

CURRICULUM VITAE

FORMATO EUROPEO/EUROPEAN FORMAT

INFORMAZIONI PERSONALI/ PERSONAL INFORMATION

Nome, Cognome/Name, Surname Alessandro, Puri

Indirizzo/Address

Via, numero civico, c.a.p., città,
nazione/ House number, street
name, postcode, city, country

Telefono/Telephone

Fax

E-mail

Sito web/Website

Nazionalità/Nationality

Luogo e data di nascita/ Place and
Date of birth

/1982

ESPERIENZA PROFESSIONALE /WORK EXPERIENCE

In ordine di data /Dates (from – to) April 2015 – present

Nome e indirizzo del datore di lavoro
/ Name and address of employer

CNR-IOM-OGG c/o ESRF, 71 Avenue des Martyrs CS 40220 F-38043 Grenoble Cedex 9
Grenoble (France)

Research

Funzione o posto occupato /
Occupation or position held

Post Doc bando n. IOM AR 007/2014 TS

Principali mansioni e responsabilità /
Main activities and responsibilities

Physics of correlated materials, XAS spectroscopy, collaboration to the refurbishment of the
beamline LISA (Linea Italiana per la Spettroscopia d'Assorbimento x), test of experimental set-
up, user support.

In ordine di data /Dates (from – to)

September 2012 – December 2014

Nome e indirizzo del datore di lavoro
/ Name and address of employer

Radboud University c/o High Field Magnet Laboratory (HFML), Toernooiveld 7
6525 ED Nijmegen, The Netherlands

Research

Funzione o posto occupato /
Occupation or position held

Post Doc

Principali mansioni e responsabilità /
Main activities and responsibilities

Research and development of an ac magnetic susceptometer, VSM magnetometry, physics of
strongly correlated materials under intense magnetic fields, user support.

In ordine di data /Dates (from – to)

May 2009 – June 2012

Nome e indirizzo del datore di lavoro

Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali di Frascati (INFN - LNF), Via Enrico

/ Name and address of employer Tipo o settore di attività / Type of business or sector	Fermi 40 - 00044 Frascati (Roma) Italy Research
Funzione o posto occupato / Occupation or position held	Research associate
Principali mansion e responsabilità / Main activities and responsibilities	AC magnetic susceptibility of High Tc superconductors, test of experimental set-up for susceptibility measurements

ISTRUZIONE E FORMAZIONE / EDUCATION AND TRAINING

In ordine di data /Dates (from – to)	November 2008 – December 2011
Nome e tipo d'istituto di istruzione o formazione / Name and type of organisation providing education and training	Sapienza - Università di Roma and Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali di Frascati (INFN - LNF)
Principali materie e competenze professionali apprese / Principal subjects occupational skills covered	Materials science, Magnetic susceptibility, Experiments under extreme conditions, magnetic properties of superconductors, Flux dynamic, Flux pinning, IR spectroscopy.
Certificato o diploma ottenuto /Title of qualification awarded	Doctoral degree in Materials science
Livello nella classificazione nazionale o internazionale / Level in National classification	
In ordine di data /Dates (from – to)	November 2005 – November 2007
Nome e tipo d'istituto di istruzione o formazione / Name and type of organisation providing education and training	Sapienza - Università di Roma
Principali materie e competenze professionali apprese / Principal subjects occupational skills covered	High Tc superconductivity, X-ray powder diffraction, Phase transitions
Certificato o diploma ottenuto /Title of qualification awarded	Master degree in Physics
Livello nella classificazione nazionale o internazionale / Level in National classification	110/110
In ordine di data /Dates (from – to)	November 2001 – January 2005
Nome e tipo d'istituto di istruzione o formazione / Name and type of organisation providing education and training	Sapienza - Università di Roma
Principali materie e competenze professionali apprese / Principal subjects occupational skills covered	Protein folding, Atomic Force Microscopy, Biophysics
Certificato o diploma ottenuto /Title of qualification awarded	Bachelor degree in Physics
Livello nella classificazione nazionale o internazionale / Level in National classification	107/110

ATTIVITA' DI RICERCA / RESEARCH ACTIVITIES

Attuali campi di ricerca / Research
sectors

Recenti attività scientifiche/ Recent
Scientific Activities.

