

Curricula dei candidati per la Commissione Strumentazione e calcolo AIC triennio 2012-2014 (in ordine alfabetico)

Rossella ARLETTI

Dr. Rossella Arletti, Ricercatore non confermato SSD GEO/06
Dipartimento di Scienze Mineralogiche e Petrologiche, Università degli Studi di Torino

La Dr Rossella Arletti si è laureata in Scienze Geologiche presso l'Università di Modena e Reggio Emilia nel 2001 (110/110 e lode) e ha conseguito il titolo di Dottore di Ricerca in Scienze della Terra nel 2005.

Ha usufruito di un contratto per prestazione d'opera e di tre assegni di ricerca annuali presso l'Università di Modena e Reggio Emilia. Nel 2006 ha svolto uno stage di ricerca di tre mesi presso l'European Synchrotron Radiation Facility (ESRF, Grenoble), alla beamline ID21. Dal maggio 2006 al maggio 2007 ha ottenuto una posizione Post-doc presso l'Ecole Nationale Supérieure de Chimie de Montpellier (France) in collaborazione con TOTAL Oil Company. Dal 2008 al dicembre 2010 è stata titolare di un assegno di ricerca presso l'Università di Ferrara finanziato da ENI.

Dal dicembre 2010 è in servizio presso l'Università di Torino come ricercatore nel settore SSD GEO/06 (Mineralogia).

L'attività scientifica della Dr. Arletti si è sviluppata principalmente su studi strutturali in *condizioni non ambiente* (HT-HP) su fasi silicatiche di interesse mineralogico e/o industriale mediante diffrazione X.

Particolare interesse è rivolto allo studio delle modificazioni strutturali indotte dalla pressione in materiali porosi. E' stata proponente di progetti di ricerca approvati e finanziati da laboratori nazionali e internazionali (ELETTRA, ESRF, ILL, ISIS) per analisi di diffrazione X (HT e HP) e neutronica e assorbimento X.

Cinzia GIANNINI

Address(es): 122/O Amendola, I-70126 Bari, Italy E-mail: cinzia.giannini@ic.cnr.it

Date of birth: 14.10.1966

Public Research : Well-established knowledge in crystallography applied to material science, nanomaterials and bionanomaterials. The know-how is on: i) experimental techniques, namely on powder diffraction and high resolution diffraction, specular reflectivity and reciprocal space mapping, with conventional x-ray source, rotating anodes and synchrotron radiation, also with microbeams (microdiffraction), on diffraction by single object with x-ray coherent radiation and holography; ii) methodology (qualitative and quantitative analysis on mixture of powders, Rietveld and Debye techniques to structural, microstructural and morphological analysis of materials). About 100 publications in international journals.

Occupation or position held: Researcher

Main activities and responsibilities: Head of the X-ray Micro Imaging-LAB laboratory (XMI-LAB) and in charge of the CNR institutional activity PM.P04.011 X-ray Diffraction and Imaging for the engineering of nanostructured materials and biological tissues and for the biodiagnostics

Education and training: 15/04/1996: PhD in Physics, University of Bari

Principal subjects/occupational skills covered: Study of the Electronic and Structural properties of semiconductor heterostructures

Scientific awards:

- Keynote speaker @ BioPhotonics and Imaging Conference (BioPIC) 2010, Dublino,

Ireland (Coherent diffractive imaging - from nanometric down to picometric spatial resolution) 18/10/2010 – 21/10/2010

