

CURRICULUM VITAE

Name: Mondelli Claudia

Date of birth: November 13th, 1963

Place and country of birth: San Giovanni Rotondo (ITALY)

Nationality: Italian

Marital status: married

Present addresses:

Residence

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Work

TOF/HR Group and CS
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EDUCATION-----

2011: Approved the authorisation to obtain the “Diplome d’Habilitation a Diriger des Recherches” (HDR) at the University Joseph Fourier of Grenoble.

December 2000: Ph.D. in Physics at the Université Joseph Fourier of Grenoble.

Title of the thesis: *”Fluctuations, frustration and dilution in the SrCr_xGa(12-x)O₁₉ compounds. Neutron scattering investigation in a broad dynamical range.”*

Supervisors: H. Mutka, J.F. Legrand.

July 2000: Qualification as Professor of Physics at Educational Dept. of L’Aquila, Italy.

June 1995: Qualification as Member of exams committee (Laboratory course of Physics) at the department of Physics, University of L’Aquila.

July 1991: “Laurea” in Physics (Structure of matter and condensed matter Physics) at the Physics Department of the L’Aquila University.

Title of the experimental thesis: *”Studio della composizione e morfologia di film sottili di leghe di Ni-Cr, depositati per sputtering in ambiente di ossigeno. Effetti dei trattamenti termici.* (Study of the composition and morphology of thin films of Ni-Cr alloys deposited by sputtering in oxygen ambient. Effects of thermal treatment.)”.

Supervisor: Prof. P. Picozzi

PREVIOUS WORKS AND FELLOWSHIPS -----

February 2013 to now: Charged of the promotion of the Italian research activity and of the relationship with the Institut Laue Langevin at the OGG in Grenoble. (Responsabile della promozione dell’Attivita’ italiana e delle relazioni con l’Institut Laue Langevin.) Nominated by the Director of IOM institute.

January 2005, present: CNR scientist at the Institut Laue Langevin (ILL) in the Time of Flight / High resolution Group. Research activity mainly on structure and dynamics of magnetic systems, structure and dynamics in confined and disordered systems: H confinement in porous materials, glasses and spin glasses; nano-materials with interest in Cultural heritage and medical applications: ancient paper, pigments and nano-materials for consolidation and preservation science, micelles for drug delivery, magnetic nanoparticles for imaging diagnostic. Development of new instrumentation, projects and design for USANS options. (OPUS project for ESS)

January 2005 – February 2013 Coordinator of the Italian participation to the ILL project C-Lab for the access of users to the calculation and simulation for neutron spectroscopy.

February 2002- December 2004: Tenure Track contract granted by INFN as scientist on IN13 at ILL. This position was to work on the management of the project of the upgrade of IN13, to support the users, and to simulate the instrument and the neutron guides in order to choose the best solutions for the instrument's upgrade.

2001: INFN Contract for a scientist position on IN13 at ILL to work on the simulation of the neutron guide H24 and of the primary spectrometer of IN13.

July 2000 –December 2000: Contract for a scientist position (Einstellung von wissenschaftlichen Angestellten) for six months at the Crystallography Laboratory at the Erlangen-Nurnberg University (Germany). This position included a status as Long Term Visitor at ILL to work on the project of the development of a new Si(311) monochromator and analyzer for IN16.

October 1998 - June 2000: C.F.R. (Contrat de Formation par la Recherche) at ILL to support my Ph.D. studies. Title of the thesis: "*Fluctuations, frustration and dilution in the $SrCr_xGa_{(12-x)}O_{19}$ compounds. Neutron scattering investigation in a broad dynamical range.*"

Supervisors: H. Mutka (ILL) and Jean Francois Legrand (Joseph Fourier University, Grenoble)

April 1997–September 1998: INFN fellowship to work at the ILL (Grenoble) in the frame of the EC-INFN project for the mobility at the international large scale facilities.

November 1996 – March 1997: Scientist position, granted by INFN in the national project INFN- Superconductivity Section to synthesize powders of high-tech ceramic materials.

May 1996-October 1996: Fellowship granted by INFN in the national project INFN-Superconductivity Section. Title of the scientific project: "*Realization of powders of HTC Superconductors for power applications.*"

July 1996: I participated in the Campaign for the Vesuvio Tomography (TOMOVES96), with a L'Aquila Seismology Group directed by Prof. R. Scarpa. (Granted by the Department of Physics of the L'Aquila University.)

January 1996 – May 1996: Teacher of Physics at the high school.

July 1994 - December 1995: Fellowship granted by INFN in the EC project INFN Pic-Stride Italia 91701618. Title of the scientific project: "*Realization of Rare Earth-Transition Metal thin films. Magnetic and magneto-optic characterization.*"

November 1991 - June 1994: teacher at the high school (subjects: Electronics and Laboratory of Electronics; Electro-technique; Mathematics and Physics).

COMPUTER EXPERTISE-----

Good knowledge of different operating systems (UNIX, VMS, WINDOWS, MAC-OS 9 and X, ...), of several software packages and programs (Microsoft Office, KaleidaGraph, Maple, Excel, Power Point, Adobe Photoshop and Illustrator, QuarkXpress, ...), of the data analysis and ray tracing programs used at ILL (LAMP, INX, SQW, Fullprof, McStas, SAview...) of calculation and modelling (VASP, Material Studio, CERIOUS, nMoldyn ...).

LANGUAGES -----

ITALIAN: mother language.

ENGLISH: fluent.

FRENCH: fluent.

SPANISH: fluent.

RUSSIAN: some notions.

