

**CONTACT INFORMATION**

University of Foggia  
Department of Clinical and Experimental Medicine  
Viale Luigi Pinto, 1  
71122 Foggia, Italy  
<http://www.unifg.it>

*Phone:* +39 (0881) 588067  
*Fax:* +39 (178) 2240797  
*Mobile:* +39 (320) 4394567  
*E-mail:* [crescenzo.gallo@unifg.it](mailto:crescenzo.gallo@unifg.it)  
<http://www.crescenziogallo.it/unifg/>

**EMPLOYMENT**

- Research Professor of Information Processing Systems, Department of Clinical and Experimental Medicine, University of Foggia, Italy, 2004–present
- Tenured teacher of Information Management, Commercial High School, Foggia, Italy, 1984–2003
- Manager of Information Systems division, Informatica Sistemi Ltd., Foggia, Italy, 1983–1991
- System Engineer and Software Programmer, A.R.I. Ltd., Bari, Italy, 1980–1983
- Software consultant, Telespazio SpA/E.S.A., Rome, Italy, 1978–1980

**EDUCATION****Academic**

- *University of Milan, Italy*  
M.S., Information Science and Technology (with honors), July 2007 (thesis topic: *Metropolitan Area Networks design and implementation*)
- *University of Bari, Italy*  
Postgraduate scholarship in *Systems analysis and implementation*, 1978–1979  
B.S., Computer Science (with honors), Sep 1978 (thesis topic: *Implementation of a CODASYL warehouse database*)

### Professional courses/seminars certifications

- “English Course – Structuring a European Project”, Dept. of Scientific and Technological Research, University of Foggia, Italy, 2009–2010
- CISCO modules CCNA-1 Networking Basics, CCNA-2 Router and Routing Basics, CCNA-3 Switching Basics and Intermediate Routing, CCNA-4 WAN Technologies, Local Academy University of Foggia, Italy, 2007
- Microsoft MOC 2273 “Managing and Maintaining a Microsoft Windows Server 2003 Environment” and MOC 2277 “Implementing, Managing and Maintaining Windows Server 2003 Network Infrastructure – Network Services”, 2007
- Informatics teaching qualification, Ministry of Education, Italy, 1982-1983-1999

### CONFERENCES AND WORKSHOPS ATTENDED

- Meeting on “Software intellectual property”, Regional Agency for Technology and Innovation (ARTI Puglia), University of Foggia, September 16th, 2008
- GARR Conference 2007 “Network Humanitatis”, Rome, Italy, October 29–31, 2007
- Meeting on “Using free software in teaching”, “Rosati” High School, Foggia, Italy, April 29th, 2004
- Workshop “Graphs and Networks”, Department of Quantitative Methods, University of Milan-Bicocca, Italy, April 27th, 2004
- Meeting: “eContent – European digital contents on the global networks”, Italian Prime Minister Office and European Commission, <http://www.cordis.lu/econtent>, Bari, Italy, March 25th, 2004

### TEACHING

#### University of Bari, Italy

- *Theory and Application of Computing Machines* (BA), Faculty of Agriculture, 1992–1994
- *Computer Science* (BA), Faculty of Economics, 1993–2000

**University of Foggia, Italy**

- *Information Processing Systems* (BD), Faculty of Medicine, summer 2011
- *Medical Informatics* (MD), Faculty of Medicine, 2006–2011
- *Architecture of Information Systems* (MSE), Faculty of Economics, 2006–2009
- *Information Systems for e-Commerce* (MSE), Faculty of Economics, 2006–2009
- *Enterprise Computing* (MSE), Faculty of Economics, 2004–2009
- *Automatic Data Processing for Economic and Financial Decisions* (BE), Faculty of Economics, 2003–2006
- *Computer Systems for Decision Support* (BE), Faculty of Economics, 2003–2006
- *Informatics* (BA), Faculty of Law, 2001–2004
- *Informatics* (BE), Faculty of Economics, 2009–2010
- *Mathematical Models for Financial Risk Evaluation* (MSE), Faculty of Economics, 2009–2010

**Inter-University Postgraduate School for Teachers – SSIS Puglia, Italy**

- *Teaching of Economic and Financial Decisions*, 2006–2007
- *Mathematics Education*, 2006–2007
- *Advanced Programming Languages*, 2006–2007
- *Laboratory of Teaching of Enterprise Finance*, 2004–2005
- *Laboratory of Special Teaching in the Logical-Mathematical Field*, 2003–2009