- Keynote speaker @ 2 Meeting of the Italian and Spanish Crystallographic Associations (MISCA2), Oviedo, Spain (MS4 Non single-crystal techniques (powder diffraction, electron diffraction, single particle imaging)) 30/6/2010 - 03/7/2010
- Chair of the microsposium 3 D x-ray diffraction imaging with nanoscale resolution @ 12 European Powder Diffraction Conference, Darmstadt, Germany, 27/8/2010 ad 30/8/2010
 - Review Committee member of the Hard Condensed Matter: Crystals and Ordered Structures @ ESRF – Grenoble, 24/4/2009 - 24/4/2008
- Invited Lecturer @ 9th Biennial Conference on High Resolution XRay Diffraction and Imaging Linz (Austria), 15/9/2008 - 19/9/2008
- Chair of the Microsymposio M32 'Nanostructure Refinement and Solution' @ 21st International Union of Crystallography Congress Osaka-Japan, 23/8/2008 - 31/8/2008
- referee of Physical Review Journals and Reviews of Modern Physics, American Physical Society 2000 - today
- Invited Lecturer @ V European Symposium on X-Ray Topography and High Resolution XTOP 2000, Ustron-Jaszowiec, Polonia 13/9/2000-15/9/2000
- European Synchrotron Radiation Facility (ESRF) Scientific Highlights 2000 (Grenoble) S. Di Fonzo, W. Jark, S. Lagomarsino, C. Giannini, L. De Caro, A. Cedola, M. Müller - X-Ray Diffraction with Nanometric Spatial Resolution - Microfocussing and Imaging Section
- European Synchrotron Radiation Facility (ESRF) Scientific Highlights 1997/1998 (Grenoble) T. Baumbach, C. Giannini, D. Lübbert, R. Felici, L. Tapfer , T. Marschner, and W. Stolz - Strain induced patterning in superlattices comparison of morphological ordering and strain ordering - Applied and Industrial Research Section
- Guest scientist @ Chinese Academy of Science – Beijin (bilater agreement) - 1996
- International Union of Crystallography Young Scientist Award @ XVII IUCr Congress and General Assembly - Seattle - 8 / 17 August, 1996
 - International Union of Crystallography Young Scientist Award @ Interference Phenomena in X-Ray Scattering Conference – Moscow - 14 / 19 August 1995

Teaching and lectures:

- Summer School - The European Commission FP7-funded Research Project Ordered Inorganic-Organic Hybrids using Ionic Liquids for Emerging Applications (ORION) Ostuni - Brindisi
Course title: Xray scattering techniques for morphological and structural characterization of Nanostructured materials- 05/06/2011 - 10/06/2011
- Nanoscience PhD School @ IIT, Genova.
Course title: Introduction to X-ray Imaging and Diffraction as well as Macrocrystallography with applications to nano and bio science 06/09/2010 - 10/09/2010
- Summer School Diffraction at the Nanoscale: Nanocrystals, Defective and Amorphous Materials, @ SLS- Villigen, Switzerland
Course title: Coherent Diffraction Imaging – Basic Introduction Concepts Forward Coherent Diffraction Imaging - Plane and Curved Waves 24/5/2010 - 30/5/2010
- AIC School Scattering Techniques: from microscopic to atomic structures @Camerino.
Course title: Coherent Diffraction Microscopy: Applications X-Ray Microdiffraction Techniques 30/8/2009 - 4/9/2009
- Biophotonic Imaging Summer School - Focus on Nanobiophotonics @ Ballyvaughan, Ireland Course title: X-ray Imaging with a microbea X-ray scanning microscopy Coherent Diffraction Imaging, 24/8/2009 - 28/8/2009
- AIC School Diffrazione di Materiali Policristallini @ Martina Franca.
Course title: Materiali Nanocristallini: Tecniche di Analisi , 26/6/2006 - 30/6/2006

- ICTP School on Synchrotron Radiation and Applications – In memory of J.C. Fuggle and L. Fonda da parte del centro Abdus Salam (International centre for theoretical physics) @ Trieste. Course title: WAXS. Non-crystallographic nanoclusters TUTORIAL: Scattering by nanoclusters 14/4/2004 - 21/4/2004

- Workshop Quantitative X-Ray Diffraction Analysis – EuroClay 2003 , 23/6/2003 - 28/6/2003

- PhD School @ Corso di Dottorato di Ricerca in Chimica dei Materiali Innovativi, Università degli studi di Bari.

