

Born in Roma,
ITALY
August 7th, 1973.

Home:
Via Francesco di Benedetto, 204
00173 Roma, ITALY
Mobile: +39 320 4269 517
+39 347 9374 437

Office:
Dipartimento di Informatica Sistemi e Prod.
Università di Roma - Tor Vergata
Via del Politecnico, 1
00133 Roma, ITALY
Phone: +39 06 7259 7732
Fax: +39 06 7259 7460 - 7729
e-mail: casalicchio@ing.uniroma2.it
url: <http://www.ce.uniroma2.it/~casali>

Right now I'm successfully working on two challenging research area: i) complex heterogeneous systems modeling and simulation, with particular interest in critical interdependent infrastructures analysis; ii) dynamic service selection in dependable Service Oriented Architectures. I'm also broadly interested next generation mobile services and distributed systems in general.

Research Experience

Nov. 2001 – Present **Researcher**, Department of Computer Science Systems and Production, University of Rome "Tor Vergata".

Main topic of interest: *Distributed Systems Modeling, Design and Performance Evaluation. Critical Interdependent Infrastructures modeling, simulation and analysis*

Oct. 2007 **Visiting** at The Volgenau School of Information Technology and Engineering, Department of Computer Science, George Mason University. Here I worked with Dr. Menascé on "*Service Computing: Optimal Service Selection with QoS constraints*"

Oct. 2003 **Visiting** at The Volgenau School of Information Technology and Engineering, Department of Computer Science, George Mason University. Here I worked with Dr. Menascé on "*GRID systems: QoS oriented resource allocation*"

Education

March. 2002 **Ph.D.** in Computer Science, University of Roma - Tor Vergata

Dec. 1998 **Master Degree** in Computer Engineering, University of Roma - Tor Vergata

Ph.D. Dissertation

Title | Cluster-based Web systems: paradigms and dispatching algorithms
Advisor | Prof. Salvatore Tucci, University of Roma - Tor Vergata, Italy
Co-Advisor | Prof. Michele Colajanni, University of Modena and Regio Emilia, Italy

Teaching Experience

2008 | Lecturer, *Software Design*, University of Rome "La Sapienza", Faculty of Engineering, Rieti Campus.
2002-Present | Lecturer, *Discrete Events Simulation*, University of Rome "Tor Vergata", Faculty of Engineering,
2003- | Lecturer, *Computer Networks, Internet and the Web*, Economic and Financial Police Academy

Present

- 2003 Lecturer, *Web Engineering*, University of Rome - Tor Vergata, Faculty of Engineering
- 2003 Lecturer, *Laboratory of Informatic*, CAMPUS Bio-medico University, Rome, Italy.
- 2003 Lecturer, *Introduction to Computer Systems Architectures and Operating Systems*, Master in Telecommunication Manager, CEDEL, Rome, Italy.
- 2001 Teaching Assistant, *Client-Server Systems*, University of Rome - Tor Vergata, Faculty of Engineering
- 2000 Teaching Assistant, *Computer Systems*, University of Rome - Tor Vergata, Faculty of Engineering
- 1999 Teaching Assistant, *Computer Architectures*, University of Rome - Tor Vergata, Faculty of Engineering
- 1998-2000 Lecturer, *Foundament of Programming*, University of Rome - Tor Vergata, Faculty of Engineering
- 1999-2005 Trainer and Lecturer for the mains Italian Information and Communication Technologies (ICT) companies (TelecomItalia, Wind, Infostrada) and for small and medium ICT companies on the following subjects: Database Programming, Unix Systems Performance Tuning, Protocols and Network Architectures, Web Programming, Web Systems design

Research Projects

- 2008-2010 "D-ASAP: Dependable Adaptable Software Architecture for Pervasive computing." project funded by the Italian Ministry of University and Research.
- 2008-2011 Cultural and direct scientific collaboration grant between University of Roma Tor Vergata, Italy and George Mason University, VA, USA – funded by University of Roma Tor Vergata
- 2008-2010 DIESIS – Design of an Interoperable European federated Simulation network for critical InfraStructures" EU co-funded project
- 2006-2008 Computational Center for Complex System Research (CRESCO) project, sponsored by Energy and Environment National Agency (ENEA), Italy
- 2002-2006 Performance Evaluation of Complex Systems: Techniques, Methodologies, and Tools (PERF) project, sponsored by Italian Ministry of University and Research
- 2002-2004 Internet: QoS, integration and Security, sponsored by National Research Council, Italy
- 2002-2003 High QoS Web Systems, sponsored by Italian Ministry of University and Research
- 2002-2003 Computational GRIDs and Applications, sponsored by National Research Council, Italy

