

BESTE ÖZCAN

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- Personal website: [REDACTED]
- Designer of "+me Project" and transitional wearable companions (TWCs): [REDACTED]
- Interaction designer in "science2mind" association of researchers using Computational models to study Brain, Mind, Society [REDACTED]
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Brief Biography (EN)

I'm designer of the concept "*Transitional Wearable Companions (TWCs)*", a particular type of social robot developed at the Institute of Cognitive Sciences and Technologies, National Research Council of Italy (ISTC-CNR) within the scientific project "*+me: motivating children with autism spectrum disorder (ASD) to interact socially*". I'm also the designer of the first prototype of TWC, "+me" social robot and associated brand.

In 2009, I finished B.Sc. and M.A. degrees in interior architecture and environmental design at the Faculty of Fine Arts, University of Hacettepe, Ankara, Turkey with the highest grade.

In 2007, I went to Rome as a M.A. exchange student for one year to work about sustainable urban squares.

In 2009, I got Ph.D. scholarship in an international program titled "Design and Innovation" at Second University of Naples, Italy and graduated with the highest grade. The Ph.D. program allowed me to continue my research in Technical University of Lisbon and University of Malaga for one year in total. I intended to continue my studies at the Ph.D. level focusing on a new design approach, related with the visions of the future, interaction design and wearable computing considering social innovation.

In 2015, after finishing my Ph.D., I have worked as an assistant professor for the History of Art Critics lesson and co-tutor for *Smart Wearables* at the design department, University of Sapienza, Rome for six months.

In 2016, I had a six months' research fellowship at robotic laboratory, University of La Salle, Barcelona to work in *Socially Assistive Robotics*.

From March 2014, I'm still collaborating with the Institute of Cognitive Sciences and Technologies, National Research Council of Italy, Rome regarding TWCs for children with autism: <http://www.plusme.it/> and as an interaction designer of "science2mind" cultural association: www.science2mind.org

Biografia Breve (IT)

Sono designer del concetto "*Transitional Wearable Companions (TWCs)*", (un particolare tipo di robot sociale sviluppato presso l'Istituto di Scienze e Tecnologie delle Cognizione, Consiglio Nazionale delle Ricerche d'Italia (ISTC-CNR) nell'ambito del progetto scientifico "*+me: motivare i bambini con disturbo dello spettro autistico (DSA) ad interagire socialmente*". Sono anche il designer del primo prototipo di TWC, "+me" social robot e marchio associato.

Nel 2009 ho conseguito un master in architettura d'interni e progettazione ambientale presso la Facoltà di Belle Arti, dell'Università di Hacettepe, Ankara, Turchia col massimo dei voti.

Nel 2007 ho ottenuto un dottorato di ricerca in un programma internazionale dal titolo "Design e Innovazione" presso la Seconda Università di Napoli, con il massimo dei voti. Il dottorato di ricerca mi ha permesso di continuare i miei studi all'Università Tecnica di Lisbona e all'Università di Malaga per un anno.

Successivamente ho collaborato per sei mesi come assistente per le lezioni di storia nella critica d'arte e co-tutoraggio del *Smart Wearables* presso il dipartimento di design, Università della Sapienza, Roma.

Nel 2016, ho avuto una borsa di ricerca di sei mesi presso il laboratorio robotico dell'Università di La Salle di Barcellona per lavorare nel campo della *Social Robotics*.

Dal marzo 2014 sto collaborando con l'Istituto di Scienze e Tecnologie delle Cognizione, Consiglio Nazionale delle Ricerche ISTC-CNR per il progetto TWCs: <http://www.plusme.it/> e come interaction designer in associazione culturale "science2mind": www.science2mind.org

