

# Curriculum Vitae of ENRICO NARDELLI

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## 1 Positions

Enrico Nardelli graduated in December 1983 at University of Rome "La Sapienza" in Electronic Engineering (Major in Computer Science) with 110/110 *cum laude*. This is a 5 years degree with 27 two-semester exams. In May 1984 he obtained the qualification to practice the Engineer profession.

He is *Full Professor* of Informatics and works since 2002 in the Department of Mathematics of the University of Roma "Tor Vergata" (one of the 180 "excellence" university departments for 2018-22). From 1992 to 2002 he has been in the Department of Informatics of the University of L'Aquila. He has held from 1993 to 2004 a position as Invited Research Scientist at the Institute for System Analysis and Informatics (IASI) of the Italian National Research Council (CNR) in Rome, where he was a researcher (equivalent to Assistant Professors) from July 1989 to October 1992, before joining university.

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 scientific research projects and of industrial research and technology transfer projects.

He is coordinating since April 2014 "Programma il Futuro" (<https://programmailfuturo.it>), a joint project between the Italian Ministry of Education and CINI, the Italian national inter-university Consortium for Informatics, for the introduction of basic concepts of informatics as a scientific subject in Italian schools. Since its inception, the project has involved about three million Italian students (half of them in primary schools) and 35,000 teachers.

Since January 2018 he is the President of *Informatics Europe*, the association of Informatics departments and research laboratories in Europe and neighbouring areas (<http://informatics-europe.org>). From September 2008 to October 2015 he has been a member of its Board of Directors, filling the role of Treasurer in 2012-13 and of Vice-President in 2014-15.

Since March 2018 he is a member of the Executive Committee of the *Informatics for All* (<http://informaticsforall.org>) coalition, aiming at introducing Informatics as a foundational discipline in schools across Europe.

He is a member since 2016 of the International Advisory Committee for the *Hour of Code and Computer Science Education Week*, the world most followed international initiative aiming at disseminating the importance of informatics education.

From July 2015 to June 2019 has been an elected member of the *ACM Europe Council* (<http://europe.acm.org>) the European branch of ACM (Association for Computing Machinery), the world largest (90.000 members) international association of informatics scientists and professionals. Since July 2019 he is co-opted in the Council as a liaison to *Informatics Europe*.

Since November 2019 he is the Director of the CINI National Laboratory “Informatics and School” (“Informatica e Scuola” - <http://consorzio-cini.it/gdl/informatica-scuola>, that he had started as a CINI Working Group in March 2017.

Since January 2016 he is member of the Executive Board of CINI as the representative of the University of Roma “Tor Vergata”. Previously (2013-2015), he has been member of the Executive Board of CINI as the representative of GRIN, the Italian Association of University Professors of Informatics.

From November 2013 to November 2016 he has been the Director of the CINI National Laboratory “InfoLife” (Metodi e Algoritmi per le Scienze della Vita) del CINI, which he had co-founded.

He has been (2009-2014) member of the Executive Board of EQANIE, the European Quality Assurance Network for Informatics Education, co-founded by GRIN, which he represented in the General Assembly.

He has been (2010-2012) the national coordinator of SIMBIOSYS, a two-years research projects on bio-informatics, financed by the Italian Ministry of University within the PRIN basic research program.

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

From September 2003 to October 2008 he has been the President of the Italian Association of University Professors in Informatics (GRIN), grouping the more than 800 university professors in Informatics all over Italy. From November 2008 to November 2014, as Past President, he has been member of its Executive Board. Previously, from September 2002 to September 2003 he has been the Vice-President of GRIN, responsible for Teaching Affairs.

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

In June-July 2007, by invitation from the Academy of Finland, he has been member of an international panel of eight Informatics experts which have evaluated Informatics research in Finland for the period 2000-2006.

At the University of Roma "Tor Vergata" he has been the Director of the Bachelor Program in Informatics, from March 2003 to May 2005, and from June 2005 to October 2007 he has been the Vice-Director of the Master Program in Informatics.

While at University of L'Aquila he has served as 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 Informatics (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.

He has held seminar 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 Informatics Institute di Berkeley, Federal Polytechnic of Zürich.

## 2 Teaching and Scientific Activities

He has lectured in university Degree programs on: Algorithms and Data Structures, Data Bases, Information Systems Design, Human-Computer Interaction, Software Engineering, Programming Languages, Informatics Education.

He has been Contract Professor in Computer Science:

- 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.

He has been Contract Research Assistant:

- from March 1988 to June 1989 at the Department of Mathematics of Rome University "Tor Vergata".
- from March 1987 to February 1988, at the Italian National Research Council (CNR).

- from January 1984 to March 1987, at the Department of Computer Science and System Analysis of Rome University "La Sapienza".

He has been Visiting Scientist at the International Computer Science Institute of Berkeley (California), 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.

His current research focus is on Informatics Education and on Socio-Technical analysis and design of Informatics Systems (*Link&Think* Interdisciplinary Laboratory <http://link-and-think.blogspot.com>).

He previously carried out research in various field of theoretical and applied Informatics:

- algorithms and data structures,
- tools and environments for interaction with information systems,
- data models,
- cooperative and distributed information systems.
- bioinformatics

For what regards the algorithms and data structures field, his areas of interest were: graph algorithms, physical data structures for multi-dimensional data, scalable distributed data structures, algorithms for partial orders, algorithms for communication networks.

