INFORMAZIONI PERSONALI Carla Andreani

Department of Physics & NAST Centre
Via della Ricerca Scientifica,
University of Rome "Tor Vergata"
0133 Rome (I)
+39 06 7259 4441 + 39 338 5067867
carla.andreani@uniroma2.it
F.C. NDRCRL54D45H501J

Sex F | **Date of birth** 5th April, 1954 | **Nazionality** Italian

SUMMARY

GENERAL INFORMATION

CURRENT POSITION **Full Professor of Applied Physics**
Full time employment. Permanent contract.

EDUCATION

21st November 1977 **Laurea *Summa cum Laude* in Physics**
University of Rome La Sapienza (MSc 1977).
Thesis "Missing mass in the universe and Black Holes" Relatore Professor Remo Ruffini.

ACADEMIC POSITIONS

Since 2021	Member of the STFC Science Board (Science Technology Facility Council-UK)
Since 2015	Professor of Applied Physics, Department of Physics, Chair Condensed Matter, University of Rome Tor Vergata
Since 2012	Director of the International Erice School "*Neutron Science and Instrumentation*", Ettore Majorana Foundation and Centre for Scientific Culture
2015-2019	Member of the "*Neutron Technology Advisory Committee* (NTAC) for the "*Chinese Spallation Neutron Source* (CSNS)", Dongguan, Guangdong (China) nominated by *Chinese Academy of Science*
2013-2019	Deputy Rector for Research Infrastructures, University of Rome Tor Vergata.
2012	Visiting Professor University of Hong Kong Sun Yat-Sen University (Guangzhou, China) and Institute of Crystal Materials of Shandong University (Jinnan, China)
2010	Visiting Professor at Sun Yat-Sen University and Shandong University Institute of Crystal Materials and Tsinghua University (Beijing, China) (China)
2007-2015	Professor in Condensed Matter, Dep. Physics, University of Rome Tor Vergata
1998- 2007	Associate Professor in Condensed Matter, Dep. Physics, University of Rome Tor Vergata
1994-1998	Member of the Physics Committee of National Research Council, in which she served in the role of scientific secretary
1984-1998	Researcher, Dep. Physics, University of Rome Tor Vergata
1984-1988	Visiting Scientist at the ISIS Spallation Neutron Source (UK), CNR fellowship
1984	Visiting Scientist at IPNS (Intense Pulsed Neutron Source) Argonne National Lab (IL, USA), CNR-NATO Fellow
1983-1984	Researcher, serving as Material Scientist, at ENEA Research Centre (IT)
1981-1983	Visiting Scientist at LINAC Harwell, A.E.R.E. Harwell (Oxfordshire, UK), CNR-NATO Fellow,
1980-1981	Post Doc Fellow, Fondazione Bordoni (IT)

MANAGEMENT

2016- 2019	Member of the Governing Board of the Consortium COIRICH (Distributed Research Infrastructure for cultural heritage diagnostics.
2015-2020	Member of the Governing Board of the Research Institute "Museo Storico della Fisica e Centro Studi e Ricerche "Enrico Fermi" (IT)
2013-2019	Director NAST Centre (Nanoscience, Nanotechnology, Instrumentation), University of Rome Tor Vergata
2011-2015	Chairperson of Scientific and Technical Committee COIRICH
2010-2014	Member of the Governing Board of SVILUPPO CULTURA s.r.l., appointed by the University of Rome Tor Vergata, spin off company financed by Italian Ministry fort University and Research dal MIUR
2005-2008	Member of the Governing Board of the University of Rome Tor Vergata
1999-2014	Director of the Journal NOTIZIARIO NEUTRONI E LUCE DI SINCROTRONE

SCIENTIFIC ADVISOR

Since 2022	Member of the CNR-ESS project board
Since 2019	Evaluator (Esperto Tecnico Scientifico) for Research Infrastructure project for the Italian Ministry of University and Research

Since 2015	Member of the National Research Council Scientific Advisory Committee for Italian in-kind contribution to the European Spallation Source
Since 2012	Member of the Program Committee of UCANS-Union of Union for Compact Accelerator-driven Neutron Sources (UCANS), http://www.ucans.org
Since1985	Spokesperson for CNR within the international agreement CNR-STFC, to coordinate the Italian neutron scattering program at ISIS (UK)
2019	Author of *NEUTRON SCIENCE AND FACILITIES* – "*A Strategic Review and Future Vision for Neutron Science in Italy. Report of the Advisory Panel*
2011	Delegate of CNR president and coordinator of the workshop ESS Italy (www.ess-italia.it), kick off for the preparatory phase di ESS (European Spallation Source) in Italy
2011	Coordinator of "ESS Italia" (www.ess-italia.it) for italian activities in the preparatory phase of ESS (European Spallation Source)
2010-2011	Member of the "Tavolo di Concertazione" MIBAC-MIUR
2009-2011	Chairperson of the "Panel for the Physical Science" of CNR
2009-2010	Delegate of CNR president and coordinator of the workshop ESS Italy (www.ess-italia.it), kick off for the preparatory phase di ESS (European Spallation Source) in Italy
2008-2010	Member of the 'International Advisory Board" of ESS Bilbao
2005-2007	Member of the *Novel Instrumentation Think Tank*, Oak Ridge National Laboratory (ORNL) (USA)
1994-2015	Membro della Commissione di coordinamento per la Spettroscopia di Neutroni e di Luce di Sincrotrone del CNR
1994-2012	Delegate of the CNR president within the European Union Round Table on Neutron Sources (NMI3) (FP3-FP7)
1996-1999	Member of the NEUTRON SOURCES WORKING GROUP (OECD MEGASCIENCE FORUM) Panel B: International cooperation in the development of neutron instrumentation and data evaluation

AWARDS

2016	*Occhialini Medal and Prize*, jointly awarded by the ***Institute of Physics*- (IOP-UK)** and Società Italiana di Fisica (SIF) – Citazion: "*For her outstanding contributions to novel experimental techniques and methods in neutron spectroscopy and her tireless commitment to fostering the British-Italian collaboration in neutron science*" https://www.isis.stfc.ac.uk/Pages/ISIS-user-Prof-Carla-Andreani-wins-prestigious-award.aspx
2016	Award 100 Eccellenze Italiane 2016
2011	Elected **Fellow of the Institute of Physics** (FInstP) (UK), Citation: "*In recognition of personal contribution to the advancement of physics as a discipline and a profession"*

PROFESSIONAL MEMBERSHIPS

Institute of Physics (IOP)
Società Italiana di Fisica (SIF)
European Physical Society (EPS)
American Chemical Society
School of Neutron Scattering "Francesco Paolo Ricci" (SoNS)

TEACHING AND EDUCATIONAL ACTIVITIES

since 2010	Member of the Teaching Committee of the Ph.D School in Materials for Health, Environment and Energy, University of Rome Tor Vergata
since 2010	Neutron Physics and Applications, Ph.D School in Materials for Health, Environment and Energy, University of Rome Tor Vergata
2004-2008	Member of the Teaching Committee of the Ph.D School "Nanostructures and Nanotechnologies", University Milano-Bicocca
2011-2007	Member of the Teaching Committee of the Ph. D School in Physics, University of Rome Tor Vergata
2000-2001	Member of the Teaching Committee of the Department of Physics, University of Rome Tor Vergata established for the planning of undergraduate degrees.

Since the a.a. 1993/1994 to date CA has been Professor of the following courses:

a.a. 2010/2001, 2011/2012 2012/2013, 2013/2014, 2014/2015, 2015/2016, 2016/2017, 2017/2018, 2018/2019, 2019/2020, 2020/2021, 2021/2022, 2022/2023	Neutron Physics and its applications, Degree in Physics Fisica and Ph School in *Materials for Health and Environment and Energy*
a.a. 2008/2009, 2009/2010, 2010/2001, 2011/2012 2012/2013, 2013/2014, 2014/2015, 2015/2016, 2016/2017, 2017/2018, 2018/2019, 2019/2020, 2020/2021, 2021/2022, 2022/2023	Physics, Degree in Biotechnologies, University of Rome Tor Vergata
a.a. 2007/2008, 2008/2009	Spectroscopy, Master and Ph D School in Physics, University of Rome Tor Vergata
a.a. 2004/2005, 2005/2006, 2006/2007, 2007/2008, 2008/2009, 2009/2010, 2009/2010, 2010/2011, 2011/2012	Material Science and investigation through neutron spectroscopy, Ph.D School "Nanostructures and Nanotechnologies", University Milano-Bicocca
a.a. 1999/2000, 2000/2001, 2001/2002, 2002/2003	Instrumentation and Neutron Scattering Techniques, e Teoria dello Scattering di Neutroni, Ph D School in Physics, University of Rome Tor Vergata
a.a. 2000/2001 e 1998/1999	Crystalography, Degree in Material Science, University of Rome Tor Vergata
a.a. 2002/2003, 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008	Physics, Degree in Biotechnologies, University of Rome Tor Vergata
a.a. 1999/2000, 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005, 2005/2006, 2006/2007	Spectroscopy, Degree in Physics, University of Rome Tor Vergata
a.a. 1988/1999	Solid State Spectroscopy, Degree in Physics, University of Rome Tor Vergata
a.a. 1994/1995, 1995/1996, 1996/1997, 1999/2000	Physics, Degree in Biology, University of Rome Tor Vergata
a.a. 1993/1994	General Physics I, Degree in Physics, University of Rome Tor Vergata

From the a.a. 1985/1986 she has collaborated to the following courses

a.a. 1985/1986	Physics, Degree in Biology, University of Rome Tor Vergata
a.a. 1986/1987	Struttura della Materia, Degree in Physics, University of Rome Tor Vergata
a.a. 1987/1988 1988/1889, 1996/1997	Physics, Degree in Biology, University of Rome Tor Vergata
a.a. 1987/1988, 1988/1889, 1989/1990	General Physics II, Degree in Mathematics, University of Rome Tor Vergata
a.a. 1990/1991, 1992/1993, 1994/1995	General Physics I, Degree in Physics, University of Rome Tor Vergata
a.a. 1991/1992, 1993/1994, 1995/1996, 1997/1998	General Physics II, Degree in Physics, University of Rome Tor Vergata
Maternity leave	March-September 1987 and September 1989-march 1990

FURTHER TEACHING

DISSEMINATION AND SUPERVISION ACTIVITIES

Tutor of over 23 Ph D students, either as advisor or co-advisor for the University of Rome Tor Vergata, Roma Tre, Milano-Bicocca, University-College-London (UK), ISIS (UK) and CNR. Host of numerous visiting professors and scientists.
Several of her former students are professors or researchers in national and international universities and research institutions.
Over 230 invited seminars or colloquia for Ph D students or national and international schools in Universities, research centres and industries in Italy, Belgium, China, Denmark, France, Spain, Sweden, Germany, Norway, Poland, Czech Republic, Switzerland , Honk Kong, Singapore, Hungary, UK, USA.
Organizer or co-organizer of over 60 national or international conferences,

workshop, and schools

I organised and directed the following workshops: “Cultural heritage and advanced technologies Symposium” (Novembre 2014), Italian Embassy London; “Understanding and fighting Dementia: an Italy-Uk Symposium” (Novembre 2016), Villa Wolkonsky British Embassy Rome - Bio&Medical Science with new light Sources (Marzo 2009) Villa Wolkonsky British Embassy Rome, “High Energy Neutrons for Science and Society” (Ottobre 2010) Villa Wolkonsky British Embassy Rome, “Industrial applications light and neutron sources ELI and ISIS”, (Roma 2013) Villa Wolkonsky British Embassy Rome, “Italy – UK Partnership in Neutron Science: Thirty Years and Beyond (Novembre 2015) Villa Wolkonsky British Embassy Rome.