Experiment@synchrotron light source:

- SCANNING SAXS & WAXS ANALYSIS OF OSTEOCALCIN COLLAGEN FIBER ORIENTATION IN HUMAN CORTICAL BONE. EFFECT OF DIFFERENT SKELETAL DISEASES. SLS Proposal Code 20100956 25/5/2011 to 28/05/2011

- PHASE RETRIEVAL FOR NOISY IMAGES AND FOR STRONGLY ABSORBING OBJECTS ELETTRA Proposal Code 20100308 14/09/2010 to 19/10/2010

- A PHANTOM STUDY WITH COMBINED ABSORPTION AND PHASE CONTRAST IMAGING FOR DEDICATED PHASE RETRIEVAL STUDIES ELETTRA Proposal Code 20095352 26/01/2010 – 31/01/2010

- COHERENT DIFFRACTION EXPERIMENTS WITH CYLINDRICAL WAVEFIELDS USING PLANAR WAVEGUIDES ESRF Proposal Code MI- 918 18/06/2008 - 24 /06/ 2008

- COHERENT X-RAY DIFFRACTION IMAGING IN FOURIER AND FRAUNHOFER REGIMES WITH WAVEGUIDES ESRF Proposal Code MI- 877 02 /05/ 2007 - 07 /05/ 2007

- X-RAY MICRODIFFRACTION FOR ENGINEERED BONE STUDY: SCAFFOLD RESORPTION ANALYSIS ESRF Proposal Code MD- 25 13 /09/ 2006 - 18 /09/ 2006

- X-RAY MICROSCOPY AND MICRODIFFRACTION EXPERIMENTS WITH X-RAY WAVEGUIDES ESRF Proposal Code MD- 490 03 /05/ 2001 - 11 /03/ 2002

- NANODIFFRACTION FOR LOCAL RESIDUAL STRESS ANALYSIS IN SEMICONDUCTORS ESRF Proposal Code HS- 977 08 /09/ 1999 - 24 /01 /2000

- STRAIN DISTRIBUTION AND INTERFACE MORPHOLOGY IN SYMMETRICALLY STRAINED (GaIn)As/GaAs/Ga(InP)/GaAs SUPERLATTICES GROWN ON OFF-ORIENTED SUBSTRATES ESRF Proposal Code SI- 419 07 / 10/ 1998 - 10 / 10/ 1998

- X-RAY DIFFRACTION AND GRAZING INCIDENCE DIFFRACTION ON GRADED Si_{1-x}Ge_x BUFFER LAYERS GROWN ON PATTERNED SUBSTRATES ESRF Proposal Code HS- 575 25 / 03 / 1998 - 30 / 03 / 1998

- X-RAY DIFFRACTION AND STANDING WAVES ON Si_{1-x}Ge_x THIN FILMS Laboratorio Nacional de Luz Sincrotron (LNLS) – Campinas - Brazil 25 / 01 / 1998 - 11 / 02 / 1998

- STRUCTURAL ORDERING AND INTERFACE MORPHOLOGY IN SYMMETRICALLY STRAINED SUPERLATTICES GROWN ON OFF-ORIENTED ESRF Proposal Code SI- 316 06 / 09 / 1997 - 13 / 09 / 1997

- STRUCTURAL ORDERING OF MONO- AND BI-LAYER (AlGaIn)(GaInSb) AND (AlSb)(GaSb) SUPERLATTICES BY X-RAY STANDING WAVES ESRF Proposal Code SI- 234 08 / 10 / 1996 - 14 / 10 / 1996

- STRAIN RELIEF INVESTIGATION OF MBE-GROWN ZnSe/GaAs (100) HETEROSTRUCTURES BY X-RAY SURFACE DIFFRACTION LURE Proposal code SD 108 Centre Universitaire Paris Sud – France

- GIXD MEASUREMENTS OF THIN ORGANIC LANGMUIR-BLODGETT FILMS LURE Proposal code SD 106 Centre Universitaire Paris Sud - France

- ETUDE PAR ONDES STATIONNAIRES DE InAs/GaAs LURE Centre Universitaire Paris Sud - France

- X-RAY STANDING WAVES MEASUREMENTS OF ALUMINUM METAL/SILICON INTERFACE Brookhaven National Laboratory, National Synchrotron Light Source, New York April 1991 - May 1991

Gabriele GIULI

Giuli Gabriele, nato a Macerata il 18/11/1970, coniugato, quattro figli, cittadinanza Italiana.