Pubblicazioni/ Books and Articles

Condensed matter science, physics of correlated materials, X-ray Absorption Spectroscopy (XAS), Structural analysis

Physics of strongly correlated materials (e.g., high Tc superconductors, topological insulators, transition metal oxides).

1. AV Kuznetsov, OA Churkin, VV Popov, IV Shchetinin, AA Ivanov, AA Yastrebtsev, BR Gaynanov, AA Yaroslavtsev, OV Chernysheva, F d'Acapito, A Puri, PA Alekseev, AP Menushenkov, "Magnetization of Crystalline and Amorphous Phases of R2Ti2O7 and R2Zr2O7 (R= Gd, Dy, Tb)" *Journal of Superconductivity and Novel Magnetism* 33, 2395–2404 (2020)
2. E. Berretti, A. Giaccherini, F. Di Benedetto, G. Montegrossi, G. O. Lepore, A. Puri, F. D'acapito, V. Dell'Aquila, and A. Lavacchi, "Electrodeposition and Characterization of Ultra-Thin Films As Model Systems for Electrocatalysis" in *Meeting Abstracts* (The Electrochemical Society, 2019), 921.
3. V. Popov, A. Menushenkov, A. Ivanov, A. Yastrebtsev, B. Gaynanov, F. d'Acapito, and A. Puri, "A XAFS investigation of amorphous-to-crystalline and fluorite-to-pyrochlore phase transitions in Ln2M2O7 (Ln= Gd, Tb, Dy; M= Ti, Zr)" *Radiation Physics and Chemistry* 108469 (2019).
4. E. Berretti, A. Giaccherini, G. Montegrossi, F. D'acapito, F. Di Benedetto, C. Zafferani, A. Puri, G. O. Lepore, H. Miller, W. Giurlani, M. Innocenti, F. Vizza, A. Lavacchi, "In-situ Quantification of Nanoparticles Oxidation: A Fixed Energy X-ray Absorption Approach" *Catalysts* 9, 659 (2019).
5. V. Popov, A. Menushenkov, A. Ivanov, B. Gaynanov, A. Yastrebtsev, F. d'Acapito, A. Puri, G. Castro, I. Shchetinin, M. Zheleznyi, Y. Zubavichus, K. Ponkratov, "Comparative analysis of long-and short-range structures features in titanates Ln₂Ti₂O₇ and zirconates Ln₂Zr₂O₇ (Ln= Gd, Tb, Dy) upon the crystallization process" *Journal of Physics and Chemistry of Solids* 130, 144 (2019).
6. G. Pugliese, F. Stramaglia, Y. Goto, K. Terashima, L. Simonelli, H. Fujiwara, A. Puri, C. Marini, M. Y. Y. Hacisalihoglu, T. Yokoya, T. Mizokawa, Y. Mizuguchi, N. L. Saini, "Temperature dependent local atomic displacements in NaSn₂As₂ system" *Journal of Physics: Condensed Matter* (2019).
7. A. Menushenkov, V. Popov, B. Gaynanov, A. Ivanov, A. Kuznetsov, A. Yaroslavtsev, F. d'Acapito, and A. Puri, "Local Disorder in Ln₂Ti₂O₇ (Ln = Gd, Tb, Dy) Pyrochlores" *JETP Letters* 109, 529 (2019).
8. F. d'Acapito, G. O. Lepore, A. Puri, A. Laloni, F. La Manna, E. Dettoni, A. De Luisa, and A. Martin, "The LISA beamline at ESRF" *Journal of Synchrotron Radiation* 26, (2019).
9. A. Puri, G. O. Lepore, and F. d'Acapito, "The new beamline LISA at ESRF: performances and perspectives for earth and environmental sciences" *Condensed Matter* 4, 12 (2019).
10. S. Liu, C. Xiao, Z. Du, A. Marcelli, G. Cibin, G. Baccolo, Y. Zhu, A. Puri, V. Maggi, and W. Xu, "Iron Speciation in Insoluble Dust from High-Latitude Snow: An X-ray Absorption Spectroscopy Study" *Condensed Matter* 3, 47 (2018).
11. K. Terashima, E. Paris, L. Simonelli, E. Salas-Colera, A. Puri, T. Wakita, Y. Yamada, S. Nakano, H. Idei, K. Kudo, M. Nohara, Y. Muraoka, T. Mizokawa, T. Yokoya, N.L. Saini, "Temperature-dependent local structure and superconductivity of BaPd₂As₂ and SrPd₂As₂" *Physical Review B* 98, 094525 (2018).
12. A. Veber, M. R. Cicconi, A. Puri, D. de Ligny, "On the Optical Properties and Bismuth Redox in Bi-Doped High-Silica Al-Si Glasses" *The Journal of Physical Chemistry C* 122, 19777 (2018).
13. A.A. Ivanov, V.G. Ivanov, A.P. Menushenkov, F. Wilhelm, A. Rogalev, A. Puri, B. Joseph, W. Xu, A. Marcelli, A. Bianconi, "Local Noncentrosymmetric Structure of Bi₂Sr₂CaCu₂O_{8+y} by X-ray Magnetic Circular Dichroism at Cu K-Edge XANES" *Journal of Superconductivity and Novel Magnetism* 31, 663 (2018)
14. V.V. Popov, A.P. Menushenkov, B.R. Gaynanov, A.A. Ivanov, F. d'Acapito, A. Puri, I.V. Shchetinin, M.V. Zheleznyi, M.M. Berdnikova, A.A. Pisarev, A.A. Yastrebtsev, N.A. Tsarenko, L.A. Arzhatkina, O.D. Horozova, I.G. Rachenok, K.V. Ponkratov, "Formation and evolution of crystal and local structures in nanostructured Ln₂Ti₂O₇ (Ln= Gd-Dy)" *Journal of Alloys and Compounds* 746, 377 (2018).