Professional Experiences

- 2008 (Feb.-May) **Design of a distributed system for custom intelligence.** Consultant for the *Italian Custom Agency – Twinning project Italy-Jordan*
- 2006-2008 **Design of Service discovery and composition mechanisms in mobile heterogeneous environments,** Consultant for *Radiolab*, Simple Mobile Service project (EU FP6)
- 2004-2005 **Design of context aware publish/subscribe systems,** Consultant for *TelecomItalia s.p.a.*, Dynamically Evolving Large Scale Information Systems (DELIS) project (EU FP6)
- 2001-2003 **Healthcare database design and implementation,** ICT Services Center, Univ. of Roma Tor Vergata, DEV: Mobile Devices for Healthcare Applications (MOBI-DEV) project

Invited Talks, Seminar and Tutorials

- Sept. 2008 Seminar *Critical Infrastructure Agent Based simulator (CIAB): lessons learned*, ENEA, Portici (Italy)
- May. 2008 Seminar *Agent Based Modeling and Simulation of Complex Systems*, Department of Enterprise Engineering, University of Roma – Tor Vergata.
- Oct. 2007 Invited talk *Critical Infrastructure Protection: The Research Challenge in Europe* George Mason University (Fairfax, VA)
- Sept. 2007 Seminar *Federated Agent Based Modeling and simulation: new approach to study interdependencies in Critical Infrastructures*, Research Center "Ennio De Giorgi" Scuola Normale Superiore, Pisa, Italy
- May 2006 Tutorial *Through the Evolution of Publish/Subscribe Systems*, 20th European Conference on Modelling and Simulation (ECMS2006), Bonn, Germany

Services and Professional Activities***Societies***

Member of the **Italian Society of Critical Infrastructure Experts (AIIC)**

Member of the **IFIP W.G. 11.10 on Critical Infrastructure Protection**

Thesis

- 2007 Co-Advisor of the **Doctoral dissertation** in Computer Science and Control Engineering, University of Roma "Tor Vergata": *Content-based publish/subscribe systems: architectures and algorithms*. Candidate Dr. Federico Morabito
- 2002 Co-Advisor of two Computer Science **Master Degree Internship dissertation**, University of Roma Tor Vergata - Vilnius Gediminas Technical University
- 2001- Present Co-Advisor of more than 25 Computer Engineering **Master Degree dissertations**, University of Roma Tor Vergata.

Refereeing

- Books* 2003 Web clusters, Tim Kientzle, Jhon Wiley & Sons Inc
- Journals* 2007 IEEE Transaction On Software Engineering
- 2008 Elsevier Computer Communications
- 2005 IEEE Internet Computing
- 2004, Journal of Systems and Software, Elsevier
- 2003, Performance Evaluation Review , NorthHolland
- Conferences* 2008, IFIP/IEEE International Workshop on Critical Information Infrastructures Security (CRITIS'08)
- 2008, IFIP WG11.10 Conference on Critical Infrastructure Protection
- 2007, 41st Hawaiian International Conference on System Sciences
- 2007, IEEE-ACM Mascot
- 2004, IEEE Vehicular Technology Conference

- 2004, Networking
IFIP-T6 conference
- 2003, IEEE International Conference on Communication
- 2003, IEEE Vehicular Technology Conference

Chairs

- 2009 Poster Chair IEEE Int. Symposium on Distributed Simulation and Real Time applications (DS-RT 2009)
- 2008 Demo Co-Chair IEEE Int. Symposium on Distributed Simulation and Real Time applications (DS-RT 2008)
- 2008 Local Organization Chair, 3rd Int. Workshop on Critical Information Infrastructures Security (CRITIS'08)
- 2005 Session Chair ACM-MSWIM2005
- 2004 Session Chair "Critical Infrastructures Protection: the Simulation Approach" - EUROSIM2004.

Committees

- 2009 Program Committee of 2009 SERSC International Conference on Disaster Recovery and Business Continuity
- 2009 Advisory/Editorial Board member of the SERSC International Journal of Disaster Recovery and Business Continuity
- 2006 Program Committee of EUROPEAN Conference on Modelling and Simulation (Simulation in Industry, Business and Services (IBS) track)
- 2004 Program Committee of European Simulation Multiconference – ESM2004.
- 2002 2002 Organizing Committee International Symposium on Computer Performance Modeling - Performance2002.