Sede: Scuola di Scienze e Tecnologie-Sezione di Geologia, Università di Camerino; Via Gentile III da Varano; 62032 Camerino (MC). e-mail: gabriele.giuli@unicam.it

TITOLI:

- Laurea con lode in Scienze Geologiche (Università di Camerino, 13/4/1994);
- Dottorato di Ricerca in Mineralogia e Cristallografia (X ciclo, Università di Firenze, 22/5/1998);

POSIZIONE ATTUALE:

Ricercatore Universitario nel settore scientifico disciplinare GEO06 (Mineralogia) presso la Scuola di Scienze e Tecnologie dell'Università di Camerino, dall'1-3-2008.

CAMPI DI RICERCA:

- Struttura di vetri silicatici
- ruolo cristallografico degli elementi minori ed in traccia nei minerali
- Spettroscopia di assorbimento dei raggi-X

PERIODI TRASCORSI PRESSO ISTITUZIONI STRANIERE:

- 5 mesi trascorsi a Bristol (UK), presso il "Dept. of Geology", per lavoro sperimentale e teorico concernente la tesi di laurea (1/3/93-31/7/93);

- 6 mesi trascorsi a Bayreuth (D), presso il "Bayerisches Geoinstitut", per la sintesi di silicati e vetri silicatici ad alta pressione (1994/1996)

- 5 mesi trascorsi a Stanford (USA) presso il sincrotrone SSRL per la raccolta di dati XAS alle soglie

K di elementi leggeri (1995/2003);

- 3 mesi trascorsi a Grenoble (F) presso European Synchrotron Radiation Facility per misure sperimentali XAS (1999-2007)

ALTRE INIZIATIVE DIDATTICHE E SCIENTIFICHE

- responsabile dell'internazionalizzazione presso la scuola S&T, Università di Camerino (dal 2009);

- revisore dei conti presso la Società Italiana di Mineralogia e Petrologia (dal 2009);

- Organizzazione della scuola AIC 2011 Crystallography beyond diffraction (Camerino, Luglio 2011).

- local organising committee e segreteria del convegno nazionale della Società Italiana Luce di Sincrotrone (SILS) (Camerino, 2004, 2009) e del convegno internazionale XAFS (Camerino, 2009);

- organizzazione delle mostre: "La natura del colore" (2010-11), "Viaggio nel silicio" (2006-7), e "Meteoriti e asteroidi" (2001), presso il polo Museale d'Ateneo dell'Università di Camerino.

ATTIVITÀ DI REVISORE SCIENTIFICO

per le riviste ISI: American Mineralogist, Geochimica et Cosmochimica Acta, Chemical Geology, Meteoritics & Planetary Science, Physics and Chemistry of Minerals, Neues Jahrbuch für Mineralogie.

PUBBLICAZIONI:

45 articoli su riviste ISI, circa 390 citazioni, H=12

Doriano LAMBA

Place, Date of Birth Caracas (Venezuela), 10th January 1955

Address : Istituto di Cristallografia - C.N.R. U.O.S di Trieste, Area Science Park – Basovizza, S.S.14, Km. 163.5 I-34149 Trieste, Italy ; E-mail doriano.lamba@ts.ic.cnr.it;

Education

1980 PhD in Chemistry *cum laude*, University of Rome "La Sapienza", Roma, Italy.

1985-1988 Postdoctoral Research Associate in Carbohydrate Chemistry, Astbury Department of Biophysics, University of Leeds, Leeds, UK

1993-1995 Postdoctoral Research Associate in Protein Crystallography, Abteilung für Strukturforschung, Max Planck Institut für Biochemie, Martinsried bei München, Germany

Professional Experience

1983-1997 Scientist at IC-CNR, Monterotondo (Roma), Italy.

1997-2005 Assistant to Prof. Arturo Falaschi, Director of the International Centre for Genetic Engineering and Biotechnology, Trieste, Italy, for the Structural Biology Programme.

1997-2005 Scientist at IC-CNR Trieste Outstation and XRD-1@ELETTRA Beamline scientist, Trieste, Italy

2000-2001 Scientific Consultant at the Abdus Salam International Centre for Theoretical Physics, Trieste, Italy; Evaluation of the project "Third World Academy of Science - Research Grants" sponsored by SIDA- SAREC, Sweden.