15. F. d'Acapito, G. O. Lepore, A. Puri, "The new LiSA beamline at the ESRF: an opportunity for environmental sciences." *Aerosols in snow and ice. Markers of environmental pollution and climatic changes: European and Asian perspectives*, 45 (2017)
16. Y. Mizuguchi, E. Paris, T. Wakita, G. Jinno, A. Puri, K. Terashima, B. Joseph, O. Miura, T. Yokoya, N.L. Saini, "Evolution of Eu valence and superconductivity in layered $\text{Eu}_{0.5}\text{La}_{0.5}\text{FeS}_{2-x}\text{Se}_x$ system" *Physical Review B* 95, 064515 (2017)
17. D. Di Gioacchino, A. Marcelli, A. Puri, C. Zou, L. Fan, U. Zeitler, A. Bianconi, "Metastability Phenomena in VO_2 Thin Films" *Condensed Matter* 2, 10 (2017)
18. R. S. Fishman, S. Bordács, V. Kocsis, I. Kézsmárki, J. Viirok, U. Nagel, T. Rööm, A. Puri, U. Zeitler, Y. Tokunaga, Y. Taguchi, Y. Tokura, "Competing exchange interactions in multiferroic and ferrimagnetic $\text{CaBaCo}_4\text{O}_7$ " *Phys. Rev. B* 95, 024423 (2017)
19. D. Di Gioacchino, N. Poccia, A. Marcelli, A. Puri, Z.-a. Xu, J. Cheng, W. Chu, N.L. Saini, "Effect of spacer layer on flux-pinning properties of iron-based superconductors" *Novel Superconducting Materials* 2, 43 (2016)
20. F. d'Acapito, A. Trapananti, A. Puri, "LiSA: the Italian CRG beamline for x-ray Absorption Spectroscopy at ESRF" *Journal of Physics: Conference Series* 712, 012021 (2016)
21. Y. Pan, A.M. Nikitin, D. Wu, Y.K. Huang, A. Puri, S. Wiedmann, U. Zeitler, E. Frantzeskakis, E. van Heumen, M.S. Golden, A. de Visser, "Quantum oscillations of the topological surface states in low carrier concentration crystals of $\text{Bi}_{2-x}\text{Sb}_x\text{Te}_{3-y}\text{Se}_y$ " *Solid State Communications* 227, 13-18 (2016).
22. V. Kocsis, Y. Tokunaga, S. Bordács, M. Kriener, A. Puri, U. Zeitler, Y. Taguchi, Y. Tokura, I. Kézsmárki, "Magnetolectric effect and magnetic phase diagram of a polar ferrimagnet $\text{CaBaFe}_4\text{O}_7$ " *Phys. Rev. B* 93 (1), 014444 (2016).
23. D. Di Gioacchino, A. Puri, A. Marcelli, N. Poccia, A. Ricci, A. Bianconi, "The flux dynamics behavior of the two competing high temperature superconducting phases in underdoped $\text{LaCuO}_{4.05}$ " *Physical Chemistry Chemical Physics* 18 (18), 12534-12540 (2016).
24. A. Puri, A. Marcelli, N. Poccia, A. Ricci, U. Zeitler, D. Di Gioacchino, "Vortex dynamics and irreversibility line in $\text{FeSe}_{0.25}\text{Te}_{0.75}$ " *Physics Procedia* 67, 890-895 (2015).
25. A. K. Nayak, M. Nicklas, S. Chadov, P. Khuntia, C. Shekhar, A. Kalache, M. Baenitz, Y. Skourski, V. K. Guduru, A. Puri, U. Zeitler, J. M. D. Coey, C. Felser, "Design of compensated ferrimagnetic Heusler alloys for giant tunable exchange bias" *Nature Materials* 14 (7), 679-684 (2015).
