

Curriculum Vitae of ENRICO NARDELLI

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1 Biographic Notes

Enrico Nardelli was born on 27 January 1960. He lives in Rome.

He graduated in December 1983 at University of Rome “La Sapienza” in Electronic Engineering with 110/110 *cum laude*, majoring in Computer Engineering. It is a five-years degree with 27 courses, each spanning over two semesters.

In May 1984 he obtained the habilitation to exercise the Engineer profession.

From September 1984 to December 1985 he fulfilled his military duty by serving as an officer in the Engineering Corp of the italian Air Force.

2 Positions

2.1 Current Positions

He is Full Professor of Computer Science and works since December 2002 at the Department of Mathematics of the University of Roma “Tor Vergata”, which is the only italian Mathematics Department to have been selected by the Centre for Higher Education Development among the 19 European Centers of Excellence for Mathematics research (<http://www.excellenceranking.org/>).

Since 2004 he is a *Registered Expert* for the italian Ministry of Education, University and Research, for the technical and scientific evaluation and monitoring of industrial research and technology transfer projects. Under this role he has reviewed tenths of submissions to ‘Veneto’, ‘Basilicata’, ‘Liguria’, ‘Piemonte’, ‘Umbria’, ‘Marche’, ‘Lazio’ Regions, and to the italian Ministry of Trade and Industry.

Since September 2008 he is in the Executive Board of Informatics Europe, the association of computer science departments and research laboratories in Europe and neighbouring areas (<http://www.informatics-europe.org>). Since January 2012 he is also the Treasurer of the association.

Since November 2008 he is, as Past President, in the Management Board of the Italian Association of University Professors in Computer Science (GRIN, <http://www.grin-informatica.it>), grouping the more than 800 university professors in Computer Science all over Italy.

Since January 2009 he is in the Executive Board of EQANIE, the European Quality Assurance Network for Informatics Education (<http://www.eqanie.eu>), co-founded by GRIN, which he represents in the General Assembly.

Since March 2010 he is the national coordinator of a two-years research projects on bio-informatics (SIMBIOSYS), financed by the italian Ministry of University within the PRIN basic research program.

2.2 Past Positions

From May 2009 to June 2011, Member of the “Sectorial Committee on ICT and Multimedia” of the *Lazio* Region, evaluating, coordinating and monitoring innovation and research projects in this sector.

In June-July 2007, by invitation from the Academy of Finland, Member of an international panel of eight Computer Science experts which have evaluated Computer Science research in Finland in years 2000-2006.

From September 2003 to November 2008, President of the Italian Association of University Professors in Computer Science (GRIN).

He was formerly, from September 2002 to October 2003, the Vice President of GRIN responsible for Teaching Affairs.

From 2004 to 2008, Member of the Management Board of AICA (*Associazione Italiana per l'Informatica ed il Calcolo Automatico*), the oldest (1961) italian scientific and professional informatics society.

From 1993 to 2004, Invited Research Scientist at the Institute for System Analysis and Computer Science (IASI) of the italian National Research Council (CNR) in Rome.

From March 2003 to May 2005, President of the Coordination Committee for the start-up of the Master Program in Computer Science of the University of Roma “Tor Vergata”.

From June 2005 to October 2007, Vice-Director of the Master Program in Computer Science of the University of Roma “Tor Vergata”.

From November 1992 to November 2002, Professor in the Department of Computer Science of the University of L'Aquila, as Associate Professors since November 1992 and as a Full Professors since November 1999.

While at University of L'Aquila he has served in the following roles:

- President of the Coordination Committee for University Information Systems, from November 1997 to March 2000;
- President of the Testing and Validation Committee for the Computer-Based Central Information System, from November 1997 to March 2000;
- Director of the Master Program in Computer Science (about 1000 students enrolled), from November 2001 to November 2002;
- President of the Faculty of Sciences Resource Planning Committee, from November 2001 to November 2002.
- Member of the Scientific Board of the Ph.D. Programme in Computer Science, held at the Department of Computer Science of University of Rome “La Sapienza”, jointly with the University of Rome “Tor Vergata” and with the University of L'Aquila, from November 1993 to November 2002.