**University LUM “Jean Monnet”, Bari, Italy**

- *Legal Informatics* (MA), Postgraduate School for Law Professions, Faculty of Law, 2006–2011
- *Enterprise Informatics* (BE), Faculty of Economics, 2006–2008

### Degree theses awarded to students

- “Telematics in the Tourism System as an Enterprise Development Tool”, Faculty of Economics, University of Bari, Italy, 1998
- “The Electronic Commerce on the Internet”, Faculty of Economics, University of Bari, Italy, 1998
- “Enterprise Information Systems and Intranets”, Faculty of Economics, University of Bari, Italy, 1998
- “Wireless Ad-Hoc Networks: Technology and Economic Impact”, Faculty of Economics, University of Foggia, Italy, 2004
- “Artificial Neural Networks: Theory and Applications”, Faculty of Economics, University of Foggia, Italy, 2005
- “Implementation of an Open Source Certification Authority Platform”, Faculty of Economics, University of Foggia, Italy, 2008
- “Using Data Warehouses for Business Intelligence”, Faculty of Economics, University of Foggia, Italy, 2010
- “Social Networks: Informatics Phenomenon and Economic Lever?”, Faculty of Economics, University of Foggia, Italy, 2010
- “An Analysis of Apple Market and Products”, Faculty of Economics, University of Foggia, Italy, 2011

### Other teaching assignments

- Informatics module in the specialization course for “Energy saving and renewable energy technician” (EU grant #PORIV73FG10103201), AFORIS-Province of Foggia, Italy, Spring 2011
- Course in “Computer Security” (EUCIP), Industry Association, Foggia, Italy, 2008–2009
- Training course in Information Technology, ASSODOLAB, Bari, Italy, Fall 2004
- Training course “E-LEARNING”, ASSODOLAB, Foggia, Italy, Spring 2004
- Informatics and Mathematics training expert in primary and secondary school courses (EU grants FSE 2008/2010), Italy, 2008–2011

- Module of “Computer Science Basics” in the specialization course for town clerks, Prefecture of Foggia, Italy, 1981
- Course for Analyst/Programmer, ENAPAICA, Foggia, Italy, 1983–1984 (grant by Regione Puglia)
- Course in “Office Automation” for school staffs, Director of Education of Foggia, Italy, 1984
- Module of Informatics in the course for Agents and Sales Representatives, Chamber of Commerce of Foggia, Italy, 1985–1992
- Informatics expert in the training courses for Mathematics and Physics school teachers (Italian Ministry for Education IT National Plan), 1987–1989
- Module of Telematics in the high school post-diploma course, ITIS Righi Cerignola, Foggia, Italy, 1990–1991
- Informatics expert in the training course for Literature Teachers of ITC Pascal, Foggia, Italy, 1990–1991
- Expert lecturer in the training course of Informatics for Mathematics and Physics high school teachers, Sannicandro Garganico, Foggia, Italy, 1995–1996
- Module of “Informatics Basics” in the post-diploma training course “Technician of Enterprise Design and Programming”, ITC Giannone – Foggia, Italy (EU grant), 1997
- Informatics expert in the professional qualification course for high school Accounting teachers, Director of Education of Foggia, Italy, 1997
- Course of “Network Administrator”, ITC Pascal – Foggia, Italy (grant by Italian Ministry of Education - Measure 1 Action 13), 2001

#### CONFERENCE AND SEMINAR PRESENTATIONS

- *A Wafer Bin Map Clustering Algorithm for Optimizing I.C. Yield Management*, Conference “UGM 2013 – 6th Mathematica Italia User Group Meeting”, University of Bologna, Italy, 30–31 May 2013.
- *Clustering Techniques for Revealing Gene Expression Patterns*, Conference “Bioinformatica e Biologia Computazionale in Campania”, Istituto di Scienze dell’Alimentazione – CNR, Avellino, Italy, 4 Novembre 2011.

