, Alfredo Ferreira, Joaquim Jorge, 3DUI 2014, Mar. 2014

IC44. "ThumbCam: Returning to Single Touch Interactions to Explore 3D Virtual Environments, "Daniel Mendes, Maurício Sousa, Alfredo Ferreira, Joaquim Jorge, Proceedings of the Ninth ACM International Conference on Interactive Tabletops and Surfaces pp 403-408 2014

IC45. Efficient Rectilinear Grids for Real-time Ray Tracing, Vasco Costa, Joao M Pereira, Joaquim A Jorge, EGSR 2014, 2014

IC46. "Improving Participation and Learning with Gamification", Gabriel Barata, Sandra Gama, Daniel Gonçalves, J Jorge, Gamification 2013, Stanford, Ontario, CA, 2-4 October 2013

IC47. "A New Approach to Walking in Place", Luís Bruno, João Pereira, Joaquim Jorge, Interact2013, South Africa, Sep. 2013

IC48. Engaging Engineering Students with Gamification, Gabriel Barata, Sandra Gama, Daniel Gonçalves, J Jorge, 5th International Conference on Games and Virtual Worlds for Serious Applications (VS-Games 2013), Bournemouth, UK, September 11-13 2013. (BEST PAPER AWARD)

IC49. "Atomic and Molecular Intelligent Tutoring Systems - The New Architecture for Intelligent and Interoperable Open Educational Resources", Gustavo Santos and Joaquim Jorge, IEEE International Conference on Advanced Learning Technologies, July 2013. Beijing, China

IC50. "3D mid-air manipulation techniques above stereoscopic tabletops", Fernando Fonseca, Daniel Mendes, Bruno Araujo, Alfredo Ferreira, Joaquim Jorge, Workshop on Interactive Surfaces for Interaction with Stereoscopic 3D, ITS2013, October 2013

IC51. "Fast Compression of Meshes for Ray-Tracing GPU", Vasco Costa, Joao Pereira and Joaquim A Jorge, WSCG 2013, Plzen Czech Republic, June 2013

IC52. "Elderly Text-Entry Performance on Touchscreens", Hugo Nicolau and Joaquim Jorge, ASSETS 2012, Boulder, Colorado, 22-24 October 2012

IC53. "Combining Virtual Environments and Direct Manipulation for Architectural Modeling", Bruno Araujo, Joaquim Jorge, José Duarte, ECAADe 2012, September 2012

IC54. "A Web-Based Application to Address Individual Interests of Children with Autism Spectrum Disorders", Margarida Silva, Tiago Guerreiro, Daniel Gonçalves, Hugo Silva, DSAI 2012: 4th International Conference on Software Development for Enhancing Accessibility and Fighting Info-exclusion, Douro, Portugal, July 2012

IC55. "Mockup Builder: 3D Modeling Direct On and Above the Surface Interaction in the Continuous Space, "Bruno Ara ú jo, Joaquim A. Jorge, Géry Casiez, Graphics Interface, Toronto, CA, May 2012

IC56. "On Modeling and Above the Stereoscopic Multitouch Display", Bruno Araújo, Joaquim A. Jorge, Géry Casiez, Martin Hachet, 3DCHI Workshop, Austin, Texas, May, 2012

IC57. "Touch Typing using Thumbs: Understanding the Effect of Mobility and Hand Posture", Hugo Nicolau, and Joaquim Jorge, In Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'12). Austin, Texas, May, 2012

IC58. "I, the Device: Observing Human Aversion from an HCI Perspective", Ricardo Jota, Pedro Lopes and Joaquim Jorge, In Alt.CHI Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'12). Austin, Texas, May, 2012

IC59. "Towards an Immersive Interface for 3D Object Retrieval", Pedro B. Pascoal, Alfredo Ferreira, Joaquim A. Jorge, 3DOR 2012, pp 51-54, Eurographics Cagliary, Italy

IC60. "Mockup Builder: 3D Modeling Direct On and Above the Surface Interaction in the Continuous Space, "Bruno Ara ú jo, Joaquim A. Jorge, Géry Casiez, Graphics Interface, Toronto, CA, May 2012

IC61. On Modeling and Above the Stereoscopic Multitouch Display, Bruno Ara ú jo, Joaquim A. Jorge, Géry Casiez, Martin Hachet, 3DCHI Workshop, Austin, Texas, May, 2012

IC62. "Touch Typing using Thumbs: Understanding the Effect of Mobility and Hand Posture", Hugo Nicolau, and Joaquim Jorge, In Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'12). Austin, Texas, May, 2012

IC63. "I, the Device: Observing Human Aversion from an HCI Perspective", Ricardo Jota, Pedro Lopes and Joaquim Jorge, In Alt.CHI Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'12). Austin, Texas, May, 2012

IC64. "Im-O-Ret: Immersive Object Retrieval", Pedro B Pascoal and Alfredo Ferreira an Joaquim Armando Pires Jorge, IEEE VR, pp. 121-122, IEEE CS Press, Costa Mesa, CA, Mar. 2012

IC65. "Augmenting touch interaction through acoustic sensing "Pedro Lopes, Ricardo Jota, Joaquim Jorge, ITS '11 Proceedings of the ACM International Conference on Interactive Tabletops and Surfaces, Kobe, Japan, Nov. 2011

IC66. "Blind People and Mobile Touch-based Text-Entry: Acknowledging the Need for Different Flavors" (BEST STUDENT PAPER AWARD), João Oliveira, Tiago Guerreiro, Hugo Nicolau, Joaquim Jorge, Daniel Gonçalves, Proceedings of ASSETS 2011 - 13th International ACM SIGACCESS Conference on Computers and Accessibility. Dundee, Scotland, October, 2011

IC67. When form really follows function - Developing the prototype of a responsive exhibition pavilion, Luis Quelhas Marques, Jose Pinto Duarte, Joaquim Jorge, 29th eCAADe Conference Proceedings / ISBN 978-9-4912070-1-3, University of Ljubljana, Slovenia, pp..619-627, September 24, 2011.