REVIEW AND EVALUATION ACTIVITIES

Peer Reviewer for several International Journals: American Chemical Society: Journal of Physical Chemistry; American Physical Society: Physical Review, Physical Review Letters; Europhysics Letters, Journal Of Chemical Physics, Institute of Physics, ISRN Condensed Matter Physics., Meas. Sci. Technology, Molecular Physics, Nature, Nature Materials, Nature Communications, Nuclear Instrument and Methods

since 2019 Scientific Advisor (Esperto Tecnico Scientifico ETS nominated *n. 1242 del 21-06-2019 e n. 1245 del 21-06-2019*) for Research Infrastructure projects “SHINE - Potenziamento dei Nodi Italiani in E-RIHS” (PIR01_00016); “PRO-ICOS_MED - Potenziamento della Rete di Osservazione ICOS-Italia nel Mediterraneo” (codice PIR01_00019), Azione *II.1 del PON Ricerca e Innovazione 2014-2020*, D.M. 999/2017, financed within D.D. 894 del 09-05-2019 e D.D. 1115 del 07-06-2019

since 2018 Chair of the scientific advisory committee Panel “NordForsk” (Nordic Neutron Science Programme) An Organization Under THE Nordic Council of Ministers

2016-2018 Member of the advisory committee Panel “NordForsk” – *Nordic Neutron Science Programme*

2008-2017 Scientific Advisor EPSRC (*Engineering and Physical Science Research Council*), UK

2015-2018 Chair of the scientific advisor committee “Facility Access Panel FAP5 for ISIS *pulsed neutron and muon facility* (UK)

2016 Member of the scientific advisor committee for the S*wedish Foundation for Strategic Research* (SSF)

2011-2016 Member of the scientific advisor committee National Projects (PRIN) for the Italian Ministry of University and Research

2014 Member of the evaluation panel for the *Swedish Research Council*,

2012 Evaluator for the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR)

2012 Member of the Scientific Advisory Panel of Georgia *Nat. Science Foundation* (Georgia)

2006-2011 Member of the Scientific evaluation Panel FAP5 for *ISIS pulsed neutron and muon facility* (UK)

2011 Member of the scientic evaluation Panel of *New Eurasia Foundation* (Russia)

2010-2011 Member of the *Advisory Board* of ESS Bilbao (E)

2010-2011 Member of the Scientific evaluation Panel of Regione Lombardia

2008-2011 Member of the *Review Committee of the Spallation Neutron Source*, Oak Ridge National Laboratory (ORNL)

2010 Member of the Evaluation Panel of the *National Science Foundation* (US)

2002-2009 Member of the Evaluation Panel MIUR , Physical science (CIVR),

2000-2002 Member of the Evaluation Panel del *Science Advisory Board di Neutron Research Laboratory* (NRL) Studsvik Svezia

RESEARCH ACTIVITY

- Study of the structure and dynamics of quantum systems, hydrogen bonded molecular fluids and solids, disordered systems

- Design and development of neutron scattering instrumentation at the eV and MeV energies at ISIS neutron facility (UK): PRISMA, TOSCA at ISIS pulsed neutron and muon source (UK)
- Pioneer Deep Inelastic Neutron Scattering -DINS technique on eVs and VESUVIO beamlines at ISIS pulsed neutron and muon source (UK)
- Pioneer the use of MeV energy neutron at spallation neutron sources for fast irradiation SEE in electronic devices and contributed to the design and construction of ChiPIR at at ISIS pulsed neutron and muon source (UK)
- Pioneer industrial applications of neutron scattering through the determination of residual stress in materials
- Exploit eV spectroscopy, DINS techniques, related methods and technologies to enable neutron scattering measurements to reach at to second time scales
- Promote and contributing to exploiting the use of γ detectors in eV neutron spectroscopy at at ISIS pulsed neutron and muon source (UK)
- Pioneer the use of eV neutrons to explore Cultural Heritage artefacts

DIRECTION OF RESEARCH GROUPS

Director of a research group consisting in 2 Full Professors, 1 Associate Professor tenure trach, 4 researcher, 2 postdoc, and 4 Ph D students carrying out research on theoretical and experimental research on materials and biomaterials.

RESEARCH PROJECTS

2014-2020	PANAREA II - “Agreement concerning collaboration in scientific research at the spallation neutron source ISIS” - CONSIGLIO NAZIONALE DELLE RICERCHE (I), (Co-I)
2015-2017	FANES and ECHIR within the framework of ICNRIESS (Italian Contribution to Neutron Research Instrumentation at the European Spallation Source), in kind MIUR for project ESS, CNR (Co-I)
2013-2020	STRASS (Sviluppo di Tecnologia e Rivelatori Avanzati per Sorgenti di Neutroni a Spallazione, in kind contribution MIUR for ESS Project, CNR, (Co-I)
2011-2014	SVILUPPO CULTURA Spin off, diagnostic of materials of cultural heritage interests, funded by Ministry of Research (Co-I)
2011-2015	META-Materials Enhancement for Technological Applications-FP7-PEOPLE-2010 IRSES, http://cordis.europa.eu/project/rcn/99153-en.html (Co-I)
2008-2014	PANAREA I - Project financed within the CNR-STFC Agreement concerning collaboration in scientific research at the spallation neutron source ISIS for the construction of neutron beamlines ChIPIR and IMAT - CONSIGLIO NAZIONALE DELLE RICERCHE (I) (Co-I)
2005-2009	ANCIENT CHARM: Analysis by neutron resonant capture imaging and other emerging neutron techniques: new cultural heritage and archaeological research methods - FP6, NEST Project, Integrating and Strengthening the European Research Area, http://cordis.europa.eu/project/rcn/81178-en.html (Co-I)
2003	Confined water: structure and dynamics –PRIN MIUR (Co-I)
2002-2006	MAPS: Materials and Plasma Science: Optical Spectroscopy, Neutron Spectroscopy and Theoretical Methods - FP5 Marie Curie Training Site, HPMT-CT-2001-00242, http://cordis.europa.eu/project/rcn/64210-en.html (Co-I)
2001-2006	e.VERDI:electron Volt Energy Resonance Detector Instrument - FP5, TMR-Access to Research Infrastructures, RTD- HPRI-CT-2001- 50020, http://cordis.europa.eu/project/rcn/58568-en.html, http://cordis.europa.eu/result/rcn/29234-en.html (PI)
2000-2004	TECHNI: Technology for Neutron Instrumentation, FP5-HUMAN POTENTIAL, HPRI-CT-1999-500, http://cordis.europa.eu/project/rcn/58205-en.html (Co-I)
2000-2003	The Microscopic Structure and Dynamics of Supercritical Aqueous Fluids-PROGETTO INFM -PAIS : Progetto triennale finanziato dalla Sezione C dell’INFM (PI)

2000-2002 Study of the structure and microscopic dynamics of acqueous solution sub- and super-critical phases- MIUR PRIN http://cercauniversita.cineca.it/php5/prin/cerca.php?codice=MM02A73572,

1998-2002 VESUVIO: A Project to provide enhanced neutron scattering capability at the highest energy transfers - FMGE980142 in FP4, TMR-Access to Large Scale Facility, RTD, http://cordis.europa.eu/project/rcn/67287-en.html *and* http://cordis.europa.eu/result/rcn/29235-en.html (PI)

1989-1990 Deep Inelastic Neutron Scattering-FP1-STIMULATION 1C–Project Reference: ST2*0314, http://cordis.europa.eu/project/rcn/823-en.html

COLLABORATIONS SELECTED

Since 2018 Professor Robert Robinson, University of Wollongong (Australia)

Since 2015 Professor Felix Ferndez-Alonso, University College London (UK)

Since 2013 Professor Loh Kian Ping, National University of Singapore, Singapore, *Proton dynamics in superheated graphene-water-pockets*

Since 2013 Professor Michele Ceriotti, University of Oxford (UK), Department of Chemistry, *Direct Measurement of Competing Quantum Effects on the Kinetic Energy of Heavy Water upon Melting*

Since 2012 Professor C. K. Loong, University of Hong Kong, School of Physics & Engineering and the Sino-French Institute of Nuclear Engineering and Technology of Sun Yat-Sen University (Guangzhou, China) and Institute of Crystal Materials of Shandong University (Jinnan, China)

Since 2011 Prof C. K. Loong, Sun Yet Sen University (China), *Inelastic neutron scattering in supercritical water*

Since 2011 Prof J. Y. Wang and X. Hu, Institute of Crystal Materials, Shandong University, Jinan, Shandong (China) *Crystal materials*

Since 2011 Dr C. Salztman, University College London (UK) *Single particle dynamics of amorphous ice*

2011-2013 Professor Giulia Galli, University of Chicago (US), *Institute of Molecular Engineering*, *The quantum nature of the OH stretching mode in ice and water probed by neutron scattering experiments*

Since 2010 Professor C. K. Loong, China Advanced Research Reactor (CARR), of the China Institute of Atomic Energy (Beijing, China) and Tsinghua University (Beijing, China)

Since 2010 Prof R. Car, University of Princeton (USA) - *Proton quantum dynamics*

Since 2008 Dr Chris Frost, ISIS Neutron Facilitye (UK) - *Irradiation techniques, neutron technologies with MeV neutrons and realization of ChIPIR beamline*

Since 2007 Dr A. I. Kolesnikov, SNS, Oak Ridge National Laboratory (USA) – *Inelastic Neutron scattering of disordered materials*

LANGUAGES

ITALIANO Mother

INGLESE Fluent

SCIENTIFIC PRODUCTION

CA is one of the Top Italian Scientists

BIBLIOMETRIC DATA

Author of over 360 papers: 221 on international refereed journals, over 150 contributions to international conferences, meetings, schools, and technical reports, 3 books
Her papers have been cited over 5000 times.
H-Index 42
i-10-index 136
Orcid: https://orcid.org/0000-0001-9497-142X

LIST OFSELECTED PAPERS

Papers on International reviewed journals (Selected)