- *Predictive Microbiology: an Artificial Neural Network Approach*, Conference “UGM 2011 – 5th Mathematica Italia User Group Meeting”, University of Turin, Italy, 6–7 October 2011
- *Scientific writing and computing environments* (LaTeX and Mathematica), seminal cycle for researchers (European Commission recommendation 11/03/2005), University of Foggia, Italy, summer 2011
- *Wolfram Mathematica – Introductory concepts*, seminar: “Mathematica 8: Compute as you think, think to Mathematica 8”, Laboratory for Quantitative Analysis of Data, Dept. of Economics, University of Foggia, Italy, March 29th, 2011 (grants by Adalta and Wolfram Italy)
- *Forecasting Photovoltaic Deployment with Neural Networks*, workshop: “Renewable energies for the economic development in Puglia”, Dept. of Economics, University of Foggia, Italy, February 3rd, 2011 (grants by Fondazione Cassa di Risparmio di Puglia)
- *An algorithm for computing stable sets in coalitional games in effectiveness form*, Conference “MTISD 2010 – Methods, Models and Information Technologies for Supporting Decisions”, University “G. d’Annunzio” of Chieti-Pescara, Italy, 12-15 September 2010
- *Using Neural Networks for classifying genomic patterns and protein structures*, Conference “UGM 2010 – 4th Italian User Group Meeting Wolfram Mathematica”, University of Milan, Italy, 7–8 October 2010
- *Link stability in MANETs routing protocols*, Conference “UBICOMM 2010 The Fourth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies”, Florence, Italy, 25–30 October 2010
- *Dynamical Systems for the Diffusion of Photovoltaic*, Conference “UGM 2008 3rd Italian User Group Meeting Wolfram Mathematica”, University Roma Tre, 26–27 November 2008
- *Baum-Eagon Inequality in Probabilistic Labeling Problems*, International Conference CLADAG 2005 “Classification and Analysis of Data Group”, University of Parma, Italy, 6–8 June 2005
- *Artificial Neural Networks in Financial Modeling*, International Conference “XXXVI European Working Group on Financial Modeling”, University of Brescia, Italy, 5–7 May 2005

- *Solving Scheduling Problems with a Simulated-Annealing Algorithm*, AICA Conference, University of Udine, 5–7 October 2005
- *A Data Set Generation Algorithm in Combinatorial Auctions*, International Conference IEEE EUROCON, Belgrade, Serbia, 21–24 November 2005
- Invited speaker at the conference *RECIPROC@: la Rete Civica della Provincia di Foggia*, Presidency of the Province of Foggia, Italy, 19 april 1998
- Invited speaker at the conference *Internet e l’Ordine – Esame delle potenzialità e delle opportunità*, Ordine dei Dottori Commercialisti, Foggia, Italy, 31 October 1997
- Invited speaker at the conference *Pianeta Internet – Comunicazioni e diritti*, PDS, Foggia, Italy, 24 October 1995

#### ACADEMIC ASSIGNMENTS

- Member of the Academic Board of the Graduate School in “Forensic Medicine”, University of Bari and Foggia, Italy, 2011–2012
- Member of the Academic Board of the PhD in “Law and Economics of the Environment, Land and Landscape”, Dept. of Economics, University of Foggia, Italy, 2010–2011
- Member of the Academic Board of the PhD in Life Sciences – XXV Cycle, Dept. of Biomedical Sciences, University of Foggia, 2009–2010
- Member of the Academic Board of the Master in “New Frontiers in Mathematics Education”, Faculty of Economics, University of Foggia, Italy, 2008–2010
- Member of the Academic Board of the Specialization Course in “Mathematics: Applications and Technological Innovations”, Faculty of Economics, University of Foggia, Italy, 2007–2008
- Member of the Commission for the SSIS State Exams, specialization in Physics-Mathematics-Informatics, University of Foggia, Italy, 2006–2007
- Member of the Academic Board of the PhD in “Mathematical Methods for Economic and Financial Decisions” – XX Cycle, 2005

#### SCIENTIFIC ACTIVITIES

## Research interests

The main research interests focus on the methodological issues related to network architectures, automatic data analysis and processing and its relations with the formalization of architectural models, theoretical analysis and application of advanced computational algorithms for artificial neural networks, with applications to the economic and biological fields.

Research activity has been initially articulated in the study of network architectures without a centralized control (ad-hoc networks) and implementation of routing protocols in mobile ad hoc networks (MANETs), the field of modeling algorithms (with integration statistical methods of simple expert decision-makers and the use of models of artificial neural networks) and the study of the formal description of the semantics of languages. In particular, the architecture of distributed computing and its implications for the formalization and control of a system failure has been investigated, with the proposal of a methodology for modeling and analysis aimed at identifying points of failure in a system of online banking.

Further research interests have covered the field of modeling, on which were first examined the theoretical aspects related to the classification of objects (*labeling*) in the image processing, characterized by “heavy” computational models, after which we analyzed the specific problem of the development and optimization of “dirty” images (in particular with regard to the “pixel classification”), and an algorithm for image enhancement was developed derived from the Baum-Eagon inequality. The research activity in the field of the optimization problems was then directed towards the analysis of the “simulated annealing” (Metropolis) method, from which an algorithmic application has derived.