IC68. Pedro Campos, Miguel Campos, João Pestana, Joaquim A. Jorge: Studying the Role of Interactivity in Museums: Designing and Comparing Multimedia Installations. HCI International 2011, Orlando, FL, USA, July 9-14, 2011: 155-164

IC69. "Combining bimanual manipulation and pen-based input for 3D modeling", Pedro Lopes, Daniel Mendes, Bruno Araujo, Joaquim A. Jorge, EG / SBIM 2011, Vancouver 15-22

IC70. "Studying the Role of Interactivity in Museums: Designing and Comparing Multimedia Installations.", Pedro Campos, Miguel Campos, Joao Pestana, Joaquim A. Jorge: HCI (3) 2011: 155-164, Orlando, USA; 2011

IC71. Understanding Individual Differences: Towards Effective Mobile Interface Design and Adaptation for the Blind, Tiago Guerreiro, Hugo Nicolau, Joao Oliveira, Joaquim Jorge, and Daniel Gonçalves, In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'11), Dynamic Accessibility Workshop. Vancouver, Canada, May, 2011

IC72. "Towards accessible touch interfaces", Tiago João Guerreiro, Hugo Nicolau, Joaquim A. Jorge, Daniel Gonçalves, ASSETS 2010: 19-26, 20 10

IC73. "Assessing mobile touch screen interfaces for tetraplegics", Tiago Guerreiro, Hugo Nicolau, Joaquim Jorge, Daniel Gonçalves, Mobile HCI 2010: 12th International Conference on Human-Computer Interaction with Mobile Devices and Services, Lisbon, Portugal, September / 2010

IC74. "A Narrative-Based Alternative to Tagging", Nuno Tomás, Tiago Guerreiro, Joaquim Jorge, Daniel Gonçalves, HyperText 2010: 21st ACM Conference on Hypertext and Hypermedia, Toronto, Canada, 06/2010

IC75. "A comparison of ray pointing techniques for very large displays", Ricardo Jota, Miguel A. Nacenta, Joaquim A. Jorge, M. Sheelagh T. Carpendale, Saul Greenberg: Graphics Interface 2010, Proceedings of the Graphics Interface 2010 Conference, May, 31 - June 02, 2010, Ottawa, Ontario, Canada 269-276

IC76. "Proficient blind users and mobile text-entry", Hugo Nicolau, Tiago Guerreiro, Daniel Gonçalves, Joaquim Jorge, European Conference on Cognitive Ergonomics (ECCE 2010), Delft, The Netherlands, 25-27 Aug 2010

IC77. "Multi-Level Hashed Grid Construction Methods", Vasco Costa, Joao Pereira, Joaquim Jorge, WSCG10 18th International Conference on Computer Graphics, Visualization and Computer Vision'2010, Plzen, Czech Republic, 02/2010

IC78. Tiago Guerreiro, Joaquim Jorge, Daniel Gonçalves, ECCE 2010, Delft, The Netherlands, 25-27 Aug 2010 "Identifying the individual ingredients for a (non) successful non-visual mobile experience"

IC79. "Laying the Groundwork for Assisted Rehabilitation", Rita Pereira, Tiago Guerreiro, Hugo Nicolau, Daniel, Gonçalves, Joaquim Jorge, ECCE 2010, Delft, The Netherlands, 25-27 Aug 2010

IC80. "An Approach to Predictive Evaluation for Users with Special Needs", Andreia Valada Artifice, João Brisson Lopes, Joaquim A. Jorge, Manuel J. Fonseca, Second IASTED International Conference on Telehealth and Assistive Technology (TAT 09), Cambridge, USA, 2009/2009

IC81. "NavTap: A Long-Term Study with Excluded Blind Users", Tiago Guerreiro, Hugo Nicolau, Joaquim Jorge and Daniel Gonçalves, ASSETS 2009 - Eleventh International ACM SIGACCESS Conference on Computers and Accessibility, Pittsburgh, USA, October, 2009

IC82. "Style Nodes and Repolygonization for Tree-Based Implicit Surface Modeling", Pauline Jepp, Bruno Rodrigues De Araujo, Joaquim Jorge, Brian Wyvill, and Mario Cost a Sousa, EG Symposium on Computational Aesthetics 2009, Victoria, BC, Canada.

IC83. "Blobby: How to Guide a Blind Person", Hugo Nicolau, Tiago Guerreiro and Joaquim Jorge, CHI'2009 Work-in-Progress program, Boston, April 2009

IC84. "A comparative study of interaction metaphors for large-scale displays", Ricardo Jota, Joaquim A. Jorge, CHI'2009 Work-in-Progress program, Boston, April 2009

IC85. "Edition: The Collaborative Calligraphic Tool to Manage Virtual Environments", Alfredo Ferreira, Marco Vala, G. Raimundo, João Madeiras Pereira, Joaquim A. Jorge, Ana Paiva, Proceedings of the VL / HCC Workshop on Sketching Tools for Diagramming, Herrsching am Ammersee, Germany, September 2008

IC86. "Mnemonical Body Shortcuts: Improving Mobile Interaction", Tiago Guerreiro, Ricardo Gamboa, Joaquim Jorge, European Conference on Cognitive Ergonomics (ECCE08), Madeira, September 2008.

IC87. "Mobile Text-Entry Models for People with Disabilities", Tiago Guerreiro, Pedro Santana, Joaquim Jorge, European Conference on Cognitive Ergonomics (ECCE08), Madeira, September 2008.