26. D. Di Gioacchino, A. Marcelli, A. Puri, A. De sio, M. Cestelli Guidi, Y. Kamili, G. Della Ventura, A. Notargiacomo, P. Postorino, S. Mangialardo, E. Wörner, E. Pace, "Graphitic Patterns on CVD Diamond Plate as Microheating/Termometer devices" *ACS applied materials & interfaces* 7 (20), 10896-10904 (2015).
27. D. Di Gioacchino, A. Puri, A. Marcelli, and N. Saini, "Flux Dynamics in Iron-Based Superconductors" *IEEE Trans. Appl. Supercond.*, 23 (3), 7300505 (2013).
28. N. Poccia, A. Ricci, G. Campi, M. Fratini, A. Puri, D. Di Gioacchino, A. Marcelli, M. Reynolds, M. Burghammer, N. L. Saini, G. Aeppli, and A. Bianconi, "Optimum inhomogeneity of local lattice distortions in $\text{La}_2\text{CuO}_{4+y}$ " *PNAS* 109, 15685-15690 (2012).
29. D. Di Gioacchino, A. Marcelli, A. Puri, A. Iadecola, N.L. Saini, A. Bianconi "Influence of the extra layer on the transport properties of $\text{NdFeAsO}_{1-x}\text{F}_{0.14}$ and $\text{FeSe}_{0.88}$ superconductors from magneto dynamic analysis" *J. Supercond. Nov. Magn.* 25, 1289-1292 (2012).
30. A. Iadecola, B. Joseph, L. Simonelli, A. Puri, Y. Mizuguchi, H. Takeya, Y. Takano and N. L. Saini, "Large local disorder in superconducting $\text{K}_{0.6}\text{Fe}_{1.5}\text{Se}_2$ studied by extended x-ray absorption fine structure", *J. Phys.: Condens. Matter* 24, 115701 (2012)
31. A. Puri, A. Marcelli, M. Cestelli Guidi, P. Postorino, E. Pace, A. De Sio, L. Gambicorti, G. Della Ventura, A. Notargiacomo, D. Di Gioacchino "PRESS-MAG-O: status of the commissioning and of the associated R&D" Internal note LNF- 11/ 19 (NT) (2011)
32. A. Iadecola, B. Joseph, A. Puri, L. Simonelli, Y. Mizuguchi, D. Testemale, O. Proux, J.-L. Hazemann, Y. and N.L . Saini "Random alloy-like local structure of $\text{Fe}(\text{Se},\text{S})_{1-x}\text{Te}_x$ superconductors revealed by extended x-ray absorption fine structure", *J. Phys.: Condens. Matter* 23, 425701 (2011).
33. D. Di Gioacchino, A. Marcelli, M. Cestelli Guidi, A. Puri, P. Postorino, E. Pace, A. De Sio, L. Gambicorti "PRESS-MAG-O: a unique instrument to probe materials and phenomena under extreme conditions at Frascati" *High Pressure Res.* 31, 91-97 (2011)
34. B. Joseph, A. Iadecola, A. Puri, L. Simonelli, Y. Mizuguchi, Y. Takano, and N. L. Saini "Evidence of local structural inhomogeneity in $\text{FeSe}_{1-x}\text{Te}_x$ from extended x-ray absorption fine structure", *Phys. Rev. B* 82, 020502(R) (2010)
35. D. Di Gioacchino, A. Marcelli, A. Puri and A. Bianconi "The a.c. susceptibility third harmonic component of $\text{NdO}_{1-0.14}\text{F}_{0.14}\text{FeAs}$: a flux dynamic magnetic analysis" *J. Phys. Chem. Solids* 71, 1046-1052 (2010)