As part of the modeling the problem has been studied of the generation of realistic data sets for the performance evaluation of approximation algorithms for the problem of determining the “winner” in a combinatorial auction (a deeply felt and widespread problem on the Internet and in the procurement of goods in the public interest). This has been done by analyzing the characteristic parameters of a combinatorial auction from an economic standpoint, leading to the proposal for a general pattern of simulated production of bids.

Applications involve the study of the economic problem of “deregulation” of the Italian electricity market, analyzing the volatility of prices and the consequent emergence of derivatives markets, until the proposal of a simple model of control of the spot market power in a deregulated environment, model tested in other countries with experience in the field. Research has also been carried out on the algorithmic implementation of a study on the optimization of decisions in the diffusion of products/innovation in a duopoly market, together with a study in the field of alternative energies (photovoltaic diffusion) and in the algorithmic Game Theory, this last relative to the extension of the concept of “farsightedness” for the study of stable coalitions which led to the design and



implementation of a generalized stable sets (in various meanings) computing algorithm.

Another research thread is related to the analysis, design and implementation of educational platforms, both for the deployment of teaching contents and for the development of an infrastructure for healthcare environments.

A particular effort has been done in the field of the semiconductor industry, with the analysis of the main issues related to the production and yield management of memory chips. This has been done for a DDR memory production plant located near our university, which allowed us to deeply study the complete production cycle and the problems related to the correct identification of some production failures. In particular, we have been able to examine the probing tests used to verify the integrity and functioning of the wafer's chips, and this has been synthesized in a seminal work.

The current research interests concern on one side the improvement of the energy efficiency of mobile devices by implementing “energy saving” mobile routing protocols, and on the other side pertain to the deep investigation of the bioinformatics aspects related to clustering of data sets from DNA microarrays for the identification of groups of related genes and/or tissue samples bearing common pathological features. For that purpose, a clustering two-dimensional correlation graph algorithm has been developed by means of a double correlation/curvature threshold that allows analysis and simulation of structural relations between genome data. This two-threshold clustering algorithm has also been applied in a variety of situations, proving its robustness and reliability, in particular in the field of the semiconductor yield management, where interesting results have been achieved combining this algorithm with an unsupervised artificial neural network approach.

Further research in bioinformatics concern the analysis of cell viability and their Raman spectra and NMR and the study of Heart Rate Variability (HRV) — and in particular of Heart Rate Turbulence (HRT) — by means of spectral analysis and application of artificial neural networks models.

## Research projects

- Member of the research unit model B Prof. Angelo Fratello University of Foggia (model A Prof. Sabino Impedovo) PRIN 2010-2011 (DM 2/Ric 12/1/2012) Project: CEIBSBIC “Convergenza elettronica di informazioni biometriche per lo sviluppo in sicurezza della società dello star bene individualmente e collettivamente”.
- Member of the research unit for the University of Foggia in the European Project DECIDE - Diagnostic Enhancement of Confidence by an International Distributed Environment (Grant Agreement: RI-261593)
- Scientific officer of the research unit for the Department of Economics of the University of Foggia in the project NEURONET Puglia