1. V. *Scacco, **C. Andreani**, S. Licoccia, P. Morales, E. Preziosi, A. Prioriello, G. Romanelli, R. Senesi and L. Fazi*
   "Fabrication and Characterization of Thin Piezoelectric β Poly(vinylidene fluoride) films"
   Submitted to Il NUOVO CIMENTO January (2023)
2. *Giovanni Romanelli, **Carla Andreani**, Laura Fazi, Arthur Ishteev, Kamilla Konstantinova, Enrico Preiosi, Roberto Senesi, and Aldo Di Carlo*
   "Changes in the hydrogen nuclear kinetic energy across the several phases of methylammonium lead tribromide,"
   Journal of Chemical Physics, **157**, 094501 (2022)
3. *V L Fazi, **C Andreani,** P Morales, E Preziosi, A Prioriello, G Romanelli, V Scacco, C. D'Ottavi, R Senesi, S Licoccia*
   Carbon nanotubes/polymer composites for stretchable electrical sensors and transducers Submitted to Molecules December (2022)
4. *Giovanni Romanelli, **Carla Andreani**, Enrico Ferraris, Christian Greco, Salima Ikram, Silvia Licoccia, Stewart F. Parker, Enrico Preziosi, Roberto Senesi, Lucy Skinner, André J. Veldmeijer, Giuseppe Paladini, Valentina Venuti and Valentina Turina*
   "Neutron-enhanced information on the laboratory characterization of ancient Egyptian leathers: hydration and preservation statuses"
   I*nformation*, **13,** 467 (2022), editor MDPI
5. *Enrico Preziosi, **Carla Andreani**, Giovanni Romanelli, and Roberto Senesi*
   The correction of Inelastic Neutron Scattering data of organic samples using the Average Functional Group Approximation"
   EPJ Web of Conference **272,** 02005, (2022)
6. *Giovanni Romanelli, Margherita Simoni, Enrico Preziosi, Jose Ignacio Marquez Damian, **Carla Andreani,** and Roberto Senesi*
   "Neutron thermal cross sections of 3D printing organic polymers using the Average Functional Group Approximation"
   Proceedings 15th International Conference on Nuclear Data for Science and Technology, 21-29 July 2022, Lawrence-Livermore National Laboratories (2022)
7. *Claudia, Scatigno, Matteo Zanetti, Svemir Rudic, Roberto Senesi, **Carla Andreani**, Gorini, Giuseppe, Felix Fernandez-Alonso*
   Hydrogen detection limits and instrument sensitivity of high-resolution broadband neutron spectrometers"
   Analytical Chemistry **94**, 12, 5023–5028, (2022),
   https://doi.org/10.1021/acs.analchem.1c04949
8. *Avner Haran, Nir M. Yitzhak, Eran Mazal-Tov, Eitan Keren, David David, Nati Refaeli, Enrico Preziosi, Roberto Senesi, Carlo Cazzaniga, Tzach Hadas, Uzi Zangi, and **Carla Andreani*** "Ultralow Power System-on-Chip SRAM Characterization by Alpha and Neutron Irradiation" IEEE TRANSACTIONS ON NUCLEAR SCIENCE **68**, Issue 11, 2598-2608 (2021), **DOI:** 10.1109/TNS.2021.3112622
9. *L. Verdolotti, C. Santillo, G. Rollo, G. Romanelli, M. Lavorgna, B. Liguori, G. Lama, E. Preziosi, R. Senesi, **C. Andreani**, M. di Prisco*
   MWCNT/rGO/natural rubber latex dispersions for innovative, piezo-resistive and cement-based composite sensors.
   Scientific Report 11, 18975 (2021)
10. *P. Ulpiani, G. Romanelli, D. Onorati, M. Krzystyniak, **C. Andreani**, R. Senesi*
    Kurtosis of momentum and displacement distributions in biphenyl.
    Il Nuovo Cimento della Società Italiana di Fisica C, 44, 115 Article no. A10 (2021)
11. *A. Cianchi, **C. Andreani**, P. Camarri, L. Fazi, C. Fornaro, E. Preziosi, A. Prioriello, R. Santonico, V. Scacco, C. Scatigno, R. Senesi, P. Picozza*
    Evaluation of the imaging performance of the TECNOMUSE muon tomograph and its feasibility in a real scenario.

European Physical Journal PLUS, 136:658, (2021)

12. *G. Romanelli, D. Onorati, P. Ulpiani, S. Cancelli, E. Perelli-Cippo, J. I. Marquez D´Amian, S. Capelli, G. Croci, A. Muraro, M. Tardocchi, G. Gorini, C. Andreani, R. Senesi*
    Thermal neutron cross sections of amino acids from average contributions of functional groups.
    Journal of Physics: Condensed Matter 33 285901 (2021)
13. *R. Senesi, **C. Andreani**, P. Baglioni, L. A. E. Batista de Carvalho, S. Licoccia, M. P. M. Marques, G. Moretti, A. Noce, R. Paolesse, S. F. Parker, E. Preziosi, G. Romanelli, A. Romani, N. Di Daniele*
    Looking for Minor Phenolic Compounds in Extra Virgin Olive Oils Using Neutron and Raman Spectroscopies.
    Antioxidants 10, 643 (2021)
14. ***C. Andreani**, G. Romanelli, A. Parmentier, R. Senesi, A. I. Kolesnikov, Hsin-Yu Ko, R. Car*
    Hydrogen Dynamics in Supercritical Water Probed by Neutron Scattering and Computer Simulation.
    Journal of Physical Chemistry Letters July 11, 9461–9467, (2020)
15. *A. Bocedi, G. Romanelli, **C. Andreani**, R. Senesi*
    Hydrogen nuclear mean kinetic energy in water down the Mariana Trench: Competition of pressure and salinity.
    J. Chem. Physics 153, 134306 (2020)
16. *C. Scatigno, G. Romanelli, E. Preziosi, M. Zanetti, S. Parker, S. Rudic, **C. Andreani**, R. Senesi*
    A python algorithm to analyse inelastic neutron scattering spectra based on the y-scale formalism.
    Journal of Chemical Theory and Computation 16, 7671-7680 (2020)
17. *D. Onorati, G. Romanelli, P. Ulpiani, C. Cazzaniga, E. Preziosi, L. Arcidiacono, G. Festa, **C. Andreani**, R. Senesi, M.C. Morone*
    FLUKA simulations and benchmark measurements of the YAP(Ce) scintillators installed on the VESUVIO spectrometer.
    Nuclear Inst. and Methods in Physics Research, A 969, 604012 (2020)
18. *K.H. Andersen, …, **C. Andreani** et al.*
    The Instrument Suite of the European Spallation Source
    Nuclear Inst. and Methods in Physics Research, A, 163402 (2020)
19. *G. Festa, G. Romanelli, R. Senesi, L. Arcidiacono, C. Scatigno, S.F. Parker, M.P.M. Marques, **C. Andreani***
    Neutrons for Cultural Heritage –Techniques, Sensors, and Detection.
    Sensors, 20, 502 (2020)
20. *L. Arcidiacono, M. Martinón-Torres, R. Senesi, A. Scherillo, **C. Andreani**, G. Festa*
    Cu-based alloys as a benchmark for T-PGAA quantitative analysis at spallation neutron sources.
    Journal of Analytical Atomic Spectrometry - JAAS- 35, 331 (2020)
21. *G. Festa, S.L. Lämmlein, R. Senesi, J. Price, C. Chiesa, C. Scatigno, N. Sadler, D. Mannes, L. Arcidiacono R. A. Robinson, **C. Andreani***
    Effect of coating systems as a barrier to humidity for lutherie woods studied by neutron radiography.
    Journal of Cultural Heritage 43,255 (2020)
22. *G. Festa, T. Christiansen, V. Turina, M. Borla, J. Kelleher, L. Arcidiacono, L. Cartechini, R. C. Ponterio, C. Scatigno, R. Senesi, **C. Andreani***
    Egyptian metallic inks on textiles from the 15th century BCE unravelled by non-invasive techniques and chemometric analysis.
    Scientific Reports 9, Article number: 7310 (2019)
23. ***C. Andreani**, C. Corsaro, D. Mallamace, G. Romanelli, R. Senesi, F. Mallamace*
    The onset of the tetrabonded structure in liquid water.
    Science China-Physics, Mechanics & Astronomy, 62, No. 10: (2019)

24. *G. Festa, T. Minniti, L. Arcidiacono, M. Borla, D. Di Martino, F. Facchetti, E. Ferraris, V.Turina, W. Kockelmann, J. Kelleher, R. Senesi, C. Greco,* ***C. Andreani***
Egyptian Grave Goods of Kha and Merit Studied by Neutron and Gamma Techniques.
Angew. Chem.Int. Edn., 130, 1 – 6, (2018)
25. *A. Parmentier, L. Arcidiacono, R Senesi, G. Romanelli,* ***C. Andreani****, J. Moir, G. Festa*
Absolute efficiency calibration of a coaxial HPGe detector for quantitative PGAA and T-PGAA.
Journal of Physics: Conference Series, 1055 (1), 012010, (2018).
26. *G Romanelli, M Krzystyniak, R Senesi, D. Raspino, J Boxall, D Pooley, S Moorby, E Schooneveld, N J Rhodes,* ***C Andreani****, F Fernandez-Alonso*
Characterisation of incident beam and current diffraction capabilities on the VESUVIO spectrometer.
Measurement and Technology 28, Number 9, 095501 (2017).
27. ***C. Andreani****, M. Krzystyniak, G. Romanelli, R. Senesi and F. Fernandez-Alonzo*
Electron-volt neutron spectroscopy: beyond fundamental systems.
Advances in Physics 66, 1-73, (2017)
28. *I. S. Anderson,* ***C. Andreani****, J. Carpenter, G. Festa, G. Gorini, C.-K Loong, R. Senesi*
Research Opportunities with Compact Accelerator-Driven Neutron Sources.
Physics Reports, 654, 1 (2016)
29. ***C. Andreani****, G. Romanelli, R. Senesi*
Direct measurements of quantum kinetic energy tensor in stable and metastable water near the triple point: an experimental benchmark.
Journal of Physical Chemistry Letters 7 (12), 2216–2220 (2016)
30. *I. Bukreeva, A. Mittone, A. Bravin, M. Alessandrelli, P. Coan, V. Formoso, R. G. Agostino, M. Giocondo, F. Ciuchi, M. Fratini, G. Festa,* ***C. Andreani****, R. Bartolino, A. Lamarra, G. Gigli, G. Ranocchia, A. Cedola*
Virtual unrolling and deciphering of Herculaneum papyri by X-ray phase-contrast tomography.
Scientific Report, 6, 27227 (2016)
31. *A. Parmentier, J. J. Shephard, G. Romanelli, R. Senesi, C. G. Salzmann,* ***C. Andreani***
Evolution of Hydrogen Dynamics in Amorphous Ice with Density.
Journal of Physical Chemistry Letters 6, 2038-2042 (2015)
32. *R. Senesi, G. Romanelli, M. A. Adams,* ***C. Andreani***
Temperature dependence of the zero point kinetic energy in ice and water above room temperature.
Chemical Physics 427, 111-116 (2013)
33. ***C. Andreani****, G. Romanelli, R. Senesi*
A combined INS and DINS study of proton quantum dynamics of ice and water across the triple point and in the supercritical phase.
Chemical Physics 427, 106 -110 (2013)
34. *G. Romanelli, M. Ceriotti, D. E. Manolopoulos, C. Pantalei, R. Senesi,* ***C. Andreani***
Direct Measurement of Competing Quantum Effects on the Kinetic Energy of Heavy Water upon Melting.
The Journal of Phys. Chem. Lett. 508, 3251–3256 (2013).
35. *R. Senesi, D. Flammini, A. I. Kolesnikov, E. Murray, G. Galli,* ***C. Andreani***
The quantum nature of the OH stretching mode in ice and water probed by neutron scattering experiments.
J. Chem. Phys. 139, 074504 (2013)
36. *D. Flammini, A. Petropaolo, R. Senesi,* ***C. Andreani****, F. McBride, A. Hodgson, M. Adams, L. Lin, R. Car*
Spherical momentum distribution of the protons in hexagonal ice from modeling of inelastic neutron scattering data.
J. Chem. Phys. 136, 024504 (2012)