IC88. "NavTap and BrailleTap: Non-Visual Texting Interfaces", Tiago Guerreiro, Daniel Gonçalves, Paulo Lagoá, Pedro Santana and J Jorge, RESNA'08 Annual Conference, 26-30 Jun 2008, Arlington, VA

IC89. "Agrafo: A Visual Interface for Grouping and Browsing Digital Photos", João Mota, Manuel J Fonseca, Daniel Gonçalves, Joaquim Jorge, Demo Paper accepted for submission will AVI 2008, 28-30 May 2008 - Naples, It Alia.

IC90. "A Taxonomy of Modeling Techniques using Sketch-based Interfaces", L. Olsen, M. Costa Sousa, FF Samavati and Joaquim A. Jorge, State of the Art Report, Eurographics'08, Crete, Greece, April 2008.

IC91. "RealFind: Managing Personal Items in the Physical World", Leonel Camara, Daniel Gonçalves, Tiago Guerreiro, Joaquim A Jorge, ACM CHI 2008, Florence, Italy, April 2008

IC92. "Suggestive Contours over Point-Set Implicits", João Proença, Mário Costa Sousa and Joaquim Jorge, GRAPP - 3rd International Conference on Computer Graphics Theory and Applications, 22 - 25 January, 2008 Funchal, Madeira - Portugal.

IC93. "In Search of Personal Information: Narrative-Based Interfaces", Daniel Gonçalves, Joaquim Jorge, IUI'08 - ACM Conf. On Intelligent User Interfaces, Spain, 16-18 January 2008.

IC94. Braille Matrix, Pedro Santana, Tiago Guerreiro, Joaquim Jorge, Proceedings of DSAI 2007 - International Conference on Software Development for Enhancing Accessibility and Fighting Info-exclusion, Vila Real, Portugal, November 2007

IC95. "An Extensible Middleware Framework for Multimodal Interfaces in Distributed Environments", Vitor MN Fernandes, Tiago Guerreiro, Bruno Rodrigues De Araujo, Joao Madeiras Pereira, Joaquim A. Jorge, 9th International Conference on Multimodal Interfaces (ICMI 2007), IEEE CS Press, Nagoya, Japan, November 2007.

IC96. "Issues in capturing the classroom experience: Lessons from the trenches", André Martins, Maria Rentróia-Bonito, Tiago Guerreiro, Joaquim Jorge, Proceedings of the ICEE 2007 - International Conference on Engineering Education, Coimbra, Portugal, September 2007.

IC97. "Sampling Point-Set Implicits", João Proença, Jo here Jorge, Mario Costa Sousa, IEEE / Eurographics Symposium on Point-Based Graphics, September 2007, Prague.

IC98. "Using Autobiographical Information to Retrieve Real and Electronic Documents", Daniel Gonçalves, Tiago Guerreiro, Renata Marin, Joaquim Jorge, HCI International 2007, Beijing, PRC, July 2007.

IC99. "IMPROVE: Designing Effective Interaction for Virtual and Mixed Reality Environments", Pedro Santos, André Stork, Thomas Gierlinger, Alain Pagani, Bruno Araujo, Ricardo Jota, Luis Bruno, Joaquim Jorge, Martin Witzel, Giuseppe Conti, Raffaele DeAmicis, Inigo Barandarian, Celine Paloc, Maylu Hafner, Don McIntyre, HCI International 2007, Beijing, PRC, July 2007.

IC100. "IMPROVE: Collaborative Design Review in Mobile Mixed Reality", Pedro Santos, André Stork, Thomas Gierlinger, Alain Pagani, Bruno Araujo, Ricardo Jota, Luis Bruno, Joaquim Jorge, John Woods Pereira, Giuseppe Conti, Raffaele DeAmicis, Inigo Barandarian, Celine Paloc, Oliver Machui, Georg Bodammer, Jose Manuel Jimenez, Don McIntyre, HCI International 2007, Beijing, PRC, July 2007.

IC101. "Composition Principles for Quality Depiction and Aesthetics", Vera Rivotti, Joao Proença, Joaquim Jorge, Mario Costa Sousa, International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging, 20–22 June, 2007, Banff, Alberta, Canada.

IC102. "Mobile Interaction Based on the Human Gesture Analysis", Ricardo Gambôa, Tiago Guerreiro and Joaquim Jorge, ISHF 2007 - International Symposium on Measurement Analysis and Modeling of Human Functions, June 14-16, Cascais.

IC103. "Automatic Color Calibration for Commodity Multi-projection Display Walls", Luciano P Soares, Ricardo Jota, Joaquim Jorge, Bruno Araujo, X Symposium on Virtual and Augmented Reality - SVR 2007, Petrópolis, RJ, Brazil, 28 May - 1 June, 2007.

IC104. "Fostering Creativity through Conceptual Design", Manuel João Fonseca, Joaquim A. Jorge, Mario Rui Gomes, Daniel Gonçalves and Marco Vala, *Proceedings of the International Conference on Human-Computer Interaction Educators* (HCIed'07), Aveiro, Portugal, March 2007.

IC105. "Fostering the CG Online Community", Frederico Figueiredo, Joaquim Jorge, Frank Hanisch, Coleen Case, WEBIST - IADIS International Conference Web Based Communities, Barcelona, Spain 3-6 March 2007.

IC106. "Collaborative Visualization of Sensor Data Through a Subscription Based Architecture", M. Witzel, M. Andreolli, G. Conti, R. DeAmicis, B. De Araujo, R. Jota and J. Jorge, Eurographics Italian Chapter annual event, February 2007

IC107. "IMPROVE: An innovative application for collaborative mobile mixed reality design review", André Stork, Pedro Santos, Thomas Gierlinger, Alain Pagani, Céline Paloc, Iñigo Barandarian, Giuseppe Conti, Raffaele deAmicis, Martin Witzel, Oliver Machui, Jose M. Jiménez, Bruno Araújo, Joaquim Jorge, Georg Bodammer, Virtual Concept 2006, Playa Del Carmen, Mexico, 26 Nov - 1 Dec, 2006

IC108. "Retrieving Data by Similarity: a Mould Quotation Tool", Manuel João Fonseca, Elsa Henriques, Alfredo Ferreira, Joaquim Jorge, Rui Soares, DET'2006, 3 rd International Conference on Digital Enterprise Technology, Setúbal, 18-20 September 2006.