- Member of the project group “Lo sviluppo del mercato energetico in Puglia: energie rinnovabili ed implicazioni economico-finanziarie” – Settore A – Ricerca Scientifica e Tecnologica at the Department of Economics of the University of Foggia (grant by Cassa di Risparmio di Puglia, 2009)
- Member of the research unit in the project “Tel.E.Sa.Net. – Telediagnosis by an Experimental Sanitary Network”, scientific manager Prof. Giuseppe Mastronardi, Politecnico di Bari (2006)
- Scientific manager of the research project “Models of Artificial Neural Networks in Grid computing”, grant by University of Foggia (2005)
- Scientific manager of the research project “Game-theoretical Approaches for Computer Science”, grant by University of Foggia (2004)
- Member of the PRIN 2004 “Controllo ottimo e giochi dinamici in problemi di utilizzo delle risorse naturali e di marketing delle innovazioni”, scientific manager Prof.ssa Laura Gardini
- Member of the CNR research project: “La catena del valore nell’IT” (manager Prof. Ugo Moscato), research: “Modelli Matematici per l’Organizzazione Logistica del Commercio On-Line”, 2001, grant #CNRC010294\_003
- Member of the operating unit at the University of Bari for the research project: “Gestione e Visualizzazione di Dati Dinamici Georeferenziati” in the national research project “La Produzione di Dati Computer-assisted: Metodologie Statistiche ed Applicazioni alla Ricerca Sociale e Sanitaria” (1997, manager Prof. Luigi Fabbris)
- Member of the operating unit at the University of Bari for the research project: “Applicazioni di Sistemi Informativi Statistico Geografici per Statistiche Ufficiali” in the national research project “Sistemi Informativi Statistico-Geografici” (M.U.R.S.T. 40% - 1996, manager Prof. Carlo Cecchi)
- Member of the operating unit at the University of Bari for the CNR coordinated research project: “Visualizzazione ed Analisi Statistica di Dati Georeferenziati” research “Sistemi Statistici ed Informatici per la Produzione di Sistemi di Rilevazione Dati Assistiti da Computer” (1996, manager Prof. Luigi Fabbris)
- Member of the operating unit at the University of Bari for the research project “Metodologie Object Oriented per il Disegno di Sistemi Informativi” (M.U.R.S.T. 60% – 1995/96)
- Member of the operating unit at the University of Bari for the research project “Sistemi basati su conoscenza di supporto all’analisi statistica dei dati” (M.U.R.S.T. 40% – 1991/95)

- Member of the operating unit at the University of Bari for the research project “Modelli Dinamici di Simulazione” (M.U.R.S.T. 60% – 1990/92)

### Referee service

- *Advancements in Genetic Engineering* (Henderson, NV, USA, <http://www.omicsgroup.org/journals/agehome.php>)
- *Australian Economic Papers* (University of Flinders & Adelaide, Australia)
- *Czech Journal of Economics and Finance* (Charles University, Praga, Repubblica Ceca)
- *Encyclopedia of Information Science and Technology*, IGI Global, USA (2012)
- *Handbook on ICT for Healthcare and Services*, IGI Global, USA (2011)
- *IEEE Transactions on Computers* (I.E.E.E., U.S.A.)
- *Intelligent Systems in Accounting, Finance and Management*, John Wiley & Sons, Ltd., Edited By: Daniel O’Leary, Online ISSN: 1099-1174 (2012)
- *International Journal on Advances in Intelligent Systems*, ISSN 1942-2679, [http://www.iariajournals.org/intelligent\\_systems/index.html](http://www.iariajournals.org/intelligent_systems/index.html), IARIA, USA
- *Journal of Algorithms and Computational Technology* (London, UK, ISSN 1748-3018, <http://www.multi-science.co.uk/jact.htm>)
- *Journal of Applied Mathematics and Computing* (Springer, U.S.A.)
- *MoKCCA 2012 - International Workshop on Mobile Knowledge Centric Computing and Applications / CENTERIS - Conference on ENTERprise Information Systems* Algarve, Portugal, October 3–5, 2012, <http://centeris.eiswatch.org/>
- *The 2011 International Conference on Intelligent Computing (ICIC 2011)*, Zhengzhou, China, August 11–14, 2011, <http://www.ic-ic.org/2011/index.htm>
- *The International Conference on Mobile Ubiquitous Computing Systems, Services and Technologies (UBICOMM)* (Valencia 2008, Malta 2009, Firenze 2010, Lisbona 2011, Barcelona 2012)

### Other scientific activities

- Member since 2010 of the Inter-University Research Centre “Population, Environment and Health”, <http://www.cirpas.it>, Universities of Bari, Foggia and Cosenza (research unit 2 - Economics)
- Member since 2009 of the Inter-University Research Centre “Laboratory of Economic, Environmental and Regional Sciences (LEEReS)”, Universities of Foggia and Bari (research unit Observatory on Tourism, Environmental Economy and Cultural Heritage)
- Member of the Technical Committee of the “International Conference on Mobile Ubiquitous Computing Systems, Services and Technologies” UBICOMM, 29 Sept.–4 Oct. 2008 Valencia (Spain), 11–16 October 2009 Silema (Malta), 25–30 October 2010 Firenze (Italy), 20–25 November 2011 Lisbona (Portugal), September 23–28 2012 Barcelona (Spain).
- Member since 2012 of the Editorial Board of the *International Journal on Advances in Intelligent Systems*, ISSN 1942-2679, IARIA, USA.
- Member since 2006 of the Scientific Committee on Tourism Observatory established in the Department of Economics of the University of Foggia
- Scientific manager since 2006 of the Laboratory for the Quantitative Analysis of Data at the Department of Economics of the University of Foggia
- Technological Auditor for the measure “Research voucher for the realization of free consulting actions to the benefit of SMEs” within the Project NILO – PUGLIA “ILOs’ Network of the State Universities of Puglia” (2008) for:
  - project of “Technology and management computerization”, company Olearia Clemente, Manfredonia, Italy
  - projects “Analytical tools for the implementation of test software for DDR-II memory modules DDR II” and “Research and analysis of open-source business information systems”, company SERE Technology, Bovino, Italy