PROJECTS -----

Call	Title/ref	Budget financed for the Lab	Period
Progetto d'interesse internazionale Roadmap ESFRI	OPUS Fondi esterni (Ref. Claudia Mondelli)	50000€	From Nov 2016
Progetto d'interesse internazionale Roadmap ESFRI	OPUS (Ref. Claudia Mondelli)	46000 €	2014-2016
Progetto d'interesse nazionale MIUR Roadmap ESFRI	Dante (Ref. C. Mondelli)	14637€	2015-2016
Ministerio de economia y competitividad (Spain)	MAT2012-33633 (Ref. Carlos Cabrillo)	40950€ (not at IOM)	1.1.2016 to 31.12.2016
Ministerio de economia y competitividad (Spain) SPID201200X0336511V0	Materiales carbonosos nanoestructurados para atrapado y confinamiento molecular	???	2008-2011

From June 2014 up to now

Responsible of the CNR project OPUS at ESS in the frame of CNR-ESS action (Progetto di ricerca di interesse nazionale CNRESS- OPUS previsto nella Roadmap ESFRI) 46Keuro at IOM (Trieste) CDR / GAE 114.000.000 / P0000327 - Resp. C. Mondelli.

From 2011-2014 Participation to the CNR Project: DANTE - Diagnostica Avanzata di Neutroni e Tecnologia per l'ESS/AB (Coordinator Cirino Vasi). Co-responsible (with Luigi Paolasini) for the part: POLARIZZAZIONE. 130 Keuro GAE P0000234 at ISM (Montelibretti, Roma) Responsible of the GAE Elisabetta Agostinelli. Scientific responsible of the Post Doc Andrea Prodi

2010-2013 Participation to the project Ilink from the Spanish Ministry of the Research and Innovation.

P. i-LINK0100 02/11/2010 Coordinator Dr. Carlos Cabrillo, 58 Keuro.

Title of the project "*Materiales carbonosos nanoestructurados para confinamiento y atrapamiento molecular. (Nanostructured carbon-based materials for molecular trapping and confinement)*".

Since 2006-2010 Participation to the project MD.P02.016.001 funded by the Italian Ministry of Education and led by Prof. F. Sacchetti. Title: "*Materia soffice: diffusione elastica ed anelastica di neutroni e raggi-x*"

Since 2006 I promoted a project at ILL in collaboration with the Sample Environment Group of ILL (Dr. Eddy Lelievre-Berna) and with Dr. C. Cabrillo of CSIC (Spain) on: "*Advanced Gas Adsorption Equipment for In-situ Neutron Studies*".

Since 2007 Participation to the ILL project "*Simulation of nanoporous matrices: Classical and "ab initio" Monte Carlo and Molecular Dynamics simulations*" This project involves the ILL Computing Science Group (Dr. Miguel Angel Gonzalez).

2006-2011 Participation to the project MAT2007-65711-C04-01 funded by the Spanish Ministry of Education and led by Dr C. Cabrillo. 173Keuro Title: “*Correlaciones espacio-temporales a nanoescalas: efectos de heterogeneidad, desorden y confinamiento*”

2002-2005 Participation to the project “PRIN” Prot. N. 2002028188_005 funded by the Italian Ministry of Education and led by Dr F. Sciortino. 107Keuro Title: “*Processi vibrazionali e di rilassamento in vetri. Scattering anelastico di neutroni, scattering Raman e studio numerico.*”

From 22-06-1996 to 01-7-1996 Participation to the campaign TOMOVES96 “Campagna di rilevamento sismologico per lo studio tomografico del Monte Vesuvio, Napoli”. International campaign (Italia, Francia, Svizzera e Inghilterra). Granted by Dipartimento di Fisica dell’Universita de L’Aquila, under the responsibility of Prof. R. Scarpa.

ACADEMIC SUPERVISION-----

From May to October 2019 Supervisor and tutor of Shojane Ragou student at University of Paris Sud XI Title: *Neutron study of kinetic of absorption of nanoparticles of earth-alkaline hydroxides in ancient waterlogged wood*

From April to October 2018 Supervisor and tutor of Sandro Zorzi student at University Ca’Foscari of Venice, Title: *The effect of production techniques on historical ceramic morphology* University Ca’Foscari of Venice (Present position: PhD student at the University of Venice)

From September to December 2017 Supervisor and tutor of Nader Sfar Hancha student at University Ca’Foscari of Venice, Title: *Effect of the synthesis methods on the properties of earth-alkaline hydroxide nanoparticles for innovative applications.*

AA 2014-2015 Director of Neutron School of the Italian Neutron Scattering Society “Giornate didattiche SISN (Societa’ Italiana di Spettroscopia Neutronica)” Nominated by members of “Giunta SISN”

From September 2014 to March 2015 Supervisor and tutor of Marco Perfetti, student at the University of Naples for a stage of preparation for the Ph.D. with a project titled: “*Inelastic and quasi elastic neutron scattering applied to magnetic material*” (Present Position: R&D in Polymer Comply Europe- Technical Department)

AA 2013-2014 Director of Neutron School of the Italian Neutron Scattering Society “Giornate didattiche SISN (Societa’ Italiana di Spettroscopia Neutronica)” Nominated by members of “Giunta SISN”

From November 2012 to December 2013 **Tutor** of Demetrio Roberto Cavicchia, PhD student in Physics at the “Université Joseph Fourier”, Grenoble, France. Title of the thesis: *Study by means of neutron scattering of nano-materials used in innovative applications.* (Present position: researcher at the University of Hamburg)

2008-2011 **Tutor** of Emanuela Pusceddu, PhD student in Physics at the “Université Joseph Fourier”, Grenoble, France. Title of the thesis: “*Inhomogeneous magnetism and phase separation in manganese oxides and related materials. A systematic study of structure and dynamics in Mn-site doped perovskites by ab initio calculations compared with neutron diffraction and inelastic neutron scattering results.*” (Present position: Junior Researcher CNR – Biometeorology Institute (Ibimet) Florence, Italy)