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

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

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

More recently, in bio-informatics he worked on the definition and realization of models and tools for representation and simulation of biochemical interaction networks. He has also investigated the interdisciplinary area of informatics and digital art, with a goal of enriching the capability of informatics systems to describe and help the comprehension of complex scenarios by using approaches and methods typical of the art domain.

He has authored more than 150 papers in the above fields, 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 (<http://www.mat.uniroma2.it/~nardelli/publications/index.html>).

He has been Team Leader and Principal Investigator various basic and applied research projects, in various national and european research programmes, in the following sectors:

- data models, algorithms, and physical data structures for territorial data management,
- data models and algorithms for management and processing of complex data,
- language and models for spatial database querying,
- information systems for land and environmental planning,
- human-computer interfaces, usability engineering, support tools for software systems design,
- multimedia and adaptive human-computer interaction.

### 3 Professional Activity

He has carried out the following categories of professional activity:

1. informatics techno-scientific expert in Procurement Committees
2. informatics techno-scientific expert for the evaluation of research, research and development, and technological innovation and transfer projects
3. dissemination of Informatics culture
4. other professional activities

#### 3.1 Procurement Committees

This sub-section describes, starting from the most recent ones, professional activities focusing on membership in Procurement Committees.

- In July-October 2016 he has been the President of the Procurement Committee for the management and maintenance services of the informatics system of “Fondartigianato”.
- In March-April 2008 he has been the President of the Procurement Committee for the maintenance, development and management of the informatics system of “Fondimpresa”.
- In July 2002 he has been 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 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 Procurement 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).

### 3.2 Evaluation of Research, R&D, Innovation and Transfer

He has developed a very large experiences on research evaluation in Informatics, above at all on applied research and development, covering all the various issues, from research and innovation policies to quantitative evaluation, from management to diffusion, transfer, and industrial and business exploitation of results.

Along more than thirty years of experience he has evaluated more than seventy basic and applied research projects in all fields of Informatics.

He has been a consultant, from 1994 to 1997, 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 a 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 ICT Programmes, in the areas of "Advanced Business and Home Systems" and "Information Processing Software and Systems".

### 3.3 Dissemination of Informatics culture

This sub-section describes, starting from the most recent ones, professional activities focusing on the dissemination of Informatics culture.

- He carries out outreach and dissemination activities related to Informatics culture, available online as public speeches (<http://www.mat.uniroma2.it/~nardelli/public-speeches.html>), dissemination articles (<http://www.mat.uniroma2.it/~nardelli/dissemination-articles.html>), and interviews (<http://www.mat.uniroma2.it/~nardelli/interviews.html>).
- He has been the co-founder of the interdisciplinary blog <http://link-and-think.blogspot.com>, developing research and dissemination on digital transformation themes adopting a socio-technical-humanistic approach. He writes op-eds on cultural and education issues of Informatics on the web sites <http://www.key4biz.it>, <http://www.broadband4europe.com>, and <http://www.agendadigitale.eu>. He has also had a blog for the online version of "Il Fatto Quotidiano" <http://www.ilfattoquotidiano.it/blog/enardelli/>, one of the major Italian newspapers.
- He is coordinating since Aprile 2014 "Programma il Futuro" (<https://programmmailfuturo.it>), a joint project between the Italian Ministry of

Education and CINI, the Italian national inter-university Consortium for Informatics, for the introduction of basic concepts of informatics as a scientific subject in Italian schools. Since its inception, the project has involved about three million Italian students (half of them in primary schools) and 35.000 teachers.

- As President of GRIN he has prepared many written and oral contributions, towards the goal of convincing Italian politicians and media on the cultural importance for an advanced society of Informatics and information technology (available on line at <http://www.mat.uniroma2.it/~nardelli/GRIN-activity/index.html>).
- In 2006 he has coordinated the scientific 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 political coalitions, industrialists, and scientists (<http://www.informatica.uniroma2.it/convegno>) and has been the editor of the proceedings, published by “Carocci Editore”.

### 3.4 Other professional activities

This sub-section describes, starting from the most recent ones, professional activities of miscellaneous kind.

- From November to December 2018 he has been member of the Evaluation Committee for the national competition to the Director position at the “Institute of Science and Technology of Informatics” of the Italian National Research Council (CNR) in Pisa.
- As member of the Board of Directors of Informatics Europe, he has contributed in 2012-2015 to the definition and realization of the annual report on the state of university education in Informatics in Europe (<https://informatics-europe.org/publications.html>).
- As member of the Board of Directors of Informatics Europe, he has directed and coordinated in 2010-2012 the design and development of the association’s web portal, featuring also a directory service for European informatics research and higher education institutions and a job placement service for positions requiring a PhD in Informatics..
- As Vice-President of GRIN he has coordinated and directed from 2003 to 2015 the design and implementation of the “Certification Systems for Quality of Content” for Italian informatics degree courses (known as “Bollino Blu”=“Blue Mark”). The system is supported by a web site and has been described in many national and international publications.
- 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.
- From November 1997 to March 2000 he has been the President of the Information Systems Steering Committee of the University of L’Aquila.
- From November 1997 to March 2000 he has been the President of the Validation Committee for the Main Information System of the University of L’Aquila.

## **4 Riferimenti**

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