### PUBLICATIONS

#### Refereed Journal Publications

1. G. Perna, M. Lasalvia, C. Gallo, G. Quartucci, V. Capozzi (2013): “Vibrational Characterization of Synthetic Eumelanin by Means of Raman and Surface Enhanced

- Raman Scattering”, *The Open Surface Science Journal* **5**:1–8, ISSN 1876-5319 (Online).
2. L. Lo Russo, C. Gallo, G. Pellegrino, L. Lo Muzio, G. Pizzo, G. Campisi, O. Di Fede (2013): “Periodontal Clinical and Microbiological Data in Desquamative Gingivitis Patients”, *Clinical Oral Investigations*, Springer Berlin Heidelberg, July 2013, pp.1–9, ISSN 1432-6981 (print version) 1436-3771 (electronic version), DOI 10.1007/s00784-013-1038-8.
  3. C. Gallo, A. Rinaldi, V. Capozzi (2013): “Estimating pollutant emission into the atmosphere: a neural network approach”, *International Journal of Environmental Protection*, ISSN 2226-6437 (Print), ISSN 2224-7777 (Online <http://www.ij-ep.org>), Aug. 2013, Vol. 3 Iss. 8, pp. 29–47.
  4. C. Gallo, F. Malatacca, A. Fratello (2013) “Web Information System Platforms for Publishing Spatial Data”, *International Journal of Web Portals*, 5(2), 34–49, April–June 2013, IGI Global, USA, DOI 10.4018/jwp.2013040103, ISSN 1938-0194, EISSN 1938-0208.
  5. C. Gallo, M. De Bonis (2013): “A Neural Network Model for Forecasting Photovoltaic Deployment in Italy”, *International Journal of Sustainable Energy and Environment*, Vol. 1 No. 1 Feb 2013, pp. 1–13, ISSN 2327-0330.
  6. N. L’Abbate, M. Lasalvia, G. Perna, P. D’Antonio, G. Quartucci, C. Gallo, V. Capozzi (2012): “Using atomic force microscopy for the analysis of morphological and mechanical cell caused by exposure to low doses of pesticides”, *Giornale Italiano di Medicina del Lavoro ed Ergonomia*, Vol. XXXIV No. 3 Suppl., pp. 413–417, ISSN 1592-7830.
  7. C. Gallo, M. Perilli, M. De Bonis (2011): “Energy Saving in Link Stability Routing Protocol”, *Current Development in Theory and Applications of Computer Science, Engineering and Technology*, Volume 4 (1/2) 2011, pp. 1–11, Scientific Advances Publishers, India, ISSN 0976-1438.
  8. C. Gallo (2009): “Parallel Algorithms for Solving Ordinary Differential Equations”, *Journal of Pure and Applied Mathematics: Advances and Applications*, ISSN 0974–9381, Vol. 1, No. 2, pp. 129–141.
  9. C. Gallo (2009): “An Efficient Statistical Approach to Handwritten Digit Recognition,” *Journal of Statistics: Advances in Theory and Applications*, ISSN 0975–1262, Vol. 1, No. 1, pp. 1–17.

10. C. Gallo, and G. De Stasio (2009): “A Mathematical Modelling Approach for Software Testing Optimization,” *Journal of Pure and Applied Mathematics: Advances and Applications*, ISSN 0974–9381, Vol. 1, No. 1, pp. 21–46.
11. C. Gallo (2008): “An Approach to the Description of Formal Languages’ Semantics,” *Journal of Mathematical Sciences: Advances and Applications*, Scientific Advances Publishers, ISSN 0974-5750, Vol. 1 No. 1, pp. 91-108.