- President of the Evaluation Committee for the admission to the above Ph.D. Programme, in November 1999.

He has been Visiting Scientist at the International Computer Science Institute of Berkeley, Ca., from July to September 1994, at the Federal Polytechnic of Zürich (ETH) from February to March 1996, and at the “Aristotle” University of Thessaloniki from July to August 2000.

From July 1989 to October 1992, Researcher (equivalent to Assistant Professors at the University) at the Institute for System Analysis and Computer Science (IASI) of the Italian National Research Council (CNR) in Rome.

From March 1988 to June 1989, Contract Research Assistant at the Department of Mathematics of Rome University “Tor Vergata”.

From March 1987 to February 1988, Contract Research Assistant at the Italian National Research Council (CNR).

From January 1984 to March 1987, Contract Research Assistant at the Department of Computer Science and System Analysis of Rome University “La Sapienza”.

He was Contract Professor in Computer Science:

- at University of Rome “Tor Vergata” during academic years 1988-89, 1989-90, and 1990-91.
- at University of L’Aquila, during academic years 1989-90 and 1990-91.
- at University of Rome “La Sapienza”, during academic year 1990-91.

3 Managerial and Consultancy Activity

Beyond the regular managerial tasks implied by the filled positions described in the previous section, Enrico Nardelli has done the activities described here below.

From 2002 to 2008, as Vice President and President of GRIN he has led, coordinated and directed the realization of the Certification Mark (*Bollino GRIN*) for undergraduate degree programs in Computer Science. The system is supported by a web site available online for public consultation at <http://grin.informatica.uniroma2.it/certificazione> and is described in a number of publications, also online (e.g. http://www.ics.heacademy.ac.uk/italics/vol6iss3/cortesi_nardelli.pdf).

Moreover he has worked extensively towards the goal of convincing Italian politicians and media on the cultural importance for an advanced society of computer science and information technology. Many written contributions prepared while he has served as President of GRIN are available online at <http://www.mat.uniroma2.it/~nardelli/GRIN-activity>. The most important activity has been the workshop “Informatics: Culture and Society” held at the Italian Chamber of Deputies (the lower house of the Italian Parliament), with participation from politicians of both coalitions, industrials, and scientists. The workshop web site is <http://www.informatica.uniroma2.it/convegno>.

From May to June 2002 he has been Member of the Appeal Committee of the Italian Ministry for Agricultural and Forestal Policies for the evaluation of technical and economic justifications provided by the industrial consortium that had won the Call for Tender for the realization of all services of the Italian National Agricultural Information System.

From February to March 2002 he has been the President of the Adjudication Committee of the Call for Tender for the provision during years 2002-2004 of adaptive and evolutive maintenance services of the application software for the Statistical Information Systems of the Italian National Statistics Institute (ISTAT).

In July 2002 he has been a Member of the Appeal Committee of the Italian National Research Council (CNR) for the evaluation of the congruity of costs related to the cooperation agreement between CNR and CINECA (a universities-owned company providing computing services) for the design and development of the CNR's information system for planning and budget management.

From December 2001 to June 2002 he has been Member of the Evaluation Committee for the national competition to a Senior Researcher position at the "Institute for Land Planning and Management" of the Italian National Research Council (CNR) in Naples.

From 1998 to 2000 he has consulted to the Italian Authority for Informatics in Public Administration (AIPA) on the design and implementation of various inter-organizational information systems in the areas of:

- public registries of personal data
- public registries of cadastral data
- exchange systems for cadastral data
- distributed information systems for mountain communities.

In all these systems, information security was a major requirement.

From 1994 to 1997 he has been a consultant to the Scientific and Technological Park of the *Abruzzo* region for reviewing and monitoring R&D projects financed by the European Union in the areas of:

- management information systems for public administration
- information systems for land monitoring and management
- multimedia systems for teaching and continuing education.