Research projects and related conference, seminar attending

I. Socially Assistive Robotics (SAR) and child-robot interaction (CRI) projects

1. **Invited speaker for "Care and Rehabilitation Expo China: The Belt and Road High-level International Forum on Assistive Technology – The 7th International Forum on Assistive Technology Innovation and Adaptation Services", (2017):** Giving presentation about the project "+me: transitional wearable companion (TWC) to motivate children with autism spectrum disorder", Beijing, China.
2. **Seminar about the project "+me: transitional wearable companion (TWC) to motivate children with autism spectrum disorder", (2017):** Giving presentation and discussions about the project at the Natural Computing and Robotics Laboratory (natuRO), Politehnica University of Bucharest, Bucharest, Romania.
3. **"+me: Transitional wearable companion for the children with autism", (2014-present):** As a founder of the conceptual design, we have been developing a novel product to motivate children with autism to communicate socially in the Institute of Cognitive Sciences and Technologies, National Research Council of Italy. Recently we are collaborating with the Italian Neurotraumatology Institute INI, shared with Villa Dante, Rehabilitation Centre and Diagnostic of Developmental Age in terms of experimenting it with children, Rome, Italy (www.plusme.it).
4. **Özcan B., Sperati V., Moretta T., Aliberti M., Baldassarre G., "Transitional Wearables Based on Bio-Signals to Improve Communication and Interaction of Children with Autism". In: New Friends 2015: The 1st International Conference on Social Robots in Therapy & Education, 2015, Almere, Netherlands.**
5. **Educational activity with elementary school students about "Social robots and emotions", (2017):** Giving presentation and design activities with the students in Istituto Comprensivo "Giovanni Falcone", Rome, Italy. Recently, we have been organizing educative child-robot interaction activity emphasizing the importance of empathy in our society and its implications through prototyping personalized low-cost social robots and teaching how to make *Do It Yourself* robots to children.
6. **Seminar about "Research journey: designing socially assistive robots, for the 11th International Week", (2017):** Giving lectures to design students in IADE Creative University, Lisbon, Portugal.
7. **Fosch-Villaronga E., Barco A., Özcan B., Shukla J., "An Interdisciplinary Approach towards a Better Cognitive Human-Robot Interaction – A Novel Emotion-Based Model", Ro-bo Philosophy Conference, 2016, Aarhus, Denmark.**
8. **"CASPER" Cognitive assistive social pet robots for hospitalized children design, (2016):** During my stay in La Salle-Universitat Ramon Llull, I have developed conceptual designs and 3D prototype for CASPER social robot with the collaboration of Technical University of Catalonia, Universitat Autònoma de Barcelona, Fundació Hospital Sant Joan de Déu, Barcelona, Spain (<https://casperresearchproject.wordpress.com/>).
9. **Curley, D., Barco, A., Pico, S., Gallego, P., Zervas, D., Angulo, C., Özcan, B., Delvaux, J., Lhoir, M., Albo-Canals, J., CASPER Project: Social pet robots facilitating tasks in therapies with children with ASD., New Friends 2016: The 2nd International Conference on Social Robots in Therapy & Education, 2016, Barcelona, Spain.**
10. **Özcan, B., Calligore, D., Fosch Villaronga, E., Sperati, V., Moretta, T. and Baldassarre, G., Designing Socially Assistive Robot (SAR) for Cognitive Child-Robot Interaction (CCRI) with Autism Spectrum Disorder - The Case of "+Me", New Friends 2016: The 2nd International Conference on Social Robots in Therapy & Education, 2016, Barcelona, Spain.**
11. **"SAR design workshop" Designing socially assistive robots that bring educational and therapeutic benefits to children, (2016):** Organizer of the workshop during the "New Friends" conference in Barcelona, Spain (<http://www.beste-ozcan.com/nf16/>).
12. **Seminar about how to design more efficient socially assistive robots (SAR), (2016):** Organizer of the seminars in La Salle-Universitat Ramon Llull, Barcelona, Spain.
13. **Vex Robotic Competition, La Salle, Barcelona (2016):** Volunteer

II. Social Innovation

1. **"H+ design: time, space, human, machine"** Ph.D. thesis at the Department of Civil Engineering, Design, Construction Industry and Environment, Faculty of Engineering, Second University of Naples, (2009-2014): Development of the innovative design approach based on the new technological advancements towards social innovation focusing on "what does it mean to be human in the future?", Naples, Italy.
2. Özcan, B., **H+ Design: Thinking About a Post-Humanitarian Design Approach Through Social Interaction**, Giornate Scientifiche di Ateneo, Seconda Università degli Studi di Napoli, Italy, 2013.
3. **"ID:M web platform"** International Ph.D. collaboration at Escuela Politecnica Superior, Universidad de Málaga, (6 months, 2013): Working with prof. Sebastian Garcia Garrido for the concept and interface development of the Mediterranean common cultural identity website, Malaga, Spain.
4. Özcan, B., **Euro Mediterranean Countries Common Cultural Identity**, Conference of Sustainable Development Symposium, Bratislava, Slovakia, 2014.