IC109. Evaluating Learning Support Systems Usability: An Empirical Approach, Alexandra Rentróia, André Martins, Tiago Guerreiro, Vitor Fernandes, Joaquim Jorge, *3rd E-learning Conference - Computer Science Education,* Coimbra, Portugal, 7-8 September 2006.

IC110. "Shapeshop: Sketch-based solid modeling with blobtrees", Ryan Schmidt, Brian Wyvill, Mario Costa Sousa, Joaquim A Jorge, July 2006, ACM SIGGRAPH 2006 (Course)

IC111. "Markerless Virtual Tapping", Miguel Figueiredo, Alexandra Ribeiro, Ricardo Jota, Joaquim A. Jorge, Short Communication to SIACG 2006, Santiago de Compostela, Spain, 7 July 2006.

IC112. "Recognizing Hand Gestures with CALI", Ricardo Jota, Alfredo Ferreira, Mariana Cerejo, Jose Santos, Manuel J. Fonseca and Joaquim A. Jorge, SIACG 2006, Santiago de Compostela, Spain, 7 July 2006. Eurographics Publishing.

IC113. "Innovative Geometric Pose Reconstruction for Marker-based Single Camera Tracking", Alexandre Buaes, Pedro Santos, André Stork and Joaquim Jorge, ACM VRCIA 2006 - International Conference on Virtual Reality Continuum and I ts Applications, 14-17 June 2006, City University Hong Kong, Hong Kong

IC114. Non-Photorealistic Rendering in Context: An Observational Study, Tobias Isenberg, Petra Neumann, Sheelagh Carpendale, Mario Costa Sousa and Joaquim A Jorge, NPAR'06, 5-7 June, Annecy, France.

IC115. "Modeling Plant Structures Using Concept Sketches", Fabrício Anastácio, Mario Costa Sousa, Faramarz Samavati and Joaquim Jorge, EG / ACM NPAR'06, 5-7 June, Annecy, France.

IC116. "Web-Based Support for Effective e-Learning", MA Rentroia-Bonito, Frederico Figueiredo, André Martins, Vitor Fernandes, Joaquim Jorge, WEBIST - International Conference on Web Information Systems and Technologies, Setúbal, Portugal, 11-13 April 2006.

IC117. "PTrack: Introducing a Novel Iterative Geometric Pose Estimation for the Marker-based Single Camera Tracking System, "Pedro Santos, André Stork, Joaquim A. Jorge, IEEE VR 2006, March 2006, Alexandria, VA.

IC118. "EMG as a Daily Wearable Interface", Tiago Guerreiro and Joaquim Jorge, GRAPP - International Conference on Computer Graphics Theory and Applications, 25-28 February 2006, Setúbal, Portugal.

IC119. "Calligraphic Interface for Management of an Agents Platform", Alfredo Ferreira, Marco Vala, João Pereira, Joaquim Jorge, Short paper to WSCG'06, Plz, Czech Republic, 1-3 February 2006.

IC120. "*Evaluating Stories in Narrative-based interfaces,* "Daniel Gonçalves, Joaquim A. Jorge, Short paper to ACM Intelligent User Interfaces Conference (IUI'06), Sydney, Australia, January 2006.

IC121. "A Calligraphic Interface for Interactive Free-Form Modeling with Large Datasets", Bruno de Araujo, Joaquim A. Jorge, SIBGRAPI'2005, Natal Brazil, IEEE CS Press, October 2005.

IC122. "DecoSketch - Towards Calligraphic Approaches to Interior Design", Tiago Brito, Manuel João Fonseca, Joaquim. Jorge, eCAADe 2005: Education and Research in Computer Aided Architectural Design in Europe, 21-24 September 2005, Lisbon.

IC123. "Sketch Mesh-based Augmentation", Luke and Olsen CM FF Samavati and Sousa and Joaquim A. Jorge, 2nd Eurographics Workshop on Sketch-Based Interfaces and Modeling, Dublin, 28-29 August 2005.

IC124. "ShapeShop: Sketch-Based Solid Modeling with BlobTrees", R Schmidt, B Wyvill, J Jorge and Mario C Sousa, 2 nd Eurographics Workshop on Sketch-Based Interfaces and Modeling, Dublin, 28-29 August 2005.

IC125. "Generic Shape Classification for Retrieval", Manuel João Fonseca, Alfredo Ferreira and Joaquim A. Jorge, GREC 2005, August 2005 HK, China.

IC126. "An Integrated Approach to Virtual Tape Design for Automotive Design", Pedro Santos, André Stork, Joaquim Jorge, Rodrigo Filipe, Proceedings of HCI International 2005, 22-27 July 2005, Las Vegas, NV.

IC127. "InStory: A System for Mobile Information Access, Storytelling and Gaming Activities in Physical Spaces", N Correia, L Alves, H Correia, Carmen Morgado, Luis Soares, José Cunha, Teresa Romão, A. Eduardo Dias, Joaquim A. Jorge, ACE2005, Universitat Politécnica de Valencia, Spain 15- 17 June 2005.

IC128. "Sketch Based Construction and Rendering of Implicit Models", Brian Wyvill, Kevin Foster, Pauline Jepp, Ryan Schmidt, Mario Costa Sousa, Joaquim A. Jorge, in Proceedings of *Eurographics Workshop on Computational Aesthetics in Graphics, Visualization and Imaging,* L. Neumann, M. Sbert, B. Gooch, W. Purgathofer (Editors), Girona, Spain 18-20 May 2005.