From 1990 to 1995 he has been consultant to Directorate General XIII (Information Technologies and Industries, and Telecommunications) of the Commission of the European Communities, for the technical and scientific evaluation and revision of R&D workplans, proposals, and projects within the R&D Programmes ESPRIT and TIDE, in the areas of "Advanced Business and Home Systems" and "Information Processing Software and Systems".

From 1991 to 1993 he has been the Coordinator of the module "Computer Science and Telematics for Communication in Professional Education" (about 400 hours) within the two 24-months Master Programs in "Engineering Communication in Professional Education" run by the Italian Consortium for Distance Learning University (CUD).

4 Scientific Activity

He carries out research in various fields of theoretical and applied Computer Science:

- algorithms and data structures

- databases and geographical information systems
- tools and environments for interaction with information systems
- cooperative and distributed information systems.

In particular, with respect to the algorithms and data structures field, his areas of interest are: graph algorithms, physical data structures for multi-dimensional data, scalable distributed data structures, algorithms for partial orders, algorithms for communication networks.

As far as the databases field is concerned, his areas of interest are: definition and analysis of multimedia and spatial data models, query languages for spatial data, physical access methods, system architectures for geographical information systems.

In the interaction with information system field his areas of interest are: interaction with system for complex problem solving, techniques and paradigms of interaction with information systems.

Concerning cooperative and distributed information systems his areas of interest are: data models for information integration, certification and security issues in the Internet-mediated inter-organizational cooperation.

He has authored more than 130 papers in the fields of interest, published in the most reputed international scientific journals and conference proceedings. He acts also as a referee for journals and conferences active in the above areas. More details on the research activity can be obtained by consulting the attached document “Research Areas and Publications” (available also online at <http://www.mat.uniroma2.it/~nardelli/publications>).

He has supervised two PhD Students, Luca Forlizzi and Adriano Di Pasquale, while at University of L’Aquila. At the University of Roma “Tor Vergata” Computer Science studies have been established very recently. The Master Degree started in 2006 and the PhD Program in 2009. Luca Forlizzi has worked on the use of partial orders as formal models for spatial data, and Adriano Di Pasquale in the field of scalable distributed data structures.

Beyond the normal activity of paper presentation at conferences, he has held seminars and lectures at various italian and international organizations: italian National Research Council in Rome and Pisa, University of Rome “La Sapienza”, University of Rome “Tor Vergata”, University of Nice, International Computer Science Institute di Berkeley, Federal Polytechnic of Zürich.

In the last three years (2007-2009) he has been member of the Program Committees of the following International Conferences:

- Third International Workshop on Requirements Engineering for Services (REFS 2009), within the 33st Annual IEEE Computer Software and Applications Conference (COMP-SAC 2009)
- Third International Conference on Methodologies, Technologies and Tools enabling e-Gov (MeTTeG 2009)
- Eleventh International Symposium on Spatial and Temporal Databases (SSTD 2009)
- 6th International Workshop on Databases, Information Systems and Peer-to-Peer Computing (DBISP2P 2008), within the 34th International Conference on Very Large Data Bases (VLDB 2008)
- Second International Workshop on Requirements Engineering for Services (REFS 2008), within the 32st Annual IEEE Computer Software and Applications Conference (COMP-SAC 2008)

- Second International Conference on Methodologies, Technologies and Tools enabling e-Gov (MeTTeG 2008)
- Track on Database Theory, Technology, and Applications (DTTA), within the 23rd Annual ACM Symposium on Applied Computing (SAC 2008)
- 5th International Workshop on Databases, Information Systems and Peer-to-Peer Computing (DBISP2P 2007), within the 33th International Conference on Very Large Data Bases (VLDB 2007)
- First International Workshop on Requirements Engineering for Services (REFS 2007), within the 31st Annual IEEE Computer Software and Applications Conference (COMP-SAC 2007)
- First International Conference on Methodologies, Technologies and Tools enabling e-Gov (MeTTeG 2007)
- Track on Database Theory, Technology, and Applications (DTTA), within the 22nd Annual ACM Symposium on Applied Computing (SAC 2007)

Participation in Program Committees of previous years can be found on line at <http://www.mat.uniroma2.it/~nardelli/conferences.html>.