37. *A. Pietropaolo, **C. Andreani,** M. Rebai, L. Giacomelli, G. Gorini, E. Perelli Cippo, M. Tardocchi, A. Fazzi, G. Verona Rinati, C. Verona, M. Marinelli, E. Milani, C. D. Frost, E. M. Schooneveld*
Fission diamond detectors for fast-neutron ToF spectroscopy.
Europhysics Letters, 94, 62001 (2011)
38. *E. Perelli Cippo, A. Borella, G. Gorini, W. Kockelmann, M. Moxon, H. Postma, N. J. Rhodes, P. Schillebeeck, E. M. Schoonenveld, M. Tardocchi, K. Dusz, Z. Hajnal, K. Biro, S. Porcinai, **C. Andreani**, G. Festa*
Imaging of cultural heritage objects using neutron resonances.
J. Anal. At. Spectrom., 26, 992-999 (2011)
39. *A. Pietropaolo, **C. Andreani**, M. Rebai, L. Giacomelli, G. Gorini, E. Perelli Cippo, M. Tardocchi, A. Fazzi, G. Verona Rinati, C. Verona, M. Marinelli, E. Milani, C. D. Frost, E. M. Schooneveld*
Single-crystal diamond detector for time-resolved measurements of a pulsed fast neutron beam.
Europhysics Letters, 92, 68003 (2010)
40. *R. Bedogni, A. Esposito, **C. Andreani**, R. Senesi, M. P. De Pascale, P. G. Picozza, A. Pietropaolo, G. Gorini, C. D. Frost, S. Ansell*
Characterization of the neutron field at the ISIS-VESUVIO facility by means of a bonner sphere spectrometer.
Nuclear Instruments and Methods in Physics Research Section A 612, 143–148, (2009)
41. *A. Pietropaolo, R. Senesi, **C. Andreani**, J. Mayers*
Quantum Effects in Water: Proton Kinetic Energy Maxima in Stable and Supercooled Liquid.
Brazilian Journal of Physics, 39, 318, (2009)
42. *T. Belgya, Z. Kis, L. Szentmiklósi, P. Kudejova, R. Schulze, T. Materna, G. Festa, P. A. Caroppi, **C. Andreani***
First elemental imaging experiment on a combined PGAI and NT set up at the Budapest Research Reactor.
Journal of Radioanalytical and Nuclear Chemistry, 278, No. 3, 751-754 (2008)
43. ***C. Andreani**, A. Pietropaolo, A. Salsano, G. Gorini, M. Tardocchi, A. Paccagnella,, S. C. D. Frost, S. Ansell, S. P. Platt*
Facility for fast neutron irradiation tests of electronics at the ISIS spallation neutron source.
Applied Physics Letters, 92, 114101 (2008)
44. *C. Pantalei, A. Pietropaolo, R. Senesi, **C. Andreani,** S. Imberti, J. Mayers, C. Burnham, G. Reiter*
Proton momentum distribution of liquid water from room temperature to the supercritical phase.
Phys Rev. Letters 100, 177801 (2008), selected for Virtual Journal of Biological Physics Research 15, issue 10 (2008)
45. *A. Pietropaolo, R. Senesi, **C. Andreani**, A. Botti, M. A. Ricci, F. Bruni*
Excess of proton mean kinetic energy in supercooled water.
Phys Rev. Letters, 100, 127802 (2008)
46. *V. Garbuio, **C. Andreani**, S. Imberti, A. Pietropaolo, G. F. Reiter, R. Senesi, M. A. Ricci*
Proton quantum coherence observed in water confined in silica nanopores.
J. Chem. Phys. 127, 154501 (2007), selected for Virtual Journal of Nanoscale Science and Technology 16, issue 18 (2007).
47. *M. Violante, L. Sterpone, A. Manuzzato, S. Gerardin, P. Rech, M. Bagatin, A. Paccagnella, **C. Andreani**, G. Gorini, A. Pietropaolo, G. Cardarilli, S. Pontarelli, C. Frost*
A new Hardware/Software Platform and a New 1/E Neutron Source for Soft Error Studies: Testing FPGAs at the ISIS Facility.
IEEE Trans. On Nuclear Science 54, 1184-1189 (2007)

48. *E. M. Schooneveld, J. Mayers, N. J. Rhodes, A. Pietropaolo,* ***C. Andreani****, R. Senesi, G. Gorini, E. Perelli-Cippo, M. Tardocchi*
    Foil Cycling Techinque for the VESUVIO spectrometer operating in the Resonance Detector Configuration.
    Review of Scientific Instruments 77, 095103 (2006)
49. *A. Pietropaolo,* ***C. Andreani****, A. Filabozzi, R. Senesi G. Gorini, E. Perelli Cippo, M. Tardocchi, N. J. Rhodes, E. M. Schooneveld*
    DINS measurements on VESUVIO in the Resonant Detector configuration: proton mean kinetic energy of water.
    Journal of Instrumentation JINST 1 P04001 doi:10.1088/1748-0221/1/04/P04001 JINST, March (2006)
50. *S. Imberti,* ***C. Andreani****, V. Garbuio, G. Gorini, A. Pietropaolo, R. Senesi, M. Tardocchi*
    Resolution of the VESUVIO spectrometer for high-energy inelastic neutron scattering experiments
    Nuclear Instruments and Methods A 552, 463-476 (2005)
51. ***C. Andreani****, D. Colognesi, J. Mayers, G. Reiter, R. Senesi*
    Measurement of momentum distribution of light atoms and molecules in condensed matter systems using inelastic neutron scattering.
    Advances in Physics, 54, 377 (2005)
52. *M. Tardocchi, G. Gorini, A. Pietropaolo, C. Andreani, R. Senesi, N. Rhodes, E. M. Schooneveld*
    YAP scintillators for resonant detection of epithermal neutrons at pulsed neutron sources.
    Review of Scientific Instrument 75, 4880-4890, (2004)
53. ***C. Andreani****, A. Pietropaolo, R. Senesi, G. Gorini, E. Perelli-Cippo, M. Tardocchi, N. Rhodes, E. M. Schooneveld,*
    A resonant detector for high-energy inelastic neutron scattering experiments.
    Appl. Physics Letters, 85, 5454-7, (2004)
54. *M. Tardocchi, A. Pietropaolo C. Andreani, A. Bracco, A. D'Angelo, G. Gorini, S. Imberti, N. Rhodes, R. Senesi, E. M. Schooneveld*
    Cadmium-Zinc-Telluride photon detector for epithermal neutron spectroscopy: pulse height response characterization.
    Nuclear Inst. Methods A 526, 477–492 (2004
55. ***C. Andreani****, A. D'Angelo, G. Gorini, S. Imberti, A. Pietropaolo, N. J. Rhodes, E. M. Schooneveld, R. Senesi, M. Tardocchi*
    CdZnTe γ detector for Deep Inelastic Neutron Scattering on the VESUVIO spectrometer.
    Appl. Phys. A: Materials Science & Processing 78, 903-913 (2004)
56. ***C. Andreani****, D. Colognesi, E. Degiorgi, A. Filabozzi, M. Nardone, E. Pace, A. Pietropaolo, R. Senesi*
    Double difference method in Deep Inelastic Neutron Scattering on the VESUVIO spectrometer.
    Nucl. Inst. Meth. A 497, 535-549 (2003)
57. ***C. Andreani****, A. Pietropaolo, R. Senesi, G. Gorini, M. Tardocchi, A. Bracco, N. Rhodes, E. Schooneveld*
    Electron-volt spectroscopy at a pulsed neutron source using a resonance detector technique.
    Nuclear Instrument and Methods A481, 509-520, (2002)
58. ***C. Andreani****, D. Colognesi, E. Degiorgi, M. A. Ricci*
    Proton Dynamics in supercritical water.
    J. Chem. Phys. 115, 11243-11248, (2001).
59. *R. Senesi,* ***C. Andreani****, D. Colognesi, A. Cunsolo, M. Nardone*
    Deep Inelastic Neutron Scattering determination of the single particle kinetic energy in solid and liquid 3He.
    Phys. Rev. Letts 86, 4584-4587, (2001)

60. ***C. Andreani***, *E. Degiorgi, R. Senesi, F. Cilloco, D. Colognesi, J. Mayers, M. Nardone, E. Pace*
Single particle dynamics in fluid and solid hydrogen sulphide: an inelastic neutron scattering study.
J. Chem. Phys. 114, 387 (2001
61. *R. Senesi,* ***C. Andreani****, Z. Bowden, D. Colognesi, E. Degiorgi, A. L. Fielding, J. Mayers, M. Nardone, J. Norris, M. Praitano, N. J. Rhodes, W. G. Stirling, J. Tomkinson, C. Uden*
VESUVIO: a novel instrument for performing spectroscopic studies in condensed matter with eV neutrons at the ISIS Facility.
Physica B 276-278, 200-201 (2000)
62. ***C. Andreani****, P. Cipriani, D. Colognesi, E. Pace*
Single particle dynamics in fluid hydrogen and deuterium.
J. Phys.: Condensed Matter 12 A139-A145 (2000)
63. *S. F. Parker, C. J. Carlile, T. Pike, J. Tomkinson, R. J. Newport,* ***C. Andreani****, F. P. Ricci, F. Sacchetti, M. Zoppi*
TOSCA: a world class inelastic neutron spectrometer.
Physica B 241 154-156 (1998)
64. *M. A. Ricci, M. Nardone, A. Fontana,* ***C. Andreani****, W. Hahn*
Light and neutron scattering studies of the OH stretching band in liquid and supercritical water.
J. Chemical Physics 108, 450-454 (1998)
65. *J. Mayers, C. Andreani, D. Colognesi*
Measurements of the kinetic energy in 4He through the superfluid transition by very high energy neutron scattering.
J. Physics - Condensed Matter 9, 10639-10649 (1997)
66. *M. A. Ricci, M. Nardone, F. P. Ricci,* ***C. Andreani****, A. K. Soper*
Microscopic structure of low temperature liquid ammonia: a neutron diffraction experiment.
J. Chemical Physics 102, 7650-7655 (1995)
67. ***C. Andreani****, A. Filabozzi, F. Menzinger, S. Desideri, A. Deriu, A. Di Cola*
Dynamics of Hydrogen Atoms in Superoxide Dismutase by Quasi-elastic neutron Scattering.
Biophys. Journal 68, 2519-2523 (1995)
68. ***C. Andreani****, A. Filabozzi, E. Pace*
Deep inelastic neutron scattering of D2 and H2 and momentum distributions of nuclei in diatomic *molecules.*
Phys Rev B 51, 8854-8863 (1995)
69. ***C. Andreani****, A. Filabozzi, M. Nardone, F. P. Ricci, J. Mayers*
Quantum and classical behaviour of the single particle dynamics in dense liquid 4He.
Phys. Rev. B 50,12744-12746 (1994)
70. *A. K. Soper,* ***C. Andreani****, M. Nardone*
Reconstruction of the orientational pair correlation function from neutron diffraction data: the case of liquid hydrogen iodide.
Phys. Rev. E 47, 2598-2605 (1993)
71. ***C. Andreani****, J. Dore, F. P. Ricci*
Structural characterization of diatomic liquids by diffraction studies.
Reports on Progress in Physics 54, 731-788 (1991)
72. ***C. Andreani****, G. Baciocco, R. Holt, J. Mayers*
Resolution in deep inelastic neutron scattering using pulsed neutron sources.
Nuclear Instruments and Methods A276, 297-305 (1989)
73. *J. Mayers,* ***C. Andreani****, G. Baciocco*
Initial state effects in deep inelastic neutron scattering.
Physical Review B 39, 2022-2028 (1989)
74. *J. M. F. Gunn,* ***C. Andreani****, J. Mayers*
A new approach to impulsive neutron scattering.