2007-2010 **Tutor** of Pierpaolo Romano, PhD student in Physics at Universidad del País Vasco, Bilbao. Title of the thesis: “*Magnetic structure and dynamics of $La_{0.7}Pb_{0.3}(Mn_{(1-x)}Fe_x)O_3$ compounds studied by nuclear techniques*” (Present position: permanent contract as a scientist at Diamond Facility, RAL, UK)

From February 1 to June 30, 2011: **Supervisor and co-tutor** of L. Setti, student at Università di Genova, for a master thesis of the V year of Chemistry on: “*Magnetic correlation in strongly correlated systems*”. Final title: “*Laurea specialistica in Scienza dei Materiali e Ingegneria*”. (Present position: Ph.D. contract at the University of Genova, Italy)

From September 2010 to February 2011: **Supervisor and co-tutor** of Chiara Cavallari of Università di Parma for a Master thesis of the V year of Materials science. Title: “*Dynamic of water in palygorskite and in mixtures with indigo.*” (Positions: Ph.D. contract at ILL and ESRF, France)

From 13 September to 31 October 2010: **Supervisor and co-tutor** of Alessandro Montanaro of Università di L’Aquila for a thesis of the III year of Chemical engineering and materials engineering. Title: “*Studio della cinetica del processo di carbonatazione dell’idrossido di calcio in sospensioni di “nano-limes” per applicazioni nei beni culturali, in campioni preparati con differenti metodologie. Analisi quantitativa.*”

From 13 September to 31 October 2010: **Supervisor and co-tutor** of Saturnino Fabio Santilli of Università di L’Aquila for a thesis of the III year of Chemical engineering and materials engineering. Title: “*Studio della struttura dell’idrossido di calcio in sospensioni di “nano-limes” per applicazioni nei beni culturali, in campioni preparati con differenti metodologie.*”

From September to December 2009: **Supervisor and co-tutor** of Alessandro Magazzù of Università di Messina for a Master thesis of the V year of Physics. Title: “*Dynamic water in confined systems*” (Position: Ph.D. contract at the University of Massina, Italy)

From May to October 2007: **Supervisor and co-tutor** of Antonio Benedetto of Università di Messina for a Master thesis of the V year of Physics. Title: *Simulation Studies of PolyEthylene Glycols Pure, in Aqueous Solutions and in Presence of Bioprotectants*, (Present position: Fellow, School of Physics, UCD, Dublin, Ireland)

From March to May 2007: **Supervisor and co-tutor** of Valeria Conti-Nibali of Università di Messina for a Master thesis of the V year of Physics. Title: “*Study by molecular dynamics of lipid membranes*”

From May to June 2004: **Supervisor and co-tutor** of Elena Ferraro of Università di Palermo for a Master thesis of the V year of Physics. Title: “*Scattering quasi elastico in differenti tipi di semi idratati*”

From June to July 2004: **Supervisor and co-tutor** of Yuri Gerelli of Università di Parma for a Master thesis of the V year of Physics. Title: “*Dinamica atomica del glucosio studiata mediante diffusione elastica di neutroni*” (Present position: researcher at the Università Politecnica delle Marche)

From June to July 2004: **Supervisor and co-tutor** of Riccardo Campari of Università di Parma for a Master thesis of the V year of Physics. Title: “*Dinamica atomica di composti polisaccaridi tramite diffusione elastica di neutroni*”

From March 2003 to July 2004: **Supervisor and co-tutor** of P. Romano, student at Università di Roma “La Sapienza”, Title obtained: “*Laurea*” in Physics equivalent to a master II. Title of the thesis : “*Neutron spectroscopy for the examinations of phase transitions in CMR manganites*” ” (Present position: permanent contract as a scientist at Diamond Facility, RAL, UK)

MAIN TEACHING ACTIVITY.....

March, 2020: **Lectures to PhD students** about application of neutron techniques to Earth Science and environment in the frame of the course “*Méthodes physiques de caractérisation des solides en Sciences de la Terre et de l’Univers*” at the Maison de Géosciences at the University Joseph Fourier, Grenoble, France.

February 2019: **Lectures to PhD students** about application of neutron techniques for PhD students of the PhD program in Science and technology of Bio and Nanomaterials” University Ca’Foscari of Venice and University of Trieste

May, 2016: **Lectures to PhD students** about application of neutron techniques for PhD students of the PhD program in Science and technology of Bio and Nanomaterials” University Ca’Foscari of Venice and University of Trieste

February, 2016: **Lectures to PhD students** about application of neutron techniques to Earth Science and environment in the frame of the course " Méthodes physiques de caractérisation des solides en Sciences de la Terre et de l'Univers" at the Maison de Géosciences at the University Joseph Fourier, Grenoble, France.

May, 2015: **Lectures to PhD students** about application of neutron techniques for PhD students of the PhD program in chemistry University of Venice (Italy)

May, 2015: **Lectures to PhD students** about application of neutron techniques for PhD students of the PhD program in Molecular science at the University of Padova (Italy)

June, 13-22 2015 **Director** of XII Neutron School of the Italian Neutron Society (SISN) GD2015

September, 13-22 2014 **Director** of the XI Neutron School of the Italian Neutron Society (SISN) GD2014.

From March 31 to April 4 2014: **Lectures to PhD students** about application of neutron techniques to Earth Science and environment in the frame of the course " Méthodes physiques de caractérisation des solides en Sciences de la Terre et de l'Univers" at the Maison de Géosciences at the University Joseph Fourier, Grenoble, France.