5 Teaching Activity

He has held one-semester and two-semester courses to bachelor and master students on the following Computer Science subjects:

- Programming
- Computer Architecture
- Algorithms and Data Structure
- Advanced Algorithmic Techniques
- Databases
- Information Systems
- Person-Computer Interaction
- Software Engineering
- Object Oriented Languages
- Object Oriented Databases
- Computability and Complexity
- Parallel and Distributed Systems

6 Research Projects

He has participated to various basic and applied research projects, in various national and european research programmes, with the roles below described:

- Team Member of the Department of Informatics and System Analysis of the University of Roma “La Sapienza” from January 1984 to December 1985 for the objective “DATA-ID” (Data Models) within the CNR five-years Finalized Research Programme “Informatica”.

- Team Leader and Principal Investigator of the Institute for System Analysis and Computer Science of CNR for the objective “MULTIDATA” (Integration between traditional and multimedia databases: design and query methods and tools) from June 1989 to October 1992 within the CNR five-years Finalized Research Programme “Computer-based Information Systems and Parallel Computation”.
- Team Member of the Institute for System Analysis and Computer Science of CNR for the working group “Basic GOODS” within the “ESPRIT Basic Research Actions” Programme (Object-oriented models, algorithms and data structures for geographical data management) for the whole project duration in years 1990 and 1991.
- Team Leader and Principal Investigator of the Institute for System Analysis and Computer Science of CNR in the ESPRIT Project “ROCKI” (Management and interpretation of complex textual and graphic documents with algorithmic and knowledge based techniques) for the whole project duration (November 1989-February 1993).
- Team Leader and Principal Investigator of University of L’Aquila in the ESPRIT Research Action “ITULAND” (High performance architectures for land monitoring and management) for the whole project duration (October 1992-December 1994).
- Team Leader and Principal Investigator of University of L’Aquila in the ESPRIT Basic Research Action “AMUSING” (Algorithms, data models, user interfaces and services for geography) for the whole project duration (November 1992-May 1994).
- Team Leader and Principal Investigator of University of L’Aquila in the Project “IMAGE-DB” (Algorithms and data structures for Spatial Databases) in the framework of the 4th Cooperation Programme Italy-Greece for the whole project duration (November 1992-May 1994).
- Team Leader and Principal Investigator of University of L’Aquila in the *Abruzzo* regional Research and Development program “Development of an Innovative Management Model for Public Administration”, run by the Scientific and Technological Park of the *Abruzzo* region, for the whole project duration in years 1995 and 1996.
- Team Leader and Principal Investigator of University of L’Aquila in the *Abruzzo* regional Research and Development program “Informatics and Networks for Supporting of Person with Disabilities”, run by the Scientific and Technological Park of the *Abruzzo* region, for the whole project duration in years 1996 and 1997.
- Team Leader and Principal Investigator of University of L’Aquila in the ESPRIT Network Research “CHOROCHRONOS” (Design and prototyping of an architecture for Spatiotemporal Database Systems) for the whole project duration (August 1996-July 2000).
- Team Leader and Principal Investigator of University of L’Aquila in the Italian Ministry of University and Research “REAL WINE” project (Resource allocation and management in wireless communication networks) within the basic research PRIN Programme, for the whole project duration in years 2001 and 2002.

7 Address

Prof. Enrico Nardelli
Dipartimento di Matematica
Università di Roma “Tor Vergata”
Via della Ricerca Scientifica snc
I-00133 Roma, Italia
Tel. +39 06 7259.4204
Mob. +39 335 590.2331
Fax. +39 06 7259.4699
E-mail: nardelli@mat.uniroma2.it
URL: <http://www.mat.uniroma2.it/~nardelli>