IC129. Sketch-Based Modeling with Few Strokes, Joseph J. Cherlin, Mario Costa Sousa, Joaquim A. Jorge, SCCG05 - Spring Conference on Computer Graphics, Budmerice, Slovakia, 12-14 May 2005.

IC130. "Mixing Images and Sketches for Retrieving Vector Drawings", A. Ferreira Jr., MJ Fonseca, Joaquim A. Jorge and Mario Ramalho, EGMM04, *7 th Eurographics Workshop on Multimedia,* Nanjing, China, 27-28 October 2004.

IC131. "Fast Adaptive Polygonization of Implicit Surfaces", Bruno Rodrigues de Araújo and Joaquim Jorge, SIACG / SIBGRAPI 2004, Brazil, Oct. 2004. IEEE CS Press

IC132. "CGEMS: Année 01 - Practice and Experience with Refereed Educational Materials for CG", Frederico Figueiredo, Colleen Case, Dena Eber, J. Jorge, Eurographics 2004 Education Program, Grenoble, September 2004.

IC133. "Cascading Recognizers for Ambiguous Calligraphic Interaction", João P. Pereira, Vasco A. Branco, Joaquim A. Jorge, Tiago D. Cardoso, F. Nunes Ferreira, SBM'04 *Eurographics Workshop on Sketch-Based Interfaces and Modeling,* Grenoble, 30-31 August 2004.

IC134. Towards 3D Modeling Using Sketches and Retrieval, Manuel J. Fonseca, Alfredo Ferreira, Joaquim A. Jorge, SBM'04 Eurographics Workshop on Sketch-Based Interfaces and Modeling, Grenoble, 30-31 August 2004.

IC135. "MIBlob: A Tool for Medical Visualization and Modeling using Sketches", Bruno Rodrigues de Araujo, Joaquim A Jorge, Mario Costa Sousa, Faramarz Samavati, Brian Wyvill, SIGGRAPH 2004 Poster.

IC136. Supporting the Community of Computer Graphics Educators, Frederico Figueiredo, Dena Eber and Joaquim A. Jorge, SIGGRAPH 2004 Educational Program, Los Angeles, August 2004.

IC137. "Retrieving Clip Art Images by Content", MJ Fonseca, Bruno Barroso, Pedro Ribeiro, J Jorge, CIVR 2004, *International Conference on Image and Video Retrieval,* 21-23 July, 2004, Dublin City University, Ireland.

IC138. "Telling Stories with Dialogue Boxes to Retrieve Documents", Daniel Gonçalves and Joaquim Jorge, TIDSE'2004, *2 nd International Conference on Technologies for Interactive Digital Storytelling and Entertainment,* 24-26 June 2004, Darmstadt, Germany.

IC139. Content-Based Retrieval of Clip Art Drawings, Alfredo Ferreira Jr., Manuel Fonseca and Joaquim A. Jorge, AVI'2004 - Advanced Visual Interfaces, Gallipoli, Italy 25-28 May 2004.

IC140. "Motivation to e-Learn within organizational settings: What is it and how could it be measured?", Maria Alexandra Bonito, Joaquim Jorge, Information Resources Management Association International Conference (IRMA2004), New Orleans, 23-26 May 2004.

IC141. "Telling Stories to Computers for Document Retrieval", Daniel Gonçalves and Joaquim Jorge, short presentation to CHI 2004 - Conference on Human Factors in Computing Systems, Vienna, April 2004.

IC142. Evaluating Adaptive User Profiles for News Classification, Ricardo Carreira, Jaime Crato, Daniel Gonçalves and Joaquim Jorge, ACM International Conference on Intelligent User Interfaces, Funchal, Madeira, 13-16 January 2004.

IC143. "Describing Documents: What Can Users Tell Us?", Daniel Gonçalves, Joaquim Jorge, ACM International Conference on Intelligent User Interfaces, Madeira, 13-16 January 2004.

IC144. "CGEMS - A Referred Server to Support the Community of CG Educators", Frederico C. Figueiredo, Dena E. Eber, Joaquim A. Jorge, Lars Kjelldahl, (Svenska föreningen for grafisk databehandling - www.sigrad.org) SIGRAD 2003, Meeting Swedish Computer Graphics Association, Umeå University, Umeå, Sweden, November 20-21, 2003. Series: Linköping Electronic Conference Proceedings, ISSN 1650-3686 (paper), 1650-3740 (www), URL: http: / /www.ep.liu.se/ecp/010/013/

IC145. "Usability evaluation of tangible user interfaces for augmented reality", JE Carvalho, Joao Luzio, Pedro Santos, Miguel Dias, Joaquim Jorge, Second IEEE International Augmented Reality Toolkit Workshop, Waseda University, Tokyo, Japan, 7 October 2003.

IC146. "A Refereed Server for Educational CG Content", Frederico Figueiredo, Dena Eber, J. Jorge, Eurographics 2003 Education Program, Granada, September 2003.

IC147. "Conceptual modeling tools at the early design phase", Ferran Naya Sanchis, M. Contero, J. Jorge and J. Conesa, ICED03, International Conference on Engineering Design, Stockholm, August 19-21 2003.

IC148. CGEMS - Computer Graphics Educational Materials Server, Frederico Figueiredo, Dena Eber, J. Jorge, ACM / SIGGRAPH Educators Program, 27-29 July 2003, San Diego, USA.

IC149. Analyzing Personal Document Spaces, Daniel Gonçalves, Joaquim Jorge, HCI International, 2003, Crete, Greece, 22-27 June 2003.

IC150. "Ubiquitous Access to Documents: Using Storytelling to Alleviate Cognitive Problems," Daniel Gonçalves, J Jorge, 2nd International Conference on Universal Access in Human - Computer Interaction, Crete, Greece, 22-27 June 2003.