### Book Chapters

12. C. Gallo (2010): “Mathematical models of financial markets” in *Applications of Mathematics in Models, Artificial Neural Networks and Arts: Mathematics and Society*, Vittorio Capecchi, Massimo Buscema, Pierluigi Contucchi and Bruno D’Amore Eds., Springer, ISBN 978-90-481-8580-1.
13. C. Gallo (2011): “A Multichannel Framework for Multimedia Content Deployment in e-Health Environments” in *Handbook of Research on ICTs for Healthcare and Social Services: Developments and Applications*, Maria Manuela Cruz-Cunha and Isabel Maria Miranda Eds., IGI Global, USA.
14. C. Gallo, M. Perilli, and M. De Bonis (2010): “Mobile Ad Hoc Networks: Protocol Design and Implementation” in *Handbook of Research on Mobility and Computing: Evolving Technologies and Ubiquitous Impacts*, Maria Manuela Cruz-Cunha and Fernando Moreira Eds., IGI Global, USA, 15-oct-2010, DOI 10.4018/978-1-60960-042-6, ISBN 9781609600426.
15. C. Gallo, G. De Stasio (2006): “Baum-Eagon inequality in probabilistic labeling problems,” post-conference proceedings of the CLADAG 2005 meeting, in *Springer Series “Studies in Classification, Data Analysis, and Knowledge Organization”*, Springer-Verlag, Heidelberg, Germany, 2006, ISBN 3-540-35977-x, pp. 103–110.
16. C. Gallo (2005): “A Game Theoretic Approach to Computer Science: Survey and Research Directions,” in *Metodi Matematici per l’Economia e la Finanza — Primo incontro dei giovani ricercatori delle università pugliesi* (Eds. Lucia Maddalena), Collana Interdipartimentale di Studi Economici – Università di Foggia, Edizioni Scientifiche Italiane, Napoli, vol. 4, pp. 143-164, 2005, ISBN 8849510128.

### Conference Publications

17. C. Gallo, and M. De Bonis (2011): “Analysis of primary and secondary models in predictive microbiology: a neural network approach”, *Mathematica Italia User Group Meeting UGM 2011*, University of Torino, Italy, ISBN 978-88-96810-02-6.

18. C. Gallo, and F. Ciardiello (2010): “An algorithm for computing stable sets in coalitional games in effectiveness form”, *MTISD 2010 Conference Proceedings*, University of Chieti-Pescara, Italy, 12–15 Sep 2010.
19. C. Gallo, and M. De Bonis (2010): “Classification of genomic patterns and protein structures using Clustering and Neural Networks in Mathematica”, *Mathematica Italia User Group Meeting UGM 2010*, University of Milano, Italy, ISBN 978-88-96810-00-2.
20. C. Gallo, M. Perilli, and M. De Bonis (2010): “Link stability in MANETs routing protocols”, *UBICOMM 2010 The Fourth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies*, IARIA Conference Proceedings, Xpert Publishing Services, ISBN 978-1-61208-000-0.
21. C. Gallo (2008): “Combination of Multiple Experts in Pattern Recognition,” *MTISD '06 Conference Proceedings*, Procida, Italy, 28–30 Sep 2006, Di Maio-Gallo-Simonetti (Eds), 2008, ISBN 978-88-464-8381-2, Franco Angeli Publishing, Italy.
22. C. Gallo (2005): “A data set generation algorithm in CAs,” *EUROCON 2005 IEEE Conference, 21-24 nov. 2005, Belgrade, Serbia and Montenegro (contributed paper, refereed)*, *IEEE Catalog Number 05EX1255C*, pp. 744–747, ISBN 1-4244-0050-3.
23. C. Gallo, and G. De Stasio (2005): “Baum-Eagon inequality in probabilistic labeling problems,” *CLADAG International Meeting “Classification and Data Analysis Group”*, Parma, Italy, June 6-8, 2005, Editors Sergio Zani and Andrea Cerioli, ISBN/ISSN 9788878470668.
24. C. Gallo (2005): “Artificial Neural Networks in Financial Modelling”, *XXXVI EWGFM International Meeting “European Working Group on Financial Mathematics”*, Brescia, 5-7 May, 2005

#### PROFESSIONAL SERVICE

- Member of the working group for the implementation of the project “Sustainable Energy Action Plan” of the Province of Foggia–LEEReS for the study of the environmental impact of energy consumption of the towns in the Province of Foggia (framework UE “Covenant of Majors”) (2010/11)
- Professional job by the company DiNets Ltd. Camerano (AN) for a description of the technical and operational characteristics of the MediaWEB – SMART inclusion platform for “multimedia content deployment” (2009)