Journal of Physics C: Solid State Physics 19, L835- L840 (1986)

75. ***C. Andreani**, P. Bosi, F. Sacchetti, C. K. Loong*
Absolute measurements of the stretching mode density of states in polycrystalline ice Ih.
Journal of Chemical Physics 83, 750-753 (1985)
76. *A. J. Allen, M. T. Hutchings, C. G. Windsor, **C. Andreani***
Neutron diffraction methods for the study of residual stress fields.
Advances in Physics 34, 445-473 (1985)
77. *A. Allen, **C. Andreani**, M. T. Hutchings, C. G. Windsor*
Measurement of internal stress within bulk materials using neutron diffraction.
Non Distructive Texture International, 14, 249-254, Elsevier (1981)
78. *P. Morales, **C. Andreani***
Light scattering from hydrogen and deuterium halides.
Physics Letters A 74A, 335-336 (1979)

Books

G. Festa, **C. Andreani**, F. Grazzi, R. Senesi
Neutron Diffraction and (n,γ)-based techniques for Cultural Heritage
in "Nanotechnologies and Nanomaterials for Diagnostic, Conservation and Restoration of Cultural Heritage", G. Lazzara and R. Fakhrullin, Elsevier *Advanced Nanomaterials*, 2019, Pages 61-77.

C. Andreani, R. Senesi, M. Krzystyniak, G. Romanelliz, F. Fernandez-Alonso
Atomic Quantum Dynamics
in Materials Research" Pages 403-457 (2017), in Experimental Methods in the Physical Sciences, Volume 49, Editors F. Fernandez-Alonso and David Price (2017), ISBN:9780128053249

G. Festa, N. Kardjilov, **C. Andreani**
Probing Our Heritage with Neutrons—One Successful Story
Pag 3 in Neutron Methods for Archaeology and Cultural Heritage, SPECIAL ISSUE, Springer International Publishing, Nikolay Kardjilov and Giulia Festa, Editors ISBN 978-3-319-33163-8 (2017)

C. Andreani, G. Festa, A. Lapi, A. Miceli, R. Senesi
Problemi di fisica generale.
Aracne editore (2016)

C. Andreani, G. Festa, A. Lapi, A. Miceli, R. Senesi
Problemi di fisica generale
TexMat editore (2015)

C. Andreani, G. Festa, A. Lapi, R. Senesi
Quesiti e Soluzioni di fisica generale'
ROMA: Exòrma Edizioni, ISBN: 978-88-95688-51-0 (2010)

C. Andreani, G. Gorini, T. Materna
Novel Neutron Imaging Techniques for Cultural Heritage Objects
pags 229-252, Book Title: "Neutrons Imaging and Applications" Editors: Anderson, Ian S.; McGreevy, Robert; Bilheux, Hassina Z. SPECIAL Springer (2009)

Invited conferences (Selected)

1. *I Neutroni incontrano l'Arte*
   International Science Communication and Science Museums: Prospects and New Ideas", 18-19 May 2017
2. *Photon energy resolved Neutron Resonance Capture Analysis and neutron energy resolved Prompt Gamma Activation Analysis for enhanced isotope identification using eV neutrons.*
   HBS Workshop, Unkel (Germany) 29-30 September 2016
3. *I neutroni per illuminare il nostro passato e il nostro presente.*
4. XIII International Symposium of Universities "Knowledge and Mercy" Rome 7th -11th September 2016
5. *DINS to probe nuclear quantum effects"*
   Workshop "Water and Water Systems", 22 July – 31 July 2016, Erice (Italy)
6. *I-UK Interdisciplinary Initiative on Dementia (2ID)*
   Italian Healthcare and MedTech Chain in the field of Neuroscience, Roma 11 September 2015
   Neutron Instrumentation at ISIS: the CNR contribution"
   Workshop "Italy-UK partnership in Neutron Science: Thirty Years and Beyond", 26/11/2015
7. *Quantal Nuclear Motions in Condensed H-Bonded Systems*
   Department of Physics & Materials Science, City University of Hong Kong, Hong Kong 14 October 2015
8. *ISIS May 2015: current status and future plans*
   Workshop UCANS V: The Fifth Meeting of The Union for Compact Accelerator-Driven Neutron Sources, Padua, Italy 12-15 May 2015
9. *Probing our heritage*
   LLB Workshop, New opportunities in Neutron Scattering Small to Medium Sources and Their Applications, Paris 14-15 May 2015
   Inelastic Scattering I and Inelastic Scattering II
10. *Quantal Nuclear Motions in Condensed H-Bonded Systems*
    VI Workshop on Electronvolt Neutron Spectroscopy: Frontiers and Horizons, Cosener's House, Oxfordshire, UK, 20th – 21st January 2014
11. *Probing our heritage*
    Institute of Physics, Physical Society Club, 9th October 2013, London, UK
12. *Direct Measurement of Competing Quantum Effects in the Melting of Heavy Water*
    3rd CMCSN Workshop, University of California, Davis, 24th - 26th June 2013
13. *Deep and Inelastic neutron scattering of quantum particles in ice, normal and metastable phases of water*
    National University of Singapore, Department of Chemistry, 3 Science Drive, Singapore 4th July 2012 & Nanyang Technological University, 21 Nanyang link, Singapore 637371, 28th June 2012
14. *Proton dynamics in the stable and metastable phases of water*
    University College London, Chemistry Department, 2 May 2012.
15. *International research and training at Tor Vergata: high energy neutron scattering, neutron imaging and irradiation techniques*
    Institute of Crystalline Materials, Shandong University, 18 April 2012
16. *International Research and Training at Rome Tor Vergata: neutron irradiation and proton quantum dynamics"*
    Sun Yat Sen University, The School of Physics & Engineering, 16 April 2012
17. *Research and Training at Rome Tor Vergata: the example of neutron imaging and irradiation*
    Sino-French Institute of Nuclear Engineering and Technology, China, 13 Aprile 2012
18. *Current experimental nuclear physics and neutron scattering research activities in Rome: an overview"*
    Physics Department of the University of Hong Kong, 12 April 2012

19. *Deep and Inelastic neutron scattering of quantum particles in ice, normal and metastable phases of water*
    Computational Materials and Chemical Sciences Network (CMCSN) - Structure and Dynamics of Water and Aqueous Solutions (SDWAS) Coordination Meeting, February 10-12, 2012 – Seattle, February 10, 2012
20. *European distributed Research Infrastructure for Cultural Heritage: ERICH*
    ICT Innovation for Quality of Life and Healthy Ageing, European Parlament, Place du Luxemburg, Bruxelles, 22nd September 2011
21. *Neutron Scattering Technology in Material and Nano-Science Research*
    State Key Laboratory of Nuclear Physics and Technology, Beijing, China, 15th Settembre 2010
22. *Proton momentum distribution in bulk and confined water*
    15th International Workshop on Quantum Atomic and Molecular Tunneling in Solids and other Condensed Phases", Darmstadt, Germany 5th Settembre 2010
23. *Neutron probe to illuminate the past*
24. International Summer School in Conservation of Historical, Monumental and Archaeological Sites, Università di Roma Tor Vergata, Luglio 2010
25. *Proton Quantum Dynamics in Water via DINS*
    Helmholtz Zentrum Berlin für Materialien und Energie GmbH Berlin, Berlin, Germany, Marzo 2010
26. *Proton Quantum Effects in Water*
    ETH Zürich, Computational Science, Department of Chemistry and Applied Biosciences, (2010)
27. *Momentum distribution and quantum effects in liquid water*
    International workshop: Structure and Dynamics of Hydrogen-Bonded Systems, ICTP Trieste 26 - 27 October 2009.
28. *Deep Inelastic Neutron Scattering in liquid water*
    London Centre of Nanotechnology, 17 Dicembre 2008
29. *Illuminating the past: neutron a tool for Cultural Heritage*
    YICGG 2008, second edition, Research Competition 2008 Workshop "Global Governance: Growth and Innovation 2020"Rome, August 18 – 27, 2008
30. *Investigation of Archaeological Artefacts using Neutron Spectroscopy with eV neutrons*
31. Workshop on Neutron and Imaging 2006 – IAN2006, 23-26th October 2006, Oak Ridge (Tennessee, USA).
32. *Proton mean kinetic energy of water in sub- and super- critical conditions*
    Workshop Progress in Electron Volt Neutron Spectroscopy, IV edition Perspectives in Neutron Spectroscopy at High Energy, 22 October 2006, Oak Ridge (Tennesse-USA).
33. *Investigation of marbles from VILLA ADRIANA via Neutron diffraction'*
    Workshop Neutron and Archaeology, 29 March 2005, Budapest, (Hungary).
34. *Single particle dynamics in fluid 3He,4He and 3He/4He liquid mixtures*
    International Conference on Neutron Scattering, Sydney, Australia il 27/11-2/12 2005.
35. *High Energy Inelastic Neutron Scattering on VESUVIO*
    Workshop Progress in Electron Volt Neutron Spectroscopy, III edition Perspectives in Neutron Spectroscopy at High Energy, Santa Fe, New Mexico, USA. 24th April 2005.
36. *Short-time single particle dynamics in quantum and molecular systems*
    European Conference on Neutron Scattering Montpellier-Francia 2-5 Settembre 2003
37. *Epithermal neutron scattering: present and future perspectives*
    ILL (Grenoble-Francia) ILL 23 Giugno 200
38. *The e-VERDI Project"*

Neutron Round Table - Joint RTD Network - European Conference 'ESS – The European Spallation Source, the European Source of Science Bonn 16-17 Maggio 2002.

39. *The single particle dynamical properties of matter studied by Neutron Spectroscopy at the eV energies: VESUVIO Project*
    Inauguration of the VESUVIO spectrometer Rutherford Appleton Laboratory (ISIS) 15 April 2002
40. *Spectroscopy with eV neutrons*
41. ILL (Grenoble-Francia), 2000
42. *Neutron spectroscopy with eV neutrons*
    6th European Spallation Source, General Meeting 20-22 September 1999 Ancona –Italy
43. *Single particle dynamics in fluid hydrogen and deuterium*
    "European Physical Society- IV Liquid Matter Conference" Granada (Spagna) Luglio 1999
44. *VESUVIO- "A project to provide enhanced neutron scattering capability at the highest energy transfer*
    Meeting "Neutron Scattering Instrumentation Workshop – Studsvik, Svezia 6 Ottobre 1997.
45. *Inelastic and quasi-elastic dynamics in superoxide dismutase*
46. Workshop on " Inelastic and quasi-elastic Neutron scattering in Biology" ILL Grenoble France 14-15 Ottobre 1996
47. *Proton momentum distributions in fluid H2*
    European Physical Society -5th General Conference of the Condensed matter Division". Aprile 22-25 1996 Baveno Stresa Italia.
48. *The impulse approximation in molecular fluids.*
    Workshop, "The use of high energy neutrons in spectroscopy", Rutherford Appleton Laboratory (UK) il 4 Maggio 1995.
49. *The atomic momentum distribution of liquid deuterium: a comparison between experiment and theory.*
    2nd Liquid Matter International Conference, Firenze 18-22 Settembre 1993
50. *Is hydrogen bond present in hydrogen halides other than HF?*
    NATO Advanced Research Workshop on Hydrogen Bond Networks, Cargese, Corsica (Francia) 16-22 Agosto 1993
51. *Deriving the asymptotic scaling function in Deep Inelastic Neutron Scattering.*
    International Workshop "Highlights in the Physics of Liquids: Experimental opportunities from the Neutron and Syncrotron Radiation Sources" Trieste 19 - 29 Luglio 1993
52. *Orientational Correlations in Liquid Iodine"*
    "Symposium on the Physics of Molecular Liquids" Oxford (UK) 1-4 Aprile 1991
53. *Impulsive neutron scattering at ISIS*
    IX General conference of the Condensed Matter Division- Nice 6-9 Marzo 1989
54. *Deep inelastic neutron scattering from hydrogeneous solids*
    International Symposium: "Neutron scattering at ISIS: recent highlights in condensed matter research" - Villa Mondragone (Monteporzio Catone) 14-16 Dicembre 1988
55. *Inchoerent inelastic neutron scattering on polycrystalline ice Ih*
    Symposium on Neutron Scattering, Berlino Ovest (6-8 Agosto 1984)