2005-2010 Team leader: Crystallography of Biomolecules and Functional Studies – Enabling Technologies for Drug Discovery, Molecular Design Dept., CNR

2006 Senior Scientist at IC-CNR Trieste Outstation, Trieste, Italy

2010- Deputy Head of the IC-CNR Trieste Outstation, Trieste, Italy

National & International Appointments

1997-2005 Member of the Research Grant Committee "Collaborative Research Programme" of the International Centre of Genetic Engineering and Biotechnology, Trieste, Italy.

1997- *Ad hoc* Reviewer for the Ministero dell'Istruzione, dell'Università e della Ricerca, Italy

1998 Co-Director Workshop on "Structure of Biological Macromolecules" organized by ICGEB, ASICTP and ISAS, 16th –27th March 1998, Trieste, Italy.

1999 Co-Chairman of the Microsymposium: "Frontiers in Biocrystallography" at the International Conference "Biocrystallography for Medicine and Biotechnology", 16th –18th December 1999, Roma, Italy.

1999-2002 Member of the Research Grant Committee "Agenzia 2000" (Biocrystallography) of Consiglio Nazionale delle Ricerche, Italy

1999-2003 Member of the Research Grant Committee "Chemistry & Biology" of the Third World Academy of Sciences, Trieste, Italy

2000 Chairman of the Microsymposium: "New Frontiers in Biocrystallography" at the XXX Congresso Nazionale – Associazione Italiana di Cristallografia, (19th- 22nd September 2000), Martinafranca, Italy

Member of the Organizing Committee: Challenges in Crystallography of Macromolecular Assemblies, 5th - 6th December 2000, Trieste, Italy

2001 Co-Director College on "Biophysics: From Molecular Genetics to Structural Biology" organized by ICGEB, ASICTP and ISAS, 1st –12th October 2001, Trieste, Italy

Co-Chairman of the Microsymposium: "Hot an Topical Structures" at European Crystallographic Meeting 2001, 25th - 31st August 2001, Kraków, Poland

2001-2004 Member of the S.A.C of the Centre of Excellence in Biocrystallography of the University of Trieste, Coordinator Prof. L. Randaccio, Trieste, Italy.

2002-2004 Member of the Structural Biology Network with Elettra, Coordinator: Prof. M. Brunori, University "La Sapienza", Roma, Italy

2002-2004 Member of the S.A.C of the Istituto Nazionale Biostrutture e Biosistemi, Roma, Italy

2003-2008 Member of the Steering Committee of IC-CNR

2003 Co-Chairman of the Workshop "Validation of Macromolecular Structures and Structure Determination Steps", 1st - 3rd December 2003, Trieste, Italy.

2005- *Ad hoc* Reviewer for Comitato di Indirizzo per la Valutazione della Ricerca (CIVR).

2005- *Ad hoc* Reviewer for "Valutazione dei Programmi di Ricerca di Interesse Nazionale" (PRIN).

2006- *Ad hoc* Reviewer - Ministry of Science, Education and Sports, National Council for Science, Republic of Croatia
2006 Co-Chairman of the Microsymposium: "Biocrystallography" at the XXXV Congresso Nazionale –Associazione Italiana di Cristallografia, 18th- 21st September 2006, Ferrara, Italy
2008-2011 Member of the Management Committee "Integrated Structural Biology Infrastructure for Europe"
2009 Member of the Scientific Committee and co-Chair of the Workshop : "Thermodynamically unstable proteins: chance or necessity?", 14th-16th December 2009, Trieste, Italy
2009- *Ad hoc* Reviewer - The Portuguese Foundation for Science and Technology : Biological Sciences Area
2009- *Ad hoc* Reviewer – University of Padova ; Research project: Structural Biology, Drug Design and Biochemistry Area
2009- Member of the Editorial Board of the Journal of Biophysics and Structural Biology (Academic Journals, Open Access Journals)
2009- Italian Delegate of the International Network Protein Engineering Centres
2010 Member of the Scientific Committee of XVIII Convegno – Società Italiana Luce di Sincrotrone, 24-26th June 2010, Padova, Italy
2011 Member of the Selection Committee for permanent positions of researchers of the Consiglio Nazionale delle Ricerche
2011- Member of the Joint Steering Committee Università di Trieste - CNR
2011- Member of the Joint Steering Committee SISSA/ISAS - CNR
2012 Member of the Scientific Advisory Board of the International Congress of Fibrinolysis and Proteolysis
2012, 1-5 July 2012, Brighton, UK