March, 20 2014 **Lectures for PhD student** in the frame of the Session A Practicals (Applications to Physics and Chemistry of Condensed Matter) of the European neutron School HERCULES at ILL, Grenoble, France. "*Data analysis of low temperatures dynamics in amorphous systems*"

June 26, 2013 **Lecture** on magnetism for PhD and Master students for the X SISN Neutron School of the Italian Neutron Society GD 2012, San Giovanni in Valle Aurina, Italy

June 27, 2012 **Lecture** for PhD and Master students for the IX SISN Neutron School of the Italian Neutron Society GD 2012, San Giovanni in Valle Aurina, Italy "*Introduction to the study of structure and dynamic of magnetic systems by neutron techniques*"

October, 20-21, 2011: **Lectures to PhD students** about application of neutron techniques to material science at the Università di Genova, Italy; (6 hours); in the frame of the Doctoral school of "Scienza e Tecnologia della Chimica e dei Materiali" (Science and technology of chemistry and materials).

June, 25-30, 2011: **Lectures to PhD students** "Computer simulation for neutron scattering" for the VIII SISN neutron school at San Giovanni in Valle Aurina, Italy.

March 7-11, 2011: **Lectures to PhD students** about application of neutron techniques to material science at the Università dell'Aquila, Italy, in the frame of the Doctoral school: "Processi chimici e biotecnologici" (Chemical and biotechnological processes) invited by Prof. G. Taglieri.

June 25-27, 2009: **Lectures to PhD students** on magnetism for the VI SISN neutron school at ILL, Grenoble, France.

June 27-29, 2005: **Lectures to PhD students:** "*Neutrons and magnetism: from fundamental interactions to new applications*" II School of SISN (Società italiana di spettroscopia neutronica) Sirolo, Italy.

April 12, 2005: **Lectures** for high school students in the frame of the project of Ministry of Education for the International year of Physics. Title of Lectures: "La fisica alle frontiere dell'avventura umana: la scienza dei nuovi materiali" at the Istituto Magistrale "Maria Immacolata" San Giovanni Rotondo, Italy, invited by the Director of the School.

March 2003: **Lectures to PhD students** about neutron spectroscopy at the Facultad de Ciencias, Universidad de Zaragoza, Spain. Invited by the PhD school responsible Dr. J Campo. "*Study of frustrated systems and magnetic clusters by neutron scattering.*"

November 2002: **Lectures to PhD students** about neutron spectroscopy (6 hours) at the Università di Napoli 13-14-15th

of November 2002, invited by the PhD school director Prof. U. Tagliacozzo.

1996-97: **Teaching assistant** for the 2nd and 4th year Laboratory course of the Engineering degree "Instrumental analysis and material control", about techniques of material characterization, at Department of Chemical, Chemical Engineering and Materials (University of L'Aquila).

1994-95: **Teaching assistant** for the 2nd year of the Physics degree in the Laboratory course concerning the experiments in electromagnetism and optics, at Department of Physics (University of L'Aquila).

GENERAL SEMINARS AND CONFERENCES -----

2019 June 30-jly 5: "The effects of manufacturing processes on historical ceramic morphology studied by Small Angle Neutron Scattering" European Conference of Neutron Scattering ECNS2019, Saint Petersburg, Russian

2018 May 23-25: "The effects of manufacturing processes on historical ceramic morphology studied by small angle neutron scattering" **Invited seminar** 19th International Seminar on "Neutron Scattering Investigation in Condensed Matter" ISNSICM2018, Poznan, Poland

2018 July 4-6: "The project OPUS for LoKI@ESS and the upgrade of D11@ILL" Congresso internazionale SISN, Parma, Italy

2017 July 9-13: "Modelling Option USANS upgrade: the project OPUS for LoKI@ESS and the upgrade of D11@ILL" Oral talk International Conference of Neutron Scattering, DCC, Daejeon, Korea.

2016 May 12-14 : "Incoherent neutron scattering a very good tool to study the water in clay and in hybrid materials" **Invited seminar** 18th International Seminar on "Neutron Scattering Investigation in Condensed Matter" ISNSICM2016, Poznan, Poland

2016 from June 29 to July 1: "OPUS OPTION USANS @ESS" **Invited seminar** Congresso internazionale SISN 2016 Ancona, Italy

2015 30 of August to 4 of September: The maya blue: an ancient hybrid material investigated by neutron scattering **Invited talk** European Conference of Neutron Scattering ECNS2015 Saragozza, Spain

2014 November, 24-25: Magnetism vs large scale facilities, conference organised by the Italian Society of Magnetism **Invited talk:** "Neutrons at ILL. Investigating magnetism with neutrons"

2014 November 7: Strategie comuni per lo sviluppo dell'In Kind italiano a ESS. Oral talk sessione Progetti italiani per ESS: OPUS.

2014 July, 3-4: SISN2014 meeting of the Società Italiana di Spettroscopia Neutronica, Napoli, Italy.

2014 June 30: Roadshow at the Università Milano Bicocca, Milano (Italy)
Invited talk: Neutron probe for geochemistry and environment.

2014 June, 22-25: VII SETN ((Sociedad Española de técnicas neutrónica), Pamplona, Spain.
Invited talk: Hybrid compounds of interest in cultural heritage studied by neutron scattering

2013 July 7-11: "Role of water in structural changes in palygorskite during the formation of Maya blue studied by neutron scattering" **Keynote** 15th International Clay Conference 7-11 Luglio 2013 Rio de Janeiro, Brasil. Symposium water mobility in reference and real clays.

2013 February 19: "Investigating magnetism with neutrons" **Invited seminar** at CNR-ISM Montelibretti, Roma, Italy from the Director of the Institut Prof. Dino Fiorani.

2013 September, 9-13: Italian National Conference on Condensed Matter Physics (Including Optics, Photonics, Liquids, Soft Matter), Milan (Italy).