- Technical-professional appointment from the Autonomous Housing Institute (IACP) of Foggia for the analysis of the corporate information system, the coordination in the implementation of the new website and design the new company's network architecture, as well as support and training to the CED staff in the management of the enterprise information system (2008/09)
- Computer expert member in the Examining Commission for technical/administrative staff, IACP Foggia (2008/09)
- Appointment of consultants for the construction of the Metropolitan Fiber Optic Network by Amgas S.p.A., Foggia (2008/09)
- Member appointed by the University of Foggia in the Board of Directors of the Inter-University Consortium of Puglia for Technological Innovation DAISY (2008/09)
- Component of the computer expert jury for the acquisition of the Environmental Information System at the Department of Environment of the Province of Foggia (2008)
- Scientific Director of UNITECH Ltd., a company for technological innovation of the University of Foggia (2007/08)
- Deputy Rector of the University of Foggia for Information and Communication Technology (2005/08)
- Referee for the University of Foggia in the CIRP project "Interregional Cooperative Computing Platform - PC21", MIUR – PON Objective 1 Regions (2005)
- Task of consulting the Municipality of Foggia in the preparation of special conditions and regulatory framework for the procurement of IT service management (2005)
- Coordinator of the group of staff at the Administrative Office and the Chancellor for "Networks for Research, Student Information System Infrastructure and Informatics", University of Foggia (2005)
- Consultant for the Istituto Zooprofilattico di Puglia and Basilicata on the protocol, digital signature, computer network related issues for the electronic processing of administrative procedures (2004)
- President (computer scientist) of the technical committee for the tender for the supply of an administrative modular information system at the AUSL BA/2 (2003)
- Consultant for the Faculty of Law, University of Foggia for the problems related to the automation of network services, teaching and administrative staff and computer training (2002/03)



- Computer expert member in the commission of a public competition based on qualifications and examinations for the coverage of two expert administrative-professional assistant positions (CAT DS ex VIII level r.f.), Istituto Zooprofilattico of Puglia and Basilicata (2002)
- Informatics consultant for the University of Foggia on problems related to the automation of administrative services (attendance, answering students, library, accounting, workflow, data networks) and computer training staff (2002)
- Chairman of the Board of Examiners of public competition for a fixed period, based on qualifications and examinations, personnel belonging to the No.1 spot category D, Technical, Scientific-Technical and Data Processing area to be assigned to the tasks of systems engineer at the University of Foggia (2002)
- Member of the Commission established by the Rector of the University of Foggia on the identification of information management procedures for the automation of Students' Secretariat, Accounting and Human Resources, Protocol and Library (2001)
- Consultant for the Information System and GARR-B Network Access Port Manager for the University of Foggia (1999/2002)
- Consultant of the Department of Health of Region Apulia for a fairness opinion on the project “ ANIMALS REGISTER DPR 317/96” and project “G.I.O.V.E. LR 24/96” (1997/98)
- Member of the Technical Committee on Design of Information Network of the University of Bari (1996/97)
- Consultant for the automation project of the company Cutolo Michele & Figli s.r.l., Rionero in Vulture (PZ) (1996/97)
- Consultant of Consortium Gargano for the “Fairness opinion on the activity 1.5 inherent Technical Support to the Rural Development of European Community initiative LEADER No. 1” (1996)
- IQS Consortium team member for EU project “ Reporting Apulia” at TECNOPOLIS – Valenzano (BA) for the introduction of technological innovations in the software production cycle (1995/96)
- Manager of the Laboratory of Informatics of the Faculty of Economics, University of Bari at Foggia (1993/97)
- Computer expert component of the jury for the contest relating to the custody of supplies and services automation for USL FG/8 (1993)

- Consultant for the analysis of the municipal information system, the City of Orta Nova (FG) (1992)
- Trainer selected by the Ministry of Education under the National Plan for Information Technology for Teachers of Mathematics and Physics (1987/89)
- Manager of the division “Information Systems Planning and Implementation” for company Information Systems Ltd., Foggia (1983/1991)
- Consultant for the purchase of an automation system, the City of Troia (FG) (1982)
- Software consultant with Telespazio S.p.A., Rome, for the project of remote sensing by Landsat-B satellite (1979/81).

### **Affiliations**

Institute for Electrical and Electronics Engineers (IEEE, USA), Member, 1998–present  
Association for Computing Machinery (ACM, USA), Professional Member, 2004–present  
Associazione Italiana per il Calcolo Automatico (AICA, Italy), Member, 2005–present  
Associazione Laureati in Scienze dell’Informazione (ALSI, Italy), Member, 2004–2009