Reviewed International Conference Proceedings (Selected)

1. **C. Andreani**, P. Bosi, E. Mazzega, F. Sacchetti, C.G. Windsor
   Observations of the dispersion relation of the O-D stretching modes in heavy ice
   "The neutron and its applications" Cambridge, (13-17 settembre 1982)
2. A. J. Allen, **C. Andreani**, M. T. Hutchings, C. M. Sayers, C. G. Windsor

Measurements of internal stress within bulk materials using neutron scattering
Conference for the 50th anniversary of the discovery of neutron "The neutron and its applications" Cambridge, (13-17 settembre 1982)

3. A. J. Allen, **C. Andreani**, M.T. Hutchings, C.M. Sayers, C.G. Windsor
Neutron diffraction studies of texture and residual stress in weldments"
V International Conference on Metallurgy and Material Science, Denmark (1984)
4. **C. Andreani**, F. Cilloco, L. Nencini, D. Rocca
Measurements of the liquid bromine structure factor S(Q) at T=30C and T=200C along the coexistence curve by neutron diffraction
"Annual Symposium on Neutron Scattering", Berlino Ovest (6-8 Agosto 1984)
5. **C. Andreani**, V, Merlo, M.A. Ricci
Vibrational density of states in polycrystalline sulphuric acid
Workshop "Neutron scattering in molecular solids", Grenoble 12-15 Luglio 1988
6. **C. Andreani**, V. Merlo, M.A. Ricci
The strucure of deuterium sulphide. A pulsed neutron scattering experiment at ISIS
International Symposium: "Neutron scattering at ISIS: recent highlights in condensed matter research" - Villa Mondragone (Monteporzio Catone) 14-16 Dicembre 1988
7. C. **Andreani**, G. Baciocco, R. Holt, J. Mayers
Resolution in deep inelastic neutron scattering using pulsed sources
Workshop on Momentum distributions 24-26 ottobre 1988 Argonne National Laboratory (USA)
8. **C. Andreani**, G. Baciocco, J. Mayers
Initial state effects in deep inelastic neutron scattering
Workshop on Momentum distributions 24-26 ottobre 1988 Argonne National Laboratory (USA)
9. **C. Andreani**, U. Buontempo, J. Mayers, F.P. Ricci
Energy resolved neutron radiography
Symposium on Neutron Scattering, Bombay India (20 -25 Gennaio (1991)
10. **C. Andreani**, M. Nardone, F. P. Ricci
Partial Structure factors and orientational correlations in liquid HI
Workshop "International workshop on the methods in the determination of partial structure factors of disordered matter by neutron and anomaluos x-ray diffraction." Grenoble (F) 10 -11 settembre (1992)
11. **C. Andreani,** A. Filabozzi, A. Deriu
"Dynamics of hydrogen atoms in superoxide dismutase "
International Workshop: QuasiElastic Neutron Scattering - QENS 95 Parma Italy Settembre 7-8 (1995).
12. **C. Andreani**, A. Filabozzi, A. Deriu, D.Di Cola, F.Menzinger, A.Desideri
"Dynamics of Cu/Zn Superoxide Dismutase"
Congresso Internazionale QENS'95 di Parma (7-8 settembre 1995).
13. **C. Andreani,** A. Deriu, A.Filabozzi, D.Russo
"Temperature dependence of low frequency dynamics by inelastic neutron scattering"
1st European Conference on Neutron Scattering, ECNS'96, Interlaken (CH), 8-11 Ottobre, 1996
14. **C. Andreani**, D. Colognesi, A. Filabozzi, M. Nardone, R. Azuah
"Temperature dependence of single particle kinetic energy in liquid parahydrogen"
1st European Conference on Neutron Scattering, ECNS'96, Interlaken (CH), 8-11 Ottobre, 1996.
15. **C. Andreani**, D. Colognesi, A. Filabozzi, M. Nardone, E. Pace

Deep inelastic neutron scattering from dense fluid parahydrogen
Scientific Highlights in Isis (1997**)** Annual Report - Pag 60.

16. **C. Andreani,** D. Colognesi, A. Filabozzi,
"Atomic and molecular momentum distributions in quantum fluids by Compton Neutron Scattering"
1st European Conference on Neutron Scattering, ECNS'96, Interlaken (CH), 8-11 Ottobre, 1996.
17. **C. Andreani,** D. Colognesi and R. Senesi
" Kinetic energy in low density supercritical ^{4}He"
IV Liquid Matter Conference"- Granada (Spagna) Luglio (1999)
18. J Tomkinson, ZA Bowden, J Mayers, J Norris, NJ Rhodes, **C Andreani,** D Colognesi, AL Fielding, M Nardone, M Praitano
VESUVIO. A project to provide enhanced neutron scattering capabilities at the highest energy transfers
ECNS'99. 2. European conference on neutron scattering (1999)
19. R. Senesi, **C. Andreani**, D. Colognesi
"Single Particle Kinetic Energy In Solid And Dense Liquid ^{3}He.
Scientific Highlights In Isis 2001 Annual Report - Cclrc Rutherford Appleton Laboratory (Uk) Pag 60.
20. **C. Andreani**, A. Pietropaolo, A. D'angelo, G. Gorini, R. Senesi, M. Tardocchi
"Gamma Detectors For Deep Inelastic Neutron Scattering In The 1-100 Ev Region"
International Conference on Neutron Scattering, München, 9.-13. September 2001
21. J. Tomkinson, **C. Andreani**, R. Newport, G. Gorini, J. Mayers, A. D'Angelo, N. Rhodes, E. Schooneveld, Z. Bowden and, R. Coleman 1
"The eVERDI project: Electron-Volt Energy Resonance Detector Instrument"
European Conference 'ESS – The European Spallation Source/The European Source of Science'. Bonn 16-17 May 2002
22. **C. Andreani**, D. Colognesi, E. Degiorgi, A. Filabozzi, M. Nardone, E. Pace , A. Pietropaolo and R. Senesi,
"Double difference method in Deep Inelastic Neutron Scattering on the VESUVIO"
European Conference 'ESS – The European Spallation Source/The European Source of Science'. Bonn 16-17 May 2002
23. J. Tomkinson, J. Mayers, T. Abdul-Redah, W. G. Stirling, A. L. Fielding, **C. Andreani**, M. Nardone, D. Colognesi, R. Senesi and E. Degiorgi,
"The VESUVIO Project"
European Conference Bonn 16-17 May 2002 'ESS – The European Spallation Source/The European Source of Science'.
24. A. Pietropaolo**, C. Andreani**, A. D'Angelo, G. Gorini, S. Inberti, N. Rhodes, E. M. Schooneveld, R. Senesi, M. Tardocchi
"The resonance detector spectrometer for neutron spectroscopy in the eV energy region"
11th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, September (2002), Pruhonice (Prague) Czech Republic, World Scientific New Jersey.
25. M. Tardocchi, **C. Andreani**, A. D'Angelo, G. Gorini, S. Imberti, A. Pietropaolo, N. Rhodes and E. Schooneveld,
"A novel detector for Deep Inelastic Neutron Scattering experiments at a pulsed neutron source"
European Conference Bonn 16-17 Maggio 2002 'ESS – The European Spallation Source/The European Source of Science'.
26. M. Tardocchi, **C. Andreani**, A. D'Angelo, G. Gorini, S. Imberti, A. Pietropaolo, R. Senesi
"Cadmium-Zinc-Tellurium (CZT) detector for Deep Inelastic Neutron Scattering experiments at a pulsed neutron source"

European Spallation Source Conference, Bonn, 15-17 May 2002.

27. **C. Andreani**, A. Filabozzi, G. Gorini, E. Perelli-Cippo, A. Pietropaolo, R. Senesi, M. Tardocchi
"Assessment of a silicon detector for pulsed neutron scattering experiments", 3rd European Conference on Neutron Scattering, Montpellier, 3-6 Settembre 2003.
28. A. Pietropaolo, **C. Andreani**, A. D'Angelo, R. Senesi, S. Imberti, G. Gorini, M. Tardocchi, E.Perelli-Cippo, N. Rhodes, E. Schoonevel
"Photon detectors for epithermal neutron scattering at high- ħw and low-q"
3rd European Conference on Neutron Scattering, Montpellier, 3-6 September 2003
29. **C. Andreani**, A. D'Angelo, A. Pietropaolo, R. Senesi, G. Gorini, M. Tardocchi, N. Rhodes, E. M. Schooneveld
"Condensed matter studies with 20-100 eV neutrons: effective detection systems for High Inelastic Neutron Scattering and Deep Inelastic Neutron Scattering".
SCIENTIFIC HIGHLIGHTS IN ISIS (2003) ANNUAL REPORT, CCLRC RUTHERFORD APPLETON LABORATORY (UK).
30. **C. Andreani,** A. Pietropaolo**,** R. Senesi, , G. Gorini , M. Tardocchi
"New perspectives for electronVolt neutron spectroscopy on inverse geometry instruments at pulsed sources"
ICANS-XVI 16th Meeting of the International Collaboration on Advanced Neutron Sources May 12 – 15, (2003) Düsseldorf-Neuss, Germany.
31. **C. Andreani**, A. Pietropaolo, R. Senesi, G. Gorini, E. Perelli-Cippo, M. Tardocchi, N. Rhodes, E. M. Schooneveld
"Density of States in ice measured using the new VLAD detector technology:"
SCIENTIFIC HIGHLIGHTS IN ISIS (2004) ANNUAL REPORT, CCLRC RUTHERFORD APPLETON LABORATORY (UK).
32. **C. Andreani**, G. Gorini, E. Perelli-Cippo A. Pietropaolo, M. Tardocchi, E. M. Schooneveld, R. Senesi,
"A Resonance Detector Technique Optimized for Inelastic Neutron Scattering Studies at the eV Energies in Condensed Matter"
ACNS 2004 American Conference on Neutron Scattering, HOSTED BY the NIST CENTER FOR NEUTRON RESEARCH College Park, Maryland, June 6–10, 2004 (USA)
33. R. Senesi, **C. Andreani**, A. Filabozzi, G. Gorini, S. Nufris, E. Perelli-Cippo, A. Pietropaolo, N. Rhodes, E. M. Schooneveld, M. Tardocchi,
"Deep Inelastic Neutron Scattering from water in the 1-40 eV energy range employing the Resonance Detector Spectrometer configuration"
ACNS 2004 American Conference on Neutron Scattering, HOSTED BY the NIST CENTER FOR NEUTRON RESEARCH College Park, Maryland, June 6–10, 2004 (USA)
34. A Pietropaolo, **C Andreani**, R Senesi, G Gorini, M Tardocchi, N Rhodes, E M Schooneveld, A. D'Angelo
"Solid state and scintillation detectors for electron Volt neutron spectroscopy"
2004 IEEE NSS/MIC/SNPS and RTSD Rome , session: Nuclear Science Symposium (NSS), October 16-22, 2004
35. A. Filabozzi, A. Pietropaolo, **C. Andreani**, M. De Pascale, G. Gorini, W. Kockelmann, E. Perelli-Cippo, R. Senesi, M. Tardocchi
"Texture and structure studies on marbles from Villa Adriana"
1st International Workshop on: "Science, Technology and Cultural Heritage", Cinema Festival Palace, Venice Lido, Italy - June 29 - July 1, 2004.
36. **C. Andreani**, E. Perelli-Cippo, G. Gorini, M. Tardocchi, A. Pietropaolo, R. Senesi, S. Imberti, N.H. Rhodes, E. Schooneveld
"High Energy Neutron Scattering from Water in the 1-40 eV Energy Range Employing the Resonance Detector Spectrometer Configuration".