2013 September, 11-12: SISN2013 meeting of the Società Italiana di Spettroscopia Neutronica, Milan (Italy).

2013 July, 8-12: International Conference of Neutron Scattering ICNS, Edinburgh, UK.
Poster: "Neutron beam polarization and focusing by beam periodic magnetic field"

2012 September 19-21: IKON3 (Third In-Kind Contributions Meeting for Neutron Science for ESS, Lund (Sweden).

2012 June: SISN2012 meeting of the Società Italiana di Spettroscopia Neutronica, CNR Firenze, Italy.

2011 October 20: "Formation of Hybrid compounds of interest in cultural heritage monitored by neutron scattering". **Invited seminar** at the University of Genova, Italy.

2011 March 14: "What neutrons can do for us: application to new materials." **Invited seminar** at the Università' de L'Aquila, L'Aquila, Italy.

2011 July, 17-22: 5th European Conference on Neutron Scattering, Prague, Czech Republic.

2010 September: IOM Workshop, September 31 to October 1, Trieste, Italy. **Oral talk** Science of the OGG group in Grenoble **Poster:** Computing lab at ILL: simulation for neutrons data **Poster:** "Study for materials for cultural heritage by neutron scattering and synchrotron radiation"

2010 June: SISN2010 meeting of the Società Italiana di Spettroscopia Neutronica, June 22-24, CNR Roma, Italy.

Invited talk 1: "Study of palygorskite clay and maya blue by neutron scattering"

Invited talk 2: IN13 an high resolution energy backscattering spectrometer: a CRG dedicated to biological studies"

2010 June 21: Giornata for the European Spallation Source at the Università Roma Tre Roma, Italy

2010 June: SEA-CSSJ-CMS trilateral meeting on clays, June 8-10, Seville, Spain.

2010 March: Symposium HERCULES XX March 25-26 Minatec, Grenoble, France

2009 October: Conferenza Nazionale di Magnetismo October 27-29, 2009, Roma, CNR, Italy **Invited talk:** "Neutrons for magnetism"

2008 September: IV SETN ((Sociedad Española de técnicas neutrónica) September 8-10 Sant Feliu de Guixols, Girona Spain

2008 May: Workshop on Fe-based layer superconductor, 14th of May, CNR, Roma, Italy.

2008 December 17: "Neutrons for condensed matter" **Invited seminar** at the Università' de L'Aquila, L'Aquila, Italy.

2007 May: Conservation Science 2007 International Conference on Cultural Heritage Conservation, May 10-11, Politecnico di Milano, Milano, Italy

2007 April: D7 user meeting. Polarised Neutron Scattering, April 26-27, Institut Laue Langevin, Grenoble, France.

2007 February: Workshop of Magnetic Properties of Manganites, February 22, LAMIA Genova, Italy. **Invited talk.** Magnetic investigations in manganites and strongly correlated systems by neutron

scattering

2006 June 16: "Neutrons for material science" **Invited seminar** at Donostia International Physics Center, San Sebastian, Spain.

2006 October: Bionutron international Conference, October 8-10, Taormina Italy.

2006 August 3-4: Excitation group of ISIS usermeeting. The Cosener's House, Abingdon, UK

2006 June: SISN2006 meeting of the Società Italiana di Spettroscopia Neutronica, June 29 to June 30, Sirolo, Italy

2005 November: ICNS05, International Conference of Neutron Scattering, November 25 to December 2, Sydney, Australia .

2005 June: SISN2005 meeting of the Società Italiana di Spettroscopia Neutronica, June 30 to July 1, Sirolo, Italy. **Invited talk.**

2005 January 13: Jornada monográfica sobre técnicas neutrónicas aplicadas a materiales cerámicos y vidrios, Instituto de Cerámica y Vidrio (CSIC), Madrid, Spain. **Invited talk:** "Estudios de materiales cerámicos magnéticos - vidrios y líquidos de espín - por técnicas neutrónicas"

2004 September: II Reunión Nacional de SETN (Sociedad Española de técnicas neutrónica" and XV Symposium del Grupo Español de Cristalografía, September 20-25, Puerto de la Cruz, Tenerife, Spain.

2004 September: N2M2 Second workshop of neutrons and numerical methods, September 14-18, Grenoble, France

2004 June: INFMeeting, June 8-10 Genova, Italy. **Oral talk:** The backscattering spectrometer IN13 at ILL: present improvements and perspectives.

2003 March 24: "Study of frustrated systems and magnetic clusters by inelastic neutron scattering and polarised neutron analysis." **Invited seminar** at Instituto de Ciencia de Materiales de Aragon, at Zaragoza, Spain.

2003 March 26: "Primera jornada científico-tecnológica sobre la aplicación de instrumentación avanzada en ciencia e ingeniería de materiales": Exploración de la materia mediante neutrones" at Pamplona, Spain.

Invited talk: "Neutron scattering for study magnetic frustrated systems and magnetic clusters".

2002 October: *Reunion nacional de usuarios de tecnicas de neutrones.* October 3-4, San Sebastian, Spain.

"New IN13 at ILL: redesign and improvement of a backscattering spectrometer dedicated to the study of the dynamics of biological systems"

2002 September: QENS2002 6th International Conference on Quasi-elastic Neutron Scattering, September 4-7 Potsdam, Berlin Germany.

Oral talk: "Improvement program for IN13: a backscattering instrument devoted to studies of biomolecular dynamics."

"Molecular dynamics in plastic conducting compounds of polyaniline."

"Temperature dependence of mean square displacement by IN13: a comparison between trehalose and sucrose water mixtures."

2002 June: 5th Condensed Matter Conference INFMeeting, June 24-28 organized by the INFN, Bari Italy.

Oral talk: "Upgrade of IN13: state of the art"

2002 May: JDN11 Journées de la Diffusion Neutronique, May 25-31, Presq'île de Giens, Var, France.

"New neutron guides at ILL. What is the best choice for IN13?"