Selected Publications (for a complete list see ListOfPublications34824-07-03.pdf file)

Book Chapters

- 2008 **E.Casalicchio**, E.Galli, *Metrics for quantifying interdependencies, Chapter 17 in Critical Infrastructure Protection II*, M.Papa and S.Shenoi Eds., Springer Publisher, 2008
- 2008 R. Setola, S. Bologna, **E. Casalicchio**, V. Masucci, *An integrated approach for simulating interdependencies*, Chapter 16 in Critical Infrastructure Protection II, M.Papa and S.Shenoi Eds., Springer Publisher, 2008
- 2006 P.Donzelli, **E.Casalicchio**, R.Setola, S.Tucci, *Modelling and Simulation of Interdependent Critical Infrastructure: The Road Ahead.*, Chapter 9 in Communication Network & Complex Systems, Imperial College Press, 2006

Journals

- 2006 **E.Casalicchio**, F.Morabito, F.Davide, G.Cortese, *.A novel approach to adaptive content-based subscription management in DHT-based overlay networks.*, Journal of Grid Computing, Springer Netherlands, Global and P2P Computing special issue . 2006.
- 2006 N. Bartolini, **E. Casalicchio**, A performance analysis of context transfer protocols for QoS enabled Internet services, Elsevier Computer Networks, Vol.50, No. 1, January 2006
- 2004 N.Bartolini, **E.Casalicchio**, S.Tucci, *.A walk through Content Delivery Networks.* Lecture Notes in Computer Science: Performance Tools and Applications to Networked Systems, M.C. Calzarossa and E. Gelenbe Editors, Elsevier 2004.
- 2004 M.Andreolini, **E.Casalicchio**, M.Colajanni, M.Mambelli, *.A cluster-based Web System Providing Differentiated and Guaranteed Services.*, Cluster Computing, vol.7, Kluwer Academic Publishers, 2004
- 2004 D.A.Menascé, **E.Casalicchio**, *.QoS in Grid Computing.*, IEEE Internet Computing, July-Aug. 2004.
- 2004 V. Cardellini, **E. Casalicchio**, M. Colajanni, P.S. Yu, *.The state of the art in locally distributed Web-server systems.*, ACM Computing Surveys, 2002

Conferences

- 2008 **E.Casalicchio**, E.Galli, S.Tucci, Modeling and simulation of Complex Interdependent Systems: a federated agent-based approach, 3rd International Workshop on Critical Information Infrastructures Security (IEEE/IFIP), 13-15 Oct.2008, Roma, Italy.
- 2008 D.A.Menascé, **E.Casalicchio**, V.Dubay, *A Heuristic Approach to Optimal Service Selection in Service Oriented Architectures* . Proc. of ACM Workshop on Software and Performance, Princeton, NJ, USA June 2008 (selected for Journal Publication – 2009)
- 2008 **E.Casalicchio**, E.Galli, *Federated Agent Based Modeling and Simulation: an Approach to Study Complex Critical Systems*, 22nd ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (PADS 2008 – Demo paper) June 3-6, 2008, Rome, Italy
- 2007 **E.Casalicchio**, E.Galli, S.Tucci, *Federated Agent-based Modeling and Simulation Approach to Study Interdependencies in IT Critical Infrastructures*. Proc. of 11th IEEE Int. Symposium on Distributed Simulation and Real Time applications (DS-RT07), Greece, Crete, Oct 2007
- 2007 V. Cardellini, **E. Casalicchio**, E. Galli, *Agent-based Modeling of Interdependencies in Critical Infrastructures through UML*, Proc of Spring Simulation Multiconference 2007/Agent Discrete Simulation 2007, Norfolk, VA, March 2007.
- 2007 V. Cardellini, **E. Casalicchio**, V. Grassi, F. Lo Presti, *Flow-based service selection for Web service composition supporting multiple QoS classes*, Proc. of IEEE 2007 International Conference on Web Services, Salt Lake City, UT, July 2007.
- 2007 G.Bartolomeo, **E.Casalicchio**, S.Salsano, N.Blefari-Melazzi, *.Design and Development Tools for Next Generation Mobile Services.*, The Second International Conference on Software Engineering Advances, France, Aug. 2007 (IEEE Computer SocietyPress)
- 2007 N. Blefari-Melazzi, **E. Casalicchio**, S. Salsano, *Context-aware Service Discovery in Mobile Heterogeneous Environments*, 16th IST Mobile & Wireless Communications Summit 2007, Budapest, Hungary, July 2007.
- 2007 **E. Casalicchio**, F. Morabito, *Distributed subscriptions clustering with limited knowledge sharing for content-based publish/subscribe systems*, Proc. of 6th IEEE Int'l Symposium on Network Computing and Applications, Cambridge, MA, USA