III. User Case Studies

1. **Cultural probe tests with design students in Portugal and Italy** (international Ph.D. collaboration at CIAUD, Faculdade de Arquitectura, Universidade de Lisboa, Portugal), (6 months, 2013): Working with prof. Rita Almendra about the cultural probe test to evaluate the visions of the future technologies of design students.
2. Özcan, B., Almendra, R., **Are Designers Ready for the Future? A Cross-Cultural Probe Test**, International Conference of Education, Research and Innovation, Seville, Spain, 2015.
3. **Acceptability of +me device with children** (Experimental protocols with the collaboration of ISTC-CNR and INI Villa Dante, Rome, Italy), (November 2016-present): Recently, we have been experimenting the device with children.

IV. Other attending as a speaker

1. Ayanoğlu H., De Crescenzo A., Özcan B., **Interactive System for Customization: Proposal for an Evolution of Creative Platforms**, CIPED. VI Congresso Internacional de Pesquisa em Design, Lisbon, Portugal, 2011.

International Research Experiences

1. **Research fellow in social robotics (6 months, 2016)** in the Robotic lab, University of La Salle, Barcelona, Spain.
2. **Research fellow in cognitive sciences and applied psychology research, Interactive wearables for children with autism (6 months, 2017)** at the Institute of Cognitive Sciences and Technologies, National Research Council of Italy (ISTC - CNR).
3. **Co-tutor, assistant professor, visiting researcher (6 months, 2015)** in Department of Planning, Design, and Technology of Architecture, The University of Sapienza, Rome, Italy.
4. **Visiting researcher in cognitive sciences and applied psychology research, Interactive wearables for children with autism (2014-ongoing)** at Institute of Cognitive Sciences and Technologies, National Research Council of Italy (ISTC - CNR).
5. **Visiting researcher (6 months, 2013)** in Escuela Politecnica Superior, Universidad de Málaga, Spain, Málaga, Spain.
6. **Visiting researcher (6 months, 2013)** in CIAUD, Faculdade de Arquitectura, Universidade de Lisboa, Portugal.
7. **M.A. research fellowship for the International Exchange Program (2009-2010)** in Department of Architecture, Faculty of Architecture, Valle Giulia, University of La Sapienza, Rome, Italy.
8. **Ph.D. Student Volunteer (2014)**, TEI, International Conference on Tangible, Embedded and Embodied Interaction, Munich, Germany.
9. **Ph.D. Student Volunteer (2013)**, SIM, International Conference on Sustainable Intelligent Manufacturing, Lisbon, Portugal.

Education

1. **International Ph.D. in Design and Innovation (2011 - 2014)** in Department of Civil Engineering, Design, Construction Industry and Environment Faculty of Engineering, Second University of Naples, Italy. Dissertation: "*H+ design: time, space, human, machine*" (SDS: ICAR/13). *Excellent grade.*
2. **Master of Arts (2006 - 2009)** in Department of Interior Architecture and Environmental Design Faculty of Fine Arts, Hacettepe University, Ankara, Turkey. Supervisor: Meltem Yilmaz. Dissertation: "*Sustainable city squares and the examination of Piazza del Popolo*". *First-degree grade.*
3. **Bachelor of Science (2001 - 2005)** in Department of Interior Architecture and Environmental Design Faculty of Fine Arts, Hacettepe University, Ankara, Turkey.

Skills

1. Electronic prototyping with Arduino boards (basic).
2. Fritzing application (basic).
3. Processing Language (basic).
4. Photoshop, Illustrator and Indesign (high).
5. Wordpress (high).
6. AutoCad, 3dsMax (medium).

Smart Wearable, Interface, Website and Logo Designs

1. "**Upi Bra**" **Intelligent bra for the women's posture control, (2015):** Co-tutoring and prototyping the student graduation project at the design department in the University of Sapienza, Rome, Italy (<http://www.beste-ozcan.com/upbra-co-tutoring/>).
2. "**SimCulture**" **Interactive web application, (2015):** Collaborazione con Prof. Domenico Parisi at ISTC-CNR, Rome, Italy (<http://150.146.65.246/simculture2.html>).
3. "**Material Design Lab**" <http://www.materialdesignlab.it/>;
4. "**+me project**" <http://www.plusme.it/>;
5. "**my personal website**" <http://www.beste-ozcan.com/>;
6. "**SAR design workshop**" <http://www.beste-ozcan.com/nf16/>;
7. (logos only) "**GOAL-Robots**" <http://www.goal-robots.eu/>;
8. "**IMOL-workshop**" <http://www.imol-conf.org/>;
9. "**E-FAI workshop**" <http://www.e-fai.org/>;
10. "**Computation Master**" <https://computationmaster.org/>;
11. "**Science2Mind**" <http://science2mind.org/> (work in progress)