"A la recherche d'un paramètre d'ordre non-conventionnel dans un antiferromagnétique frustré: l'apport de la méthode Monte-Carlo inverse"

2002 May: European Conference ESS, May 16-17 Bonn, Germany.

“Search for unconventional order parameters in a frustrated antiferromagnet based on the Reverse Monte Carlo Method.”

2002 May: SISN 2002 satellite of meeting of European Conference ESS. Meeting of the Società Italiana di Spettroscopia Neutronica, 17 Bonn, Germany.

2002 April: Workshop INFN, April 18-19 Genova, Italy.

Oral talk: *“Neutron scattering study of phase transitions in disordered magnetic systems: spin glasses and spin liquids”*

2001 November: SISN2001 meeting of the Società Italiana di Spettroscopia Neutronica 8-10, Milazzo, Italy.

Invited talk: *“Simulations to project and to upgrade instruments for neutron scattering”*

2001 September: ICNS 2001 September 9-13 Munich, Germany

“Upgrade of the backscattering spectrometer IN13 at ILL”

“Low temperature deviations from expected classical spin configurations in a frustrated system, analysis of dynamic disorder by the Reverse Monte-Carlo method.”

2001 June: 4th Condensed Matter Conference INFMeeting, June 18-22 organized by the INFN at Roma, Italy

“Spin configurations in frustrated systems studied by Reverse Monte Carlo Method (RMC).”

2001 April: ILL Millenium Symposium and European User Meeting 6-7 April at Grenoble, France.

“Polarised neutron study of dynamical correlations in the highly frustrated system $SrCr_xGa_{12-x}O_{19}$.”

“Extended Q-range on the backscattering spectrometer IN16 at ILL”

2001 January: Journées spins quantiques a basse dimension. Grenoble, France.

Oral Talk: *“Dynamique quasi-élastique et gel de spins dans le composé frustré $SrCr_xGa_{12-x}O_{19}$.”*

2000 November: SISN2000 - meeting of the Società Italiana di Spettroscopia Neutronica, Roma Italy.

Invited talk: *“Neutron scattering application to the study of metal nano-clusters in ion implanted fused silica glass.”*

2000 May 11-15: HFM2000 – Highly Frustrated Magnetism 2000, University of Waterloo, Canada.

Oral talk: *“Neutron scattering studies of the kagome system*

$SrCr_xGa_{12-x}O_{19}$. Effects of magnetic dilution and dynamic response in a broad E-T range.”

1999 December 13: *“Magnetic dilution in strongly frustrated system $SrCr_xGa_{12-x}O_{19}$. Neutron scattering study of magnetic response.”*

Invited seminar at the Università degli Studi di Parma, Dept. of Physics, Italy.

1999 February 9: *“Neutron scattering study of magnetic response of the kagomé system $SrCr_xGa_{12-x}O_{19}$.”*

Invited seminar at CNRS Laboratoire Louis Neel, Grenoble.

1999 January 10: *“Spin glass systems.”* **General seminar** at ILL.

1999 November 15-17: SISN99 - meeting of the Società Italiana di Spettroscopia Neutronica, Genova Italy.

Invited talk: *“Effects of magnetic dilution on the strongly frustrated $SrCr_xGa_{12-x}O_{19}$ kagomé compounds.”*

1999 June: 2nd Condensed Matter Conference INFMeeting, organized by the INFN at Catania, Italy.

1999 May: JDN 99 - Journées de la Diffusion Neutronique, organized by Société Française de la Neutronique at La Grande Motte, France.

1998 November: SISN98 - meeting of the Società Italiana di Spettroscopia Neutronica, Perugia Italy. Invited talk: *Neutron scattering study of magnetic response of the kagomé system SrCr₈Ga₄O₁₉*

1998 September: PNCMI'98 - Polarized Neutron Conference, organized by ILL at Grenoble, France.

1998 August: 6^{eme} Journées de la Matière Condensée and 17th General Conference of the Condensed Matter Division EPS, Grenoble France.

1998 August: EPDIC6 - Powder diffraction International Conference, organized at Budapest, Hungary.

1998 June: First Condensed Matter Conference INFMeeting, organized by the INFM at Rimini, Italy.

1998 May: JDN 98 - Journées de la Diffusion Neutronique, organized by Société Française de la Neutronique at Albé, France.

1998 January: ILL workshop "*Journées spins quantiques a basse dimensions*", ILL Grenoble, France.

1996 October: SATT8 - 8th National Conference Superconduttività ad Alta Temperatura di Transizione, organized by INFM-Section Superconductivity at Como, Italy

1996 September: 10th National Conference of Catalysis and 11th National Conference of Industrial Chemistry, organized at L'Aquila, Italy.

1996 September: AIMAT - 3rd National Conference, organized by Associazione Nazionale Materiali (AIMAT) at Napoli, Italy.

1995 May: 2nd National Conference on "*Materiali nanofasici*", organized by Gruppo Nazionale di Struttura of CNR, at Roma, Italy.

INTERNATIONAL BOARDING, REVIEW PANELS AND COMMITTEES:

From 2017 up to now: Member of proposal review panel for Neutron Science at the Large Scale Facility Oak Ridge National Lab. (USA) - Chemical Spectroscopy Subcommittee. Invited by Gabrielle Boudreau Group Leader, User Programs and Outreach Neutron Sciences Directorate

2017 Member of the panel for the evaluation of research proposal about "Proposte Assegni di ricerca 2017 for the University of Calabria" (CINECA)

2016: Chair of evaluation committee for a Post-Doc position at OGG, Grenoble. Ref. IOM AR 007/2016 TS

2015: Chair of evaluation committee for a Post-Doc position at OGG, Grenoble. Ref. IOM AR 005/2015 TS

From November 2012 to April 2016: Member of proposal review panel for Neutron Science at the Large Scale Facility Institut Laue Langevin (FR) - College 1, Applied Physics, Instrumentation and Techniques Subcommittee. Invited by the ILL's Director

2015 August- September Member of the International boarding for the ECNS2015 International Conference of Neutron Scattering 2015, Saragoza, Spain

2015 June- July CNR representative and Member of the CNRESS comitate for the coordination of the Italian In Kin project to the ESS.