IC151. "High-Dimensional Data Indexing for Content-Based Retrieval in Large Databases," Manuel J. Fonseca, Joaquim Jorge, 8th International Conference on Database Systems for Advanced Applications (DASFAA '03), Kyoto, Japan, March 2003.

IC152. "Content-Based Retrieval Towards of Technical Drawings through High-Dimensional Indexing", M J. Fonseca and J. A Jorge, 1st Ibero-American Symposium on Computer Graphics, Guimarães (SIACG'02), July 2002.

IC153. "Direct Modeling: From Sketches to 3D Models", Ferran Naya Sanchis, J. Jorge et al, 1st Ibero-American Symposium on Computer Graphics, Guimarães (SIACG'02), July 2002.

IC154. Sketching User Interfaces with Visual Patterns, T. Caetano, Neri Goulart, J. Fonseca, J. Jorge, 1st Ibero-American Symposium on Computer Graphics, Guimarães (SIACG02), July 2002.

IC155. "JavaSketchIt: Issues in Sketching the Look of User Interfaces", AT Caetano, N. Goulart, M.J. Fonseca and JA Jorge, AAAI Spring Symposium on Sketch Understanding, March 25-27, 2002, Palo Alto, California.

IC156. "CALI: An Online Scribble Recognizer for Calligraphic Interfaces", M J. Fonseca, Caesar Pimentel and JA Jorge, 2002 AAAI Spring Symposium on Sketch Understanding, March 25-27, 2002, Palo Alto, California.

IC157. "Handling Ambiguity and Errors: Visual Languages for Calligraphic Interaction", João P. Pereira, J. Jorge, MJ Fonseca, SIBGRAPI'01, Florianópolis, Brazil, October 2001.

IC158. "Web Clipping: Compression Heuristics for Displaying Text on a PDA", P. Gomes, S. Tostão, D. Gonçalves and J. Jorge, 3rd International Workshop on Human Computer Interaction with Mobile Devices, Sept. 2001, Lille, France.

IC159. "Experimental Evaluation of a Trainable Scribble Recognizer for Calligraphic Interfaces", César Pimentel, MJ Fonseca and Joaquim A Jorge, GREC'01, Canada, September 2001.

IC160. "Adaptive Tools for the Elderly - New Devices for Coping with Age-Induced Cognitive Disabilities", Joaquim Jorge, EC / NSF Workshop on Universal Accessibility of Ubiquitous Computing, 22-25 May 2001, ACM Press, Alcácer do Sal, Portugal.

IC161. "Reduced Instruction Set Calligraphic Interfaces: Sketching Complex 3D Objects with (Fewer) Gestures," Pereira JP, Jorge JA, White V., Ferreira FN, 4th European Academy of Design Conference Proceedings, pp. 194 - 196, Aveiro, Portugal, April 2001.

IC162. "Modeling Solids and Surfaces with Sketches - An Empirical Evaluation", Vladimiro Colaço, M J. Fonseca and Joaquim Jorge, poster presentation, WSCG2001, Plzen, Czech Republic, February 2001.

IC163. "Visual Languages for Sketching Documents", Maria Albuquerque, Manuel João Fonseca, Joaquim Jorge, IEEE-VL2000, Seattle, USA, 10-14 September 2000.

IC164. "Using Fuzzy Logic to Recognize Gestures Interactively", Manuel J. Fonseca, Joaquim A Jorge, FUZZ-IEEE'2000, Intl. Conference on Fuzzy Systems, pp291-296, San Antonio, TX, May 2000.

IC165. Towards Calligraphic Interfaces: Sketching 3D Scenes with Gestures and Context Icons, J. P. Pereira, Joaquim Jorge, Vasco Branco and F. Nunes Ferreira, WSCG2000, Plzen, Czech Republic, Feb. 2000.

IC166. "A Simple Approach to Recognize Geometric Shapes Interactively", Joaquim A Jorge, Manuel J. Fonseca, 3rd International Workshop on Graphics Recognition (GREC99), Jaipur, India, 26-27 Sep 1999.

IC167. "The Digital Library for the Virtual Organization", José Luís Borbinha, João Ferreira, Joaquim Jorge, José Delgado, HICSS'98, 30th Hawaii International Conference on System Sciences, January 1998.

IC168. "MIDAS: A Visual Language for Multimedia Document Specification", Maria C. Gonçalves and Joaquim Jorge, II Brazilian Symposium on Programming Languages (SBLP'97), September 1997, Campinas, SP, Brazil.

IC169. Networked Digital Libraries: The Concept and a Case Study, José Ferreira, José Borbinha, Joaquim Jorge and José Delgado, Workshop on Networked Information Retrieval, SIGIR'97 - 20th International ACM SIGIR Conference on Research and Development in Information Retrieval, Philadelphia, PA, USA, July 1997.

IC170. "MIDAS - A Visual Language for Interactive Design of Multimedia Documents", Carla Gonçalves and Joaquim Jorge, CAD / Graphics'97, Schenzhen, China, December 1997.

IC171. "Revolution or Fad? Towards Electronic Publishing" (in Russian), Peter R. Bono, Joaquim A. Jorge, Stanislav V. Klimenko, Proceedings of the First Russian Conference on Office Information Systems, 19-21 November 1996, Moscow, Published by Center of Information Technology and Open Systems, pp. 56-61.

IC172. "Formal Visual Languages and Spatial Reasoning", J. Jorge and Dragos A. Vaida, SIC '96, International Panel Conference on Soft and Intelligent Computing, Budapest, October 1996.

IC173. Fuzzy Adjacency Languages and Applications to Spatial Reasoning, EP Glinert, J. Jorge and Dragos A. Vaida, FUZZ-IEEE '96 Intl. Conf. On Fuzzy Systems, New Orleans, September 1996.