36. D. Di Gioacchino, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Puri, P. Postorino, E. Pace, A. De Sio, L. Gambicorti "Status of PRESS-MAG-O: the experimental apparatus to probe materials and phenomena under extreme conditions at Frascati" J. Phys. Chem. Solids 71, 1042-1045 (2010)
37. R. Caivano, M. Fratini, N. Poccia, A. Ricci, A. Puri, Z.A. Ren, X.L. Dong, J. Yang, W.Lu, Z.X. Zhao, L. Barba, A. Bianconi "Feshbach resonance and mesoscopic phase separation near a quantum critical point in multiband FeAs-based superconductors" Supercond. Sci. Technol. 22, 014004 (2009)
38. M. Fratini, R. Caivano, A. Puri, A. Ricci, Z.-A. Ren, X.-L. Dong, J. Yang, W. Lu, Z.-X. Zhao, L. Barba , G. Arrighetti, M. Polentarutti and A. Bianconi "The effect of internal pressure on the tetragonal to monoclinic structural phase transition in ReOFeAs: the case of NdOFeAs" Supercond. Sci. Technol. 21, 092002 (2008)
39. V. Palmisano, L. Simonelli, A. Puri, M. Fratini, Y. Busby, P. Parisiades, E. Liarokapis, M. Brunelli, A. N. Fitch and A.Bianconi "Controlling mesoscopic phase separation near electronic topological transitions via quenched disorder in ternary diborides" J. Phys. Condens. Matter 20, 434222 (2008)

Tutoraggio/Tutoring

Tutor at the Hercules School, Grenoble, France. Editions 2016, 2017, 2018, 2020.

**ULTERIORI INFORMAZIONI /
ADDITIONAL INFORMATION**

Languages spoken

- Italian mother tongue
- Fluent spoken and written English
- Intermediate level French (B1).

IT skills

- Excellent knowledge of Windows, good knowledge of Linux and Mac OS.
- Excellent knowledge of word processing and spreadsheets (word, excel)
- Programming languages known: C, C++
- Knowledge of data analysis programs: Iffeffit, Kaleidagraph, GSAS, Origin.

f.to Alessandro Puri

Grenoble 18/09/2020