International Journal and Conference Publications

1. Fosch-Villaronga E., Özcan B, "Progettazione e disciplina dell'esoscheletro: L'inestricabile co-evoluzione tra umani e robot", ISBN: 978-88-6857-144-3, pp. 89-117, Nuova corrente: Rivista di critica letteraria e filosofica, vol. 159, Interlinea, Novara, 2017.
2. Curley, D., Barco, A., Pico, S., Gallego, P., Zervas, D., Angulo, C., Özcan, B., Delvaux, J., Lhoir, M., Albo-Canals, J., "CASPER Project: Social pet robots facilitating tasks in therapies with children with ASD", In: New Friends 2016: The 2nd International Conference on Social Robots in Therapy & Education, ISBN: 978-84-945603-9-2, pp.33-34, New Friends 2016 & Omnia Science (Omnia Publisher SL), 2016, Barcelona.
3. Özcan, B., Caligiore, D., Fosch Villaronga, E., Sperati, V., Moretta, T. and Baldassarre, G., "Designing Socially Assistive Robot (SAR) for Cognitive Child-Robot Interaction (CCRI) with Autism Spectrum Disorder - The Case of '+me'". In: New Friends 2016: The 2nd International Conference on Social Robots in Therapy & Education, ISBN: 978-84-945603-9-2, pp.69-70, New Friends 2016 & Omnia Science (Omnia Publisher SL), 2016, Barcelona.

4. Sperati, V., Özcan, B., "Technical report of the experimental device +me (version1.0)", <http://puma.isti.cnr.it/dfdownloadnew.php?ident=/cnr.istc/2016-TR-001&langver=en&scelta=NewMetadata>, DOI: 10.13140/RG.2.1.3201.8166, Institute of Cognitive Sciences and Technologies, ISTC-CNR, 2016.
5. Özcan B., Sperati V., Moretta T., Aliberti M., Baldassarre G., "Transitional wearable companions: a novel concept of soft interactive social robots to improve social skills in children with autism spectrum disorder", pp.471-481, Springer Social Robotics Special Edition, vol. 8, issue 4, DOI: 10.1007/s12369-016- 0373-8, 25.07.2016, 2016.
6. Fosch-Villaronga E., Barco A., Özcan B., Shukla J., "An Interdisciplinary Approach towards a Better Cognitive Human-Robot Interaction – A Novel Emotion-Based Model", pp. 195-205, **Ro-bo Philosphy Conference**, DOI: 10.3233/978-1-61499-708-5-195, What Social Robots Can and Should Do J. Seibt et al. (Eds.) IOS Press, 2016, Aarhus, Denmark.
7. Özcan B., Sperati V., Moretta T., Aliberti M., Baldassarre G., "Transitional Wearables Based on Bio-Signals to Improve Communication and Interaction of Children with Autism". In: **New Friends 2015: The 1st International Conference on Social Robots in Therapy & Education**, pp. 58-59, Windesheim Flevoland, 2015, Almere.
8. Sperati, V., Özcan, B. "Un dispositivo che aiuta a comunicare ed interagire", pp.30-33, *DA Giornale: per la ricerca e l'innovazione* 45, n.1, Indalo Comunicazione s.r.l.
9. Özcan, B., Almendra, R., "Are Designers Ready for the Future? A Cross-Cultural Probe Test". In: **International Conference of Education, Research and Innovation**, ISBN: 978-84-608-2657-6, pp. 7237-7242, IATED, Seville, Spain, 2015.
10. Özcan, B., Sperati, V., Caligiore, D., Baldassarre, G., "Motivating Children with Autism to Communicate and Interact Socially Through the '+me' Wearable Device". In: *Nea Science - Giornale Italiano di Neuroscienze, Psicologia e Riabilitazione*, ISBN: 978-88-6857-144-3, vol. 5 pp. 59 - 65. Neapolisanit, 2014.
11. Özcan, B., "H+ design: un approccio innovativo al design di domani", *DIID Disegno Industriale*, vol. "Smart design" n. 58, pp.98-101, ISBN: 978-888981945-6, 2014, Rome.
12. Özcan, B., Garrido, S., "What If...: A Design Manifesto", ISSN: 1889-433 x, *Diseño Revista internacional de investigación, innovación y desarrollo en Diseño*, Vol. 9, April, Grupo de investigación Lenguaje Visual y Diseño Aplicado, Malaga.
13. Ayanoğlu H., De Crescenzo A., Özcan B., **Interactive System for Customization: Proposal for An Evolution of Creative Platforms**, abstract published in AA.VV., CIPED. VI Congresso Internacional de Pesquisa em Design – Abstract book|Program, Pag.264, publication of CIAUD_Centro de Investigação em Arquitectura, Urbanismo e Design. Lisbon, Portugal, 2011.
14. Özcan, B., "Nowhere citizens: through science and technology, we will evolve, Serious Wonder, <http://www.seriouswonder.com/nowhere-citizens-science-technology-will-evolve/>, 2015.
15. Özcan, B., "+me: connecting children with autism's inner voice with the outer world", Serious Wonder, <http://www.seriouswonder.com/connecting-children-autisms-inner-voice-outer-world/>, 2015.