IC174. "A Fuzzy Relational Path Algebra for Distance and Directions," J. Jorge, Dragos A. Vaida, ECAI-96 Workshop on Representation and Processing of Spatial Expressions, Budapest, August 1996.

IC175. "Online Parsing of Visual Languages Using Adjacency Grammars", J. Jorge, EP Glinert, IEEE Symposium on Visual Languages (VL´95), Darmstadt, Germany, September 1995.

IC176. "Metawidgets: Towards a Theory of Multimodal Interface Design", MM Blattner, Glinert EP, J. Jorge and GR Ormsby. IEEE COMPSAC '92, Chicago.

IC177. "Automated Testing of Computer Graphics Standards", J. Jorge and M. Göbel, 1st Luso-German Computer Graphics Meeting, Lisbon, October 1988.

IC178. "THESEUS on X", Matthias Müth, Joaquim A. Jorge, 1st Luso-German Computer Graphics Meeting, Lisbon, October 1988.

IC179. "Algorithms for Irregular Shape Placement "JC Bernardo, Jorge J., 8th Congress of the Brazilian Computer Society, Brazil, July 1988.

Communications to international workshops and conferences (including posters and *position papers*)

PP1. "Estimating respiratory frequency by filtering Kinect v2 skeletal data", FB Marques, A Bernardino, J Jorge, DS Lopes, in Translational Research and Innovation in Human and Health Science, Annals of Medicine, 50:sup1, S10-S170, DOI: 10.1080/07853890.2018.1427445

PP2. "Kinect-based biofeedback interfaces to improve upper limb rehabilitation", A Domingues, J Jorge, DS Lopes, in Translational Research and Innovation in Human and Health Science, Annals of Medicine, 50:sup1, S10-S170, DOI: 10.1080/07853890.2018.1427445

PP3. "Combining 2D and 3D image data for preoperative planning of corrective osteotomies in cubitus varus and cubitus valgus, ", João Martins, Soraia Paulo, J Jorge, Manuel Cassiano Neves, DS Lopes, in Translational Research and Innovation in Human and Health Science, Annals of Medicine, 50:sup1, S10-S170, DOI: 10.1080/07853890.2018.1427445

PP4. Augmented Reality for Rehabilitation Using Multimodal Feedback, João Vieira, Mauricio Sousa, Joaquim Jorge in REHAB '15 Proceedings of the 3rd 2015 Workshop on ICTs for Improving Patients Rehabilitation Research Techniques, Pages 38-41

PP5. "Binding an Handheld Device with its Owner", Mauricio Sousa, Joaquim Jorge, Collaboration Meets Interactive Surfaces, Oct 6, 2013, IST / UIST St Andrews, UK

PP6. "Envisioning Multi-Surface Collaborative Review of 3D Virtual Models", Daniel Mendes, Alfredo Ferreira, Joaquim Jorge, Oct 6, 2013, IST / UIST St. Andrews, UK

PP7. So Fun it Hurts - Gamifying an Engineering Course", Daniel Gonçalves, Gabriel Barata, Joaquim Jorge in"Using Augmented Cognition for Gamification", Thematic Area: Augmented Cognition, HCI International 2013, pp639-648, Springer LNAI 8027, Las Vegas July 2013.

PP8. "Compressed Grids for GPU Ray Tracing of Large Models", Vasco Costa, Joao Pereira and Joaquim A Jorge, WSCG 2013, Plzen Czech Republic, June 2013

PP9. "3D Collaborative Visualization on Large Screen Displays", Daniel Mendes, Pedro Campos, Mauricio Sousa, Alfredo Ferreira, Bruno Araujo, Luciano Soares, Alberto Raposo, Joaquim Jorge, P OWERWALL:. 1st Int Workshop on Interactive, Ultra-High-Resolution Displays, April 27, 2013, CHI Paris, France

PP10. "Designing a Mobile Collaborative System for Navigating and Reviewing Oil Industry CAD Models", Hildegardo Noronha, Bruno de Araujo, Pedro Campos, Luciano Soares, Joaquim Jorge, Alberto Raposo, NORDICHI 2012 Industrial Track, Oct 2012

PP11. "A Mobile System for Collaborative Design and Review of Large Scale Virtual Reality Models", Pedro Campos, Duarte Gouveia, Hildegardo Noronha and Joaquim Jorge, Joint Virtual Reality Conference of ICAT - EGVE - EuroVR Oct 2012.

PP12. "The Disability Continuum: Investigating Health and Situational Induced Impairments and Disabilities "Hugo Nicolau and Joaquim Jorge, 2 nd Workshop on Mobile Accessibility, San Francisco, CA Sep 21, 2012.

PP13. "Exploring the Non-Visual Acquisition of Targets on Touch Phones and Tablets", Tiago Guerreiro, Joaquim Jorge and Daniel Gonçalves, 2 nd Workshop on Mobile Accessibility, San Francisco, CA Sep 21, 2012.

PP14. "Guiding Blind People with Haptic Feedback", Slim Kammoun, Christophe Jouffrais, Tiago Guerreiro, Hugo Nicolau, Joaquim Jorge, Workshop on Frontiers in Accessibility for Pervasive Computing, Newcastle, UK, June 19th, 2012.

PP15. "Mobile Text-Entry: The Unattainable Ultimate Method", T Warrior, H Nicholas, J Jorge, D Gonçalves, workshop on Frontiers in Accessibility for Pervasive Computing, Newcastle, UK, June 19th, 2012.