Teaching Experience

1989-1991 & 1996-1997 Structure-based drug design - University of Siena, Italy
1992-1993 Computational chemistry in drug discovery, University of Urbino, Italy.
1997-2000 Structural Biology and Biophysics - *PhD Program in Biophysics* at ISAS, Trieste, Italy
2001-2006 Structural Biology *PhD Program Structural and Functional Genomics* at ISAS, Trieste, Italy
2004-2008 High Throughput Protein Crystallography: A Drug Discovery Tool *Training Course on Molecular Design and Computer-Assisted Combinatorial Chemistry*, International Centre of Science - UNIDO, Trieste, Italy
2010- Introduction to Structural Biology – Scuola Normale Superiore di Pisa, Italy

Research activity

- Structural studies of Acetylcholinesterases and their inhibitors: implications for the design of new anti-Alzheimer drugs
- Structural studies of novel oxime as blood-brain barrier penetrating Acetylcholinesterase reactivators
- Structural studies of neutralizing antibodies (TrkA-receptor and Nerve Growth Factor)
- Structural and functional studies of painless Nerve Growth Factor mutants
- Structural and functional studies of proNeurotrophins
- Structural studies of microbial enzymes involved in polysaccharides degradation and processing
- Targeting mechanisms of *Pseudomonas aeruginosa* pathogenesis

Research Grants & Contracts

2000-2004 Menarini Biotech, Roma, Italy; Sanochemia Pharmazeutika AG, Vienna, Austria
2003-2005 Lay Line Genomics SpA, Roma, Italy
2006-2009 Bracco Imaging, SpA, Trieste, Italy
2007 AdriaCell S.r.l., Trieste, Italy

Chiesi Farmaceutici SpA, Parma, Italy
2008-2011 Sincrotrone Trieste S.C.r.l, Trieste, Italy
Publications

Peer Reviewed publications: **102**; Book Chapters: **6** ; Patents: **1**; Structures deposited in the RCSB Protein Data Bank: **30**; H-index: **16**

Andrea LAUSI

Giovanni VALDRE'

Doctor of Physics (Structure of Matter), University of Bologna.
M.Phil. (Physics), University of Cambridge, UK.
C.Engineer, Engineering Council, London UK.
PhD (Physics), University of Cambridge, UK.

Riassunto schematico dell'attività di ricerca:

- i) Analisi micro e nanostrutturale di minerali, materiali sintetici, biominerali e biomateriali;
- ii) Sviluppo e applicazione di metodologie di Microscopia, Diffrazione e Spettroscopia (Electr.Micr., SPM, Electr.Diffr., XRD, XRF, EDS, EELS);
- iii) Studio sperimentale dell'interazione di superficie di minerali con molecole organiche e biologiche per applicazioni geo-ambientali, nano-biotecnologiche e scienze di base della vita;
- iv) Simulazioni quanto-meccaniche e agli elementi finiti.

Il Dr Valdre' è autore e co-autore di oltre 100 articoli internazionali e circa 200 presentazioni a congressi di cui una quarantina tra "Plenary lectures", "Key-notes" e "Invited".
E' co-autore ed editor di vari testi scientifici internazionali e di un testo universitario su Misure e Metodologie. Ha co-organizzato numerosi congressi internazionali sui materiali.
E' stato Associate Editor di Acta Materialia (USA) e Scripta Materialia (USA); è attualmente Associate Editor del Philosophical Magazine (UK) e del Philosophical Magazine Letters (UK); è membro del Advisory Board di Imaging & Microscopy (Germany).
Collabora con varie industrie nazionali e promuove l'attività italiana all'estero.
E' il Responsabile del Centro di Biomineralogia, Cristallografia e Biomateriali dell'Università di Bologna.