2014 Member of evaluation committee for a Post-Doc position at OGG-LISA, Grenoble. Ref. IOM AR 007/2014 TS Prot. n. protocollo IOM 0004942 Data 9.12.2014

2012 April **Member of evaluation committee** in the frame of the project DANTE for the Italian participation at the European Spallation Source for a position of post-doc “ASSEGNO DI RICERCA SENIOR –n. ISM/ASS/001/2012/MLIB “ to work under my responsibility at the OGG, Grenoble, France.

2011 October 21 **Member of evaluation committee** of the Master II (laurea specialistica) thesis in Material science and engineering of the students: L. setti, A. Sala, R. Spotorno and of the Master I thesis of the student E. Solari at the “Universita’ di Genova’.

2011 May 16: **Member of evaluation committee**, for the discussion of a PhD thesis in Physics of E. Pusceddu at the ‘Universite J Fourier” Grenoble, France. Title of thesis: *"Propriétés structurelles et magnétiques dans les composants de manganese $Ln_{0.5}Ca_{0.5}MnO_3$ ($Ln=La, Pr, Nd, \dots, Lu$). Un etude systématique par diffusion des neutrons et calculs ab initio."* (Present position: CNR post doc at the Institute of Biometeorology in Florence).

2010 December: **Member of evaluation committee** for the discussion of a PhD thesis in Physics at Universidad del País Vasco, Bilbao of P. Romano. Title of the thesis: *"Magnetic structure and dynamics of $La_{0.7}Pb_{0.3}(Mn_{(1-x)}Fe_x)O_3$ compounds studied by nuclear techniques"* (Present position: permanent contract as a scientist at Diamond Facility, RAL, UK)

2008 June 16: **Member of evaluation committee** of P. Lázpita Arizmendiarieta for the discussion of a PhD thesis on: *"Transiciones magneticas y estructurales en aleaciones ferromagneticas con memoria de forma"*, Universidad del País Vasco, Bilbao. (Present position: contract as scientist at the University of Bilbao, Spain)

From 2001 to 2006 Member as secretary of College of proposal review panel for Neutron Science at the Large Scale Facility Institut Laue Langevin (FR) - College 6, Structure and dynamics of disordered systems.

2004 May 5, **Member of evaluation committee** for the selection of a INFM Tenure Track n. 885 del 30 marzo 2004

2003 Publication Boarding of ICM03 International Conference of Magnetism 2003, Roma, Italy

AA 1994-95 **Member of committee** for the final examination of the university courses in **“Esperimenti II”** of the second year in Physics of the department of Physics of the “Università de L’Aquila”

REFEREE for international conferences:

- a. ICM03 (International Conference of Magnetism 2003), Roma, Agosto 2003
- b. ICNS05 (International Conference of Neutron Scattering) tenutasi a Sidney, Australia dal 25 Novembre al 2 Dicembre 2005.

SUPPORT TO THE USERS as local contact on several instruments at ILL since 1999.

Invited scientists

- 1) Prof. Valeria Arrighi, Herriot-Watt University Edimburgh May 2016 funded by ILL
- 2) Prof Elti Cattaruzza University Ca’ Foscari of Venice, Italy July 2017 funded by ILL
- 3) Dr. Carlos Cabrillo, IEM-CSIC, Madrid, Spain, July 2019 funded by ILL
- 4) Prof Elti Cattaruzza University Ca’ Foscari of Venice, Italy July 2019 funded by ILL

SCHOOLS ATTENDED AND PERMANENT FORMATION-----

13-14 December 2012: “Corso di formazione generale del CNR (Delibera CdA n.13 del 21/02/2012 CNR-SPIN): tecniche di microscopie innovative e a risoluzione atomica” At the Department of Physics and technology of materials University of Genova

June 2002: Course of scientific communication organised at the Université Joseph Fourier of Grenoble, France. June 12-14.

September: 6th Oxford Summer School on Neutron Scattering, Oxford UK, 13th –23rd September 1999.

1999 May: Ecole thématique de la Diffusion Quasi-elastique des neutrons, organized by Société Française de la Neutronique at La Grande Motte, France.

1998 May: Ecole thématique de la diffusion de neutrons aux petit angles, organized by Société Française de la Neutronique at Albé, France.

1998 February, March: **HERCULES** School - Higher European Research Course for Users of Large Experimental Systems: "*Neutron and synchrotron radiation for Physics and Chemistry of condensed matter*", organized at Grenoble. Supported by: Ministère de la recherche Françé, CNRS, CEA, Commission European communities, IESA, ESRF, ILL, LLB, LURE.

1997 September: 16th School of Crystallography: "*Sorgenti non convenzionali in cristallografia: fondamenti e applicazioni.*" (Unconventional sources in crystallography: fundaments and applications.), organized at Perugia by the Associazione Italiana di Cristallografia (AIC).

1995 October: GNSM, 3rd School of Section - Course of Gruppo Nazionale di Struttura della Materia (GNSM): "*Nuovi sviluppi ed applicazioni nel magnetismo.*" (New developments and applications in magnetism) organized by GNSM Division, at Sant'Agnello di Sorrento, Italy.