PP16. "Towards an Immersive Interface for 3D Object Retrieval", Pedro B. Pascoal, Alfredo Ferreira, Joaquim A. Jorge, 3DOR 2012, pp 51-54, Eurographics Cagliary, Italy

PP17. "Im-O-Ret: Immersive Object Retrieval", Pedro B Pascoal and Alfredo Ferreira and Joaquim Armando Pires Jorge, IEEE VR, pp. 121-122, IEEE CS Press, Costa Mesa, CA, Mar. 2012

PP18. Personal mobile controller for blind people, Hugo Nicolau, Renato Nunes, Joaquim A. Jorge. 371-372, Mobile HCI 2010, Lisbon

PP19. "Multi-Level Hashed Grids for Ray Tracing", Vasco Costa, Joao Pereira, Joaquim Jorge, High Performance Graphics 2009, New Orleans, Louisiana, USA, 08/2009

PP20. "Now, It's Personal! Evaluating PIM Retrieval Tools", Daniel Gonçalves, Joaquim A. Jorge, Personal Information Management (PIM 2008) workshop at CHI 2008, 5-6 April 2008, Florence, Italy.

PP21. "Mobile Phone Interaction with Outdoor Advertisements", Pedro Ventura, Hugo Sousa, Joaquim Jorge, Workshop on Designing and Evaluating Mobile Phone-Based Interaction With Public Displays at CHI 2008, 5-6 April 2008, Florence, Italy.

PP22. "Mnemonical Body Shortcuts: Body Space Gesture Recognition", Ricardo Gamboa, Tiago Guerreiro, Joaquim Jorge, RECPAD 2007, 13th Portuguese Pattern Recognition Conference, Lisbon, 26 October 2007.

PP23. "Describing and Parsing Hand-Drawn Sketches Using a Syntactic Approach", Joan Mas Romeu, Joaquim A. Jorge, Gemma Sanchez and Josep Llados, GREC'2007, October, Brazil.

PP24. "EMF: Extensible Multimodal Framework", Vitor Fernandes, Tiago Guerreiro, Bruno Araujo, Joaquim Jorge, Joao Madeiras Pereira, poster, HCI International 2007, Beijing, PRC, July 2007.

PP25. "Mnemonical Gesture-based Mobile Interaction", Ricardo Gamboa, Tiago Guerreiro, Joaquim Jorge, accepted as poster, HCI International 2007, Beijing, PRC, July 2007.

PP26. "Assistive Technologies for Spinal Cord Injured Individuals: Electromyographic Mobile Accessibility", Tiago Guerreiro and Joaquim Jorge, Proceedings of the 7th International Workshop on Gesture in Human-Computer Interaction and Simulation (GW2007), Lisbon, July 2007.

PP27. "Mnemonical Body Shortcuts", Ricardo Gamboa, Tiago Guerreiro, Joaquim Jorge, Proceedings of the 7th International Workshop on Gesture in Human-Computer Interaction and Simulation (GW2007), Lisbon, July 2007.

PP28. Interpreting Annotated Engineering Drawings, Nuria Aleixos, Ferran Naya, Manuel Contero, Joaquim Jorge, Peter Varley, Peter Company, 2007 Workshop on Pen-Centric Computing Research, Brown Univ, Rhode Island, USA, March 2007.

PP29. "Aesthetics of Hand-Drawn and Computer-Generated Illustrations", Tobias Isenberg, Petra Neumann, Sheelagh Carpendale, Mario Costa Sousa, and Joaquim A. Jorge In Bruce Gooch, László Neumann, Werner Purgathofer, Editors, Dagstuhl Seminar 06221 on Computational Aesthetics in Graphics, Visualization and Imaging. 2006

PP30. "Quill: A Narrative-Based Interface for Personal Document Retrieval", Daniel Gonçalves, Joaquim A. Jorge, Guest invited to the ACM SIGCHI Conference alt.chi trail, Montreal, April 2006.

PP31. "Supporting the Online Community of Computer Graphics Educators", Frederico C. Figueiredo, Joaquim A. Jorge, Brazilian Symposium on Computer Graphics and Image Processing (SIBGRAPI 2005), Natal, Brazil, October 2005.

PP32. "CGEMS - Computer Graphics Educational Materials Source: Submissions and Editorial Policies", Frederico C. Figueiredo, Dena E. Eber, Joaquim A. Jorge, CGE04 - Eurographics / SIGGRAPH Workshop on Computer Graphics Education, China, June 2004.

PP33. "Proposal for a CG Online Educational Content Submission and Reviewing System", Sónia Assunção, Frederico Figueiredo and Joaquim Jorge in Proceedings, CGE02 - Eurographics /

SIGGRAPH Workshop on Computer Graphics Education, J. Jorge, A. Chalmers, M Mihrmedi (eds.), Bristol, United Kingdom, July 2002.

PP34."When I'm sixty-four...: there are real strategies for providing universal accessibility for the elderly", Laura M. Leventhal, Mary Zajicek, Joaquim A. Jorge, Krista Coleman, Robert JK Jacob, Peter White, David G Novick, Julio Abascal, Elizabeth D. Mynatt: CHI Extended Abstracts 2002: 694-695.

PP35. "Restructuring CG & Visualization Curriculum at IST", J. Brisson Lopes, Joaquim Jorge, et. al., Eurographics Workshop on Graphics and Visualization Education (GVE'99), Coimbra, July 1999.

PP36. "Revolution or Fad? Towards Electronic Publishing", Joaquim Jorge, Peter Bono, Position Paper, Eurographics Future Directions Workshop, CWI, Amsterdam, May 1996.

PP37. Testing CGI Output, Joaquim Jorge and Mario Rui Gomes, Position paper, *Workshop on Computer Graphics Device Interface,* Heppenheim, May 1988.

Databases

1. Hsieh, C., Ouyang, C., Nascimento, J. C., Pereira, J., Jorge, J., & Moreira, C. (2023). MIMIC-Eye: Integrating MIMIC Datasets with REFLACX and Eye Gaze for Multimodal Deep Learning Applications (version 1.0.0). **PhysioNet**. https://doi.org/10.13026/pc72-aso3.