Gordon Research Conference, Water and Aqueous Solutions, August 1st – 6th 2004 Holderness School, Plymouth, New Hampshire, USA.

37. R. Senesi, **C. Andreani**, D. Fernandez-Canoto, V. Garbuio, G. Gorini, S. Imberti, E. Perelli-Cippo, A. Pietropaolo, N.J. Rhodes, E.M. Schooneveld, M. Tardocchi
"Neutron spectroscopy of high energy excitations on the VESUVIO spectrometer"
ICANS-XVII 17th Meeting of the International Collaboration on Advanced Neutron Sources April 25 – 29, (2005) Santa Fe, New Mexico USA.
38. A. Pietropaolo**, C. Andreani**, D. Fernandez-Canoto, V. Garbuio, G. Gorini, S. Imberti, E. Perelli-Cippo, R. Senesi, M. Tardocchi
"Resolution in High energy Inelastic Neutron Scattering Using VESUVIO spectrometer"
ICANS-XVII 17th Meeting of the International Collaboration on Advanced Neutron Sources April 25 – 29, 2005 Santa Fe, New Mexico USA.
39. Zs. Kasztovszky for the Ancient Charm collaboration (G. Gorini, R. Cattaneo, E. Perelli Cippo, A. Pietropaolo, M. Tardocchi, **C. Andreani**, B. Adembri, M. L. Arancio, P.A. Caroppi, G. Festa, P. De Pascale, D.Malfitana, R. Senesi, K. T. Biro, K. Dúzs, Zs. Hajnal, T. Belgya, Zs Kasztovszky, Z. Kis, L. Szentmikósi, A. Kirfel, J. Jolie, P. Kudejova, T. Materna, R. Schulze, P. Schillebeeckx, A. Borella, D. Fontijn, C.W.E. van Eijk, V.R. Bom, M.C. Clarijs, M.C. Moxon, H. Postma, W.Kockelmann,E. Godfrey, J.A. James, P.G. Radaelli, N.R. Rhodes, A. Scherillo, E.M. Schooneveld, D. Visser)
"ANCIENT CHARM: A new project for neutron-based 3D imaging with applications to archaeological research"
Symposium on Archaeometry, Quebec City (Canada), 2/6 May 2006
40. G. Festa for the Ancient Charm collaboration (G. Gorini, R. Cattaneo, E. Perelli Cippo, A. Pietropaolo, M. Tardocchi, **C. Andreani**, B. Adembri, M. L. Arancio, P.A. Caroppi, P. De Pascale, D. Malfitana, R. Senesi, K. T. Biro, K. Dúzs, Zs. Hajnal, T. Belgya, Zs Kasztovszky, Z. Kis, L. Szentmikósi, A. Kirfel, J. Jolie, P. Kudejova, T. Materna, R. Schulze, P. Schillebeeckx, A. Borella, D. Fontijn, C.W.E. van Eijk, V.R. Bom, M.C. Clarijs, M.C. Moxon, H. Postma, W.Kockelmann,E. Godfrey, J.A. James, P.G. Radaelli, N.R. Rhodes, A. Scherillo, E.M. Schooneveld, D. Visser)
ANCIENT CHARM: A new project for neutron-based 3D imaging with applications to archaeological research
Looking Forward to the Past: Science and Heritage, Tate Modern London 28 November 2006. **(**Ist prize winner**)**:
41. G. Festa, **C. Andreani**, A. Filabozzi, D. Malfitana, J. Poblome
"Neutron Techniques in Cultural Heritage"
Acheometriai Muhely, III.2 32-36 (2006).
42. Zsolt Kasztovszky and the Ancient Charm Collaboration
"ANCIENT CHARM: a new European project for neutron-based 3D imaging with applications to archaeological research"
SYMPOSIUM ON ARCHAEOMETRY, Quebec City (Canada), 2/6 May (2006)
43. M. Violante, L. Sterpone, A. Manuzzato, S. Gerardin, P. Rech, M. Bagatin, A. Paccagnella, **C. Andreani**, A. Pietropaolo, G. Cardarilli, S. Pontarelli, C. Frost
"A New Hardware/Software Platform and a New 1/E Neutron Source for Soft Error Studies: Testing FPGAs at the ISIS Facility"
IEEE RADiation Effects Conference (RADECS) - Workshop or symposium (2006)
44. M. Violante, M. Sonza Reorda, L. Sterpone, A. Manuzzato, S. Gerardin, P. Rech, M. Bagatin, A. Paccagnella, **C. Andreani**, G. Gorini, A. Pietropaolo, G. Cardarilli, A. Salsano, S. Pontarelli, C. Frost
"A new hardware/software platform for the soft-error sensitivity evaluation

of FPGA devices"
LATW2007 - Cuzco, Peru - Int. Conf. Proceedings (2007)

45. Zs. Kasztovszky, Z. Kis, T. Belgya, W. Kockelmann, G.Festa, A. Filabozzi, **C. Andreani**, A. Kirfel, K. T. Biró, K. Dús, Zs. Hajnal, P. Kudejova and the Ancient Charm Collaboration
"Prompt gamma activation analysis and time of flight neutron diffraction neutron on 'black boxes' in the Ancient Charm project"
12th Proceedings at the International Conference on Modern Trends in Activation Analysis Tokyo Metropolitan Univ., Hachioji-shi, Tokyo, JAPAN, (Sep. 16-21 2007).
46. F. Lo Celso, V. Benfante, R. Triolo, N. Kardjilov, A. Hilger, G. Festa, A. Filabozzi, **C. Andreani**
"Application of Neutron Techniques on Marbles of Archeological
4th European Conference on neutron scattering, 25-29 June 2007, Lund, (Sweden)
47. A. Pietropaolo, **C. Andreani**, M. Tardocchi, G. Gorini, C.D. Frost , S Ansell, A. Paccagnella, S. Gerardin, A. Salsano, S. Pontarelli,
"Soft error
4th European Conference on neutron scattering, 25-29 June 2007, Lund, (Sweden)
48. T. Belgya, and the Ancient Charm collaboration (G. Gorini, R. Cattaneo, E. Perelli Cippo, A. Pietropaolo, M. Tardocchi, **C. Andreani**, B. Adembri, M. L. Arancio, P.A. Caroppi, G. Festa, P. De Pascale, D. Malfitana, R. Senesi, K. T. Biro, K. Dúzs, Zs. Hajnal, T. Belgya, Zs Kasztovszky, Z. Kis, L. Szentmikósi, A. Kirfel, J. Jolie, P. Kudejova, T. Materna, R. Schulze, P. Schillebeeckx, A. Borella, D. Fontijn, C.W.E. van Eijk, V.R. Bom, M.C. Clarijs, M.C. Moxon, H. Postma, W.Kockelmann,E. Godfrey, J.A. James, P.G. Radaelli, N.R. Rhodes, A. Scherillo, E.M. Schooneveld, D. Visser)
"Radiography driven PGAA and neutron diffraction measurements on Black Boxes designed for the 'ANCIENT CHARM' project"
37th International Symposium on Archaeometry, Siena, 12-16 May 2008
49. Zs. Kasztovszky, Z. Kis, T. Belgya, W. Kockelmann, S. Imberti, E. M. Schooneveld, G. Festa, A. Filabozzi, **C. Andreani**, A. Kirfel, K. T. Biró, K. Dúzs, Zs. Hajnal, P. Kudejova6 M. Tardocchi and the **Ancient Charm Collaboration "Promt Gamma Activation Analysis and time of flight neutron diffraction of '' in the 'Ancient Charm' project"**
12th International Conference on Modern Trends in Activation Analysis Tokyo Metropolitan Univ., Hachioji-shi, Tokyo, JAPAN, (Sep. 16-21 2007). Special issue to be published, September 2008
50. G. Festa, **C. Andreani,** W. Kockelmann, A. Kirfel and the Ancient Charm Collaboration (et al.)
'Neutron Diffraction Analysis of 'Black Boxes''
Archeometriai Muhely, Hungary, Nr. 2008/1
51. G. Cellere, S. Gerardin, M. Bagatin, A. Paccagnella, A. Visconti, M. Bonanomi, S. Beltrami, P. Roche, G. Gasiot, R. Harboe Sørensen, A. Virtanen, C. Frost, P. Fuochi, **C. Andreani**, G. Gorini, A. Pietropaolo, S. Platt.
"Neutron-induced soft errors in advanced Flash memories"
2008 IEEE International Electron Devices Meeting, San Francisco, CA, December 15-17, (2008)
52. M. Bagatin, S. Gerardin, A. Paccagnella, **C. Andreani**, G. Gorini, A. Pietropaolo, S.P. Platt, C. D. Frost
"Factors Impacting the Temperature Dependence of Soft Errors in Commercial SRAMs"
RADECS 2008, Jyvaskyla, Finland, September 10-12th, (2008).
53. T. Materna and the Ancient Charm Collaboration (**C. Andreani** et al.)
"Combined neutron imaging techniques for cultural heritage purpose"

The Thirteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS13), August 25–29, (2008) Cologne, Germany