1995 October: National School of the Condensed Matter Physics, organized by INFM, at Torino (Villa Gualino), Italy.

1994 October: 5th National School of Material Science, organized by INFM and Consorzio Interuniversitario Nazionale di Chimica dei Materiali (INCM), at Ostuni, Italy.

1990 October: National School of the Condensed Matter, organized by GNSM at L'Aquila.

1990 September: GNSM, 2nd School of Section, 12th Course: "*Proprieta' magnetiche della materia: fondamenti, magnetismo di superficie, film e multistrati, tecniche avanzate di indagine.*" (Magnetic properties of matter: fundaments, surface magnetism, films and multilayers, advanced techniques of investigation.), organized by GNSM at L'Aquila.

RECENT AND SELECTED PUBLICATIONS:

G., Taglieri, Valeria Daniele, Ludovico Macera, Ralf Schweins, Sandro Zorzi, Marie Capron, Gilles Chaumat and Claudia Mondelli : *Sustainable Nanotechnologies for Curative and Preventive Wood Deacidification Treatments: An Eco-Friendly and Innovative Approach*. Nanomaterials Volume 10, Issue 9, 1744 (2020)

Perez-Checa, A; Porro, JM; Feuchtwanger, J; Lazpita, P; Hansen, TC; Mondelli, C; Sozinov, A; Barandiaran, JM; Ullakko, K; Chernenko, V: *Role of Fe addition in Ni-Mn-Ga-Co-Cu-Fe ferromagnetic shape memory alloys for high-temperature magnetic actuation* Acta Materialia Vol.196, 549-555 (2020)

Mondelli, C; Zorzi, S; Ricci, G; Galvan, V; Balliana, E; Schweins, R; Cattaruzza, E: *Exploring the Porosity in Ceramics*

at the nm Scale: From Understanding Historical Ceramics to Innovative Materials Design ChemPhyChem Vol. 21, Issue 10, 966-970 (2020)

Taglieri, G; Daniele, V; Mondelli, C: *MgO nanoparticles synthesized starting from an innovative one-step process* JOURNAL OF THE AMERICAN CERAMIC SOCIETY Vol.101, 1780-1789 (2018)

Taglieri, G; Daniele, V; Macera, L; Mondelli, C: *Nano Ca(OH)₂ synthesis using a cost-effective and innovative method: Reactivity study* JOURNAL OF THE AMERICAN CERAMIC SOCIETY Vol. 100, 5766-5778 (2017)

Lazpita, P; Barandiaran, JM; Gutierrez, J; Mondelli, C; Sozinov, A; Chernenko, VA: *Polarized Neutron Study of Ni-Mn-Ga Alloys: Site-Specific Spin Density Affected by Martensitic Transformation* Phys. Rev Lett Vol. 119 N. 155701 (2017)

-Claudia Mondelli, Fabrizio Bardelli, Jenny G. Vitillo, Mathilde Didier, Jocelyne Brendle, Demetrio R. Cavicchia, Jean-Charles Robinet, Laurent Charlet

"Hydrogen adsorption and diffusion in synthetic Na-montmorillonites at high pressures and temperature" International Journal of Hydrogen Energy Vol. 40, Issue 6 2698-2709 (2015)

-Fabrizio Bardelli, Claudia Mondelli, Mathilde Didier, Jenny G. Vitillo, Demetrio R. Cavicchia, Jean-Charles Robinet, Laura Leone, Laurent Charlet *"Hydrogen uptake and diffusion in Callovo-Oxfordian clay rock for nuclear waste disposal technology"* Applied Geochemistry Vol.49, 168-177 (2014)

-F. Fernandez-Alonso, C. Cabrillo, R. Fernández-Perea F. J. Bermejo, M A. González, C. Mondelli, and E. Farhi *"Solid para-hydrogen as the paradigmatic quantum crystal: Three observables probed by ultrahigh-resolution neutron spectroscopy"* Phys. Rev. B 86, 144524 (2012)

-C Mondelli, M Sánchez del Río, MA González, A. Magazzú, C. Cavallari, M. Suárez, E. García-Romero, and P. Romano *"Role of water on formation and structural features of Maya Blue"* Journal of Physics: Conference Series 340 (2012) 012109

- J. Gutierrez, J. M. Barandiaran, F.J. Bermejo, C. Mondelli, P.Romano, P. Fouquet, and M. Monkenbusch *"Evidence for two disparate spin dynamics regimes within Fe-substituted La_{0.7}Pb_{0.2}(Mn_{1-x}Fe_x)O₃, (0 <x< 0.2) colloidal magnetoresistive manganites. Neutron spin-echo measurement"* Phys. Rev. B 76, 184401 (2007)

- M. Missori, C. Mondelli, M. de Spirito, C. Castellano, M. Bicchieri, R. Schweins, G. Arcovito, M. Papi and A. Congiu Castellano *"Modifications of the mesoscopic structure of cellulose in paper degradation"* Phys. Rev. Lett. 97 (2006) 238001

- C. Mondelli, M.A. Gonzalez, F. Albergamo, C. Carbajo, M.J. Torralvo, E. Enciso, F. J. Bermejo, R. Fernandez-Perea, C. Cabrillo, V. Leon and M.L. Saboungi; *"Collective excitations in liquid D₂ confined within the mesoscopic pores of a MCM-41 molecular sieve"* Phys. Rev B, 73 (2006) 094206

- S. Magazù, G. Maisano, F. Migliardo, C. Mondelli *"Mean Square Displacement Relationship in Bioprotectant Systems by Elastic Neutron Scattering"* Biophys. J., 86 May (2004) 3241-3249

- O. Waldmann, T. Guidi, S. Carretta, C. Mondelli and A.L. Dearden *"Fundamental excitations in the cyclic molecular nanomagnet Cr⁸"* Phys Rev. Lett. 91 (2003), 237202.