Honours and Awards

1. "+me" project is selected as the **best creative design** in "New Technology" category, "Lazio Creativo, 2018".
2. "+me" project is selected as one of the **best projects**, "TornoSubito, 2015".
3. "+me" project **GLOBAL ELEVATE AWARDS 2016**, runner-up winner.
4. "+me" project **The Best Social Innovation Project 2015**, StartCup Lazio
5. Italian Government **research fellowship**, "Transitional interactive wearables with biosensors to improve the communication of children with autism", six months in the University of La Salle-Ramon Llull, Barcelona, Spain, 2016. (The project is selected as one of the most innovative project from thousands of projects)
6. Turkish Government **M.E.B. research fellowship**, 6 months in the design department of the University of Sapeinza, Rome, Italy, 2015.
7. Region of Campania **Ph.D. scholarship**, 3 years in the University of Naples, Italy, 2009-2013.

Oral and Written Communications

1. **DOMUS**, “Beste Ozcan: +me” www.domusweb.it/en/news/2015/10/26/beste_ozcan_me_.html#tw
2. **DA**, “Un dispositivo che aiuta a comunicare e interagire”
http://www.daonline.info/sito/pagine/dynamic_art.php?id=232&table_name=da2011_n1
3. **RAI CULTURE SCIENZA**, “Un cuscino per aiutare i bambini autistici: dal Maker Faire l’idea di un architetta turca” <http://www.scienze.rai.it/gallery-refresh/un-cuscino-per-aiutare-i-bambini-autistici-dal-maker-faire-l%E2%80%99idea-di-un%E2%80%99architetta-turca/1243/0/default.aspx>
4. **TV2000-SIAMO NOI**, <http://www.tv2000.it/siamonoi/video/siamo-noi-puntata-del-19-ottobre-2015/>
5. **RAI 1-UNOMATTINA**, <http://www.raiplay.it/video/2015/10/Unomattina-del-13102015-30fb7330-0227-4e34-9c24-d8675996335f.html>
6. **REPPUBLICA TV**,
http://roma.repubblica.it/cronaca/2015/10/17/news/maker_faire_la_fiera_dell_innovazione-125275430/?ref=search
7. **IL MESSAGGERO**, http://video.ilmessaggero.it/tech/maker_faire_2015_me_il_cuscino_per_comunicare-71181.shtml

Patents: “+me” brand.

Languages: Turkish (mother tongue), Italian (excellent), English (excellent), Spanish (basic level).

References

1. Prof. Jordi Albo-Canals Associate Professor La Salle BCN – Ramon Llull University (Barcelona, Spain) Robotics Director at La Salle Campus Almere (the Netherlands). Visiting Professor – Tufts University, MA, US. e-mail: jalbo@salleurl.edu
2. Gianluca Baldassarre, director and researcher of the Laboratory of Computational Embodied Neuroscience, Institute of Cognitive Sciences and Technologies, National Research Council of Italy (ISTC - CNR), gianluca.baldassarreistc.cnr.it
3. Prof. Rita Almendra Professor at the Department of Design, Faculty of Architecture, TU Lisbon, Portugal, rita.a.almendra@gmail.com
4. Prof. Sebastian Garcia Garrido Professor at Ingeniería en Diseño Industrial y Desarrollo del Producto, University of Malaga, Spain, segarr@uma.es