54. T. Materna and the Ancient Charm Collaboration (**C. Andreani** et al.) *"New Neutron Imaging Techniques for Cultural Heritage Purposes"* 2008 Nuclear Science Symposium, Medical Imaging Conference and 16th Room Temperature, Semiconductor Detector Workshop (IEEE), Octobre 19-25, (2008) Dresden, Germany
55. G. Gorini, H. Kamermans, R. Cattaneo, E. Perelli Cippo, A. Pietropaolo and M. Tardocchi, **C. Andreani**, B. Adembri, M.L. Arancio, P.A. Caroppi, M. De Pascale, G. Festa, D. Malfitana, R. Senesi, A. M. Giusti, A. P. Recchia, S. Porcinai, K.T. Biró, K. Dúzs, Zs. Hajnal, T. Belgya, Zs. Kasztovszky, Z. Kis, L. Szentmikósi, A.Kirfel, J. Jolie, R. Schulze, P. Kudejova, P. Schillebeeckx, A. Borella,, T. Materna, D. Fontijn, L. Amkreutz, S. Scholten, C.W.E. van Eijk, V.R. Bom, M.C. Clarijs, M.C. Moxon, H. Postma, E. Godfrey, W. Kockelmann, P. Radaelli, N.J. Rhodes, E.M. Schooneveld and D. Visser. *"Neutron-based Analysis for Cultural Heritage Research. Results of the Ancient Charm project"* 14th International Congress "Cultural Heritage and New Technologies"83.
56. **C. Andreani**, R. Senesi, A. Pietropaolo, G. Gorini *"Perspectives for electron Volt neutron spectroscopy at Long Pulse Spallation Neutron Sources "* ICANS XIX, 19th meeting on Collaboration of Advanced Neutron Sources March 8 – 12, Grindelwald, Switzerland, PSI-Proceedings 10-01 ISSN-Nr. 1019-6447, (2010) Vienna, (2009)
57. M. Rebai, **C. Andreani**, A. Fazzi, C. D. Frost, L. Giacomelli, G. Gorini, E. Milani, E. Perelli Cippo, A. Pietropaolo, G. Prestopino, E. Schooneveld, M. Tardocchi, C. Verona and G. Verona Rinati *Fission diamond detector tests at the ISIS spallation neutron source***.** XIX International collaboration on Advanced Neutron Sources, ICANS XIX, PSI-Proceedings 10-01 ISSN-Nr. 1019-6447, (2010).
58. **C. Andreani,** R. Senesi, A. Pietropaolo, G. Gorini *"Perspectives for electronvolt neutron spectroscopy at long pulse spallation neutron sources "* Proceedings of the XIX International collaboration on Advanced Neutron Sources, PSI-Proceedings. 10-01, ISSN-Nr. 1019-6447 (2010).
59. M. Rebai, G. Gorini, A. Pietropaolo, M. Tardocchi, A. Fazzi, E. Milani, G. Verona Rinati, **C. Andreani,** R. Senesi**,** C. D. Frost, E. M. Schooneveld, N. J. Rhodes, R. Bedogni, A. Esposito, *"Development of high energy neutron counters for the CHIPIR beam line at ISIS-TS2"* XIX International collaboration on Advanced Neutron Sources, ICANS XIX Conference Proceedings, ISSN-Nr. 1019-6447 (2010).
60. A. M. Paradowska, A. Tremsin , J. F. Kelleher, S. Y. Zhang, S. Paddea, G. Burca, J. A. James, A. Rehan, N. H. Faisal, F. Grazzi, G. Festa, **C. Andreani**, F. Civita, P. J. Bouchard, W. Kockelman, M. E. Fitzpatrick *Modern and Historical Engineering Components Investigated by Neutron Diffraction.* ATEM'11, September 19-21, 2011, Kobe, Japan
61. M Rebai, L Giacomelli, **C Andreani**, A Fazzi, C D Frost, E Perelli Cippo, A Pietropaolo, N Rhodes, M Tardocchi, E Schooneveldd and G Gorini *2nd International Workshop on Fast Neutron Detectors and Applications (FNDA2011), Kibbutz Ein* Gedi, Israel 6th-11th November (2011).
62. A Miceli, G Festa, R Senesi and **C Andreani** *"Monte Carlo simulations of bi-parametric Prompt Gamma Activation Analysis for imaging of Cultural Heritage artefacts"* International Conference on Neutron Scattering (ICNS), 8-12 July 2013,

Edinburgh (UK)

63. A Parmentier, **C Andreani**, R Senesi, C G Salzmann and J J Shephard
"Characterization of vibrational spectra of amorphous ices by inelastic (INS) and deep-inelastic (DINS) neutron scattering"
International Conference on Neutron Scattering (ICNS), 8-12 July 2013, Edinburgh (UK)
64. G. Romanelli, M. Ceriotti, D Manolopoulos, R Senesi and **C Andreani**
"Oxygen momentum distribution in water: quantum effects and anisotropy"
International Conference on Neutron Scattering (ICNS), 8-12 July 2013, Edinburgh (UK)
65. G. Festa, R. Senesi, G Tardino, D. C. Mannes, G. Gorini and **C. Andreani**
"Neutrons and music: Imaging investigation of ancient flute musical instruments"
International Conference on Neutron Scattering (ICNS), 8-12 July 2013, Edinburgh (UK)
66. M Bagatin, S Gerardin, A Paccagnella, V Ferlet-Cavrois, A Visconti, G Gorini, **C Andreani**, C. D. Frost
"Neutron and alpha SER in advanced NAND Flash memories"
IEEE Conference "Radiation and Its Effects on Components and Systems (RADECS), 23 September (2013)
67. G. Festa, L. Arcidiacono, A. Pappalardo, T. Minniti, C. Cazzaniga, A. Scherillo, **C. Andreani** and R. Senesi
"Isotope identification capabilities using time resolved prompt gamma emission from epithermal neutrons"
ICANS XXII, International Collaboration on Advanced Neutron Sources, 27–31 March 2017, Saïd Business School, University of Oxford, UK
68. M. Krzystyniak, G. Romanelli, M. Fabian, M. Gutmann, G. Festa, L. Arcidiacono, M. Gigg, K. Druzbicki, **C. Andreani**, R. Senesi, F. Fernandez-Alonso
"VESUVIO: The Current Testbed for a Next-generation Epithermal Neutron Spectrometer"
ICANS XXII, International Collaboration on Advanced Neutron Sources, 27–31 March 2017, Saïd Business School, University of Oxford, UK
69. **C. Andreani,** A. Fedi, M. Ottavi, G. Furano, A. Bruno, R. Senesi, C. Cazzaniga
"High-energy Neutrons Characterization of a Safety Critical Computing System"
30th IEEE Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems, October 23-25 Cambridge (2017).
70. M. P. M. Marques, S.F. Parker, D. Gonçalves, A. P. Mamede, A. R. Vassalo, C. I. Makhoul, G. Festa, **C. Andreani** and L. A. E. Batista de Carvalho
"A Vibrational Spectroscopic Study of Burned Human Bones"
XVII European Conference on the Spectroscopy of Biological Molecules (ECSBM 17), 11-14 September, Amsterdam (2017).
71. IB Adilina, **C Andreani**, R Applin, L Arcidiacono, J. Armstrong, ALM Batista de Carvalho, A de Bruin, KT Butler, H Cavaye, A Davidson, F Demmel, H Doan, S Dixon, F Fernandez-Alonso, G Festa, V García-Sakai, SO Halukeerthi, B Hewer, S Imberti, A Ivanov, M Krzystyniak, S Kukran, AP Mamede, MP Marques, J Martinez-Gonzalez, P McMillan, A Michaelides, S Mukhopadhyay, SF Parker, A Perrichon, J Ponsoby, C Pruteanu, E Roberts, G Romanelli, A Rosu-Finsen, P Rozyczko, S Rudić, CG Salzmann, C Scatigno, G Schweicher, R Senesi, Z Sharif, IP Silverwood, N Skipper, BE Souza, SK Talewar, K Tian, M Tian, K Titov, P Ulpiani, A. Zachariou
'Instrument for rapid testing of effects of high energy neutrons on electronic devices'
Molecular Spectroscopy Science Meeting 2018, Technical Report RAL-TR-2018-014, pag 1-162, December (2018)

Dissemination Papers

1. *Instrument for rapid testing of effects of high energy neutrons on electronic devices*
Carla Andreani, Chris Frost, Giuseppe Gorini and Alessandro Paccagnella
ASI Magazine, January 2014
2. *I neutroni svelano I segreti dei Beni Archeologici ed Artistici*
Carla Andreani and Giuseppe Gorini
Technology Review, www.technology.review.it N. 6, Novembre Dicembre 2006
3. *L'arte più nascosta svelata dai neutroni*
Carla Andreani, Corriere della Sera, Scienza (Uomo, Tecnologia, Ecologia, Natura) Martedì 7 Febbraio 2006
4. *E i fisici progettano una TAC per I monumenti*
intervista a **Carla Andreani** Il Messaggero, 17 Dicembre 2005

Technical Reports (Selected)

1. **C. Andreani**, P. Bosi, M. Condarelli
Calcolo della densità di stati a 1-fonone del ghiaccio Ih ordinato. Nota Interna n. 754 Istituto di Fisica "G.Marconi" - Universita' "La Sapienza" Roma (1980)
2. A. Allen, **C. Andreani**, M.T. Hutchings,
Examination of test plate MS1 using neutron diffraction techniques. M.P.D. 521.2, Harwell Report A.E.R.E. (June 26th, 1981)
3. A.J. Allen**, C. Andreani**, M.T. Hutchings, C.G. Windsor
Residual stress measurements in bulk steel samples using neutron diffraction. Report ILL (Institute Lau-Langevin) (August 7th,1981
4. **C. Andreani**, P. Bosi, F. Menzinger, F. Sacchetti
Evaluation of the performances of a constant-Q spectrometer for the spallation neutron source SNS at Rutherford Appleton Laboratory. Proposal for the fabrication of a spectrometer at ISIS, presented at Rutherford Laboratory (May 1983)
5. **C. Andreani**, C. Petrillo, F. Sacchetti
Accordo CNR-SERC per l'accesso italiano alle SNS. Nota Interna del Consiglio Nazionale delle Ricerche (1984)
6. **C. Andreani**
Applicazioni in metallurgia di tecniche a fasci neutronici: misure di tensioni interne nei materiali con diffrazione ad alta risoluzione. Nota Interna ENEA-Casaccia TIB-MAT RIT 84003 (1984)
7. **C. Andreani**, F. Cilloco, R. Felici, F. Sacchetti
Prospettive attuali per la sorgente neutronica pulsata (LISONE). Rapporto Interno ISM 1985/1
8. **C. Andreani**, F. Cilloco, C. Petrillo, F. Sacchetti, C.G. Windsor
Final mechanical specification of the spectrometer PRISMA for the spallation neutron source. Rapporto Interno ISM 1985/4
9. [**C. Andreani**, F. Cilloco, L. Nencini, D. Rocca, R. N. Sinclair
The structure of liquid bromine. Materials Physics Division AERE HARWELL MPD/NBS/265 (1985)
10. **C. Andreani**, F. Cilloco, L. Nencini, D. Rocca, R. N. Sinclair
The structure of liquid bromine. Nota Interna del Dipartimento di Fisica, University of Rome Tor Vergata ROM2F/85/007 (1985).
11. A. J. Allen, M. T. Hutchings, C. G. Windsor, **C. Andreani**
Neutron diffraction methods for the study of residual stress fields. Materials Physics Report AERE HARWELL R 11630 (1985)
12. A. J. Allen, M. T. Hutchings, C. G. Windsor, **C. Andreani**
Measurements of the residual stress field within bulk steel components and weldements using neutron diffraction techniques. Nota Interna del Dipartimento di Fisica, University of Rome Tor Vergata ROM2F/85/008 (1985)
13. **C. Andreani**, C. J. Carlile, F. Cilloco, C. Petrillo, F. Sacchetti, G. C. Stirling, C. G. Windsor

PRISMA-A spectrometer for the measurements of coherent excitations on a pulsed spallation neutron source. RAL Report 026 (April1986)

14. J. M. F. Gunn, **C. Andreani**, J. Mayers
A simple approach to impulsive neutron scattering. RAL Report 86-093 (November 1986)
15. C. Andreani, U.Steigenberger and C.G.Windsor
PRISMA" - A unique phonon spectrometer. Harwell Report MPD/NBS/377 (1990)
16. **C. Andreani,** A. Filabozzi, E. Pace
Deep inelastic neutron scattering. Nota Interna Dipartimento di Fisica, University of Rome Tor Vergata(1994)
17. **C. Andreani**, E. Degiorgi, A. Filabozzi, D. Colognesi, M. Nardone
*Double difference technique applied to deep inelastic neutron scattering on eVs spectrometer: Au and U foils.*Nota Interna Dipartimento di Fisica, University of Rome Tor Vergata Rom2F/98
18. R. Senesi, **C. Andreani** and D. Colognesi
Single particle kinetic energy in solid and dense liquid 3He.
Invited paper in Highlights of ISIS Science, The Rutherford Appleton Laboratory - ISIS Facility Annual Report 2000-2001, CCLRC Technical Report RAL-TR-2001-050 Pag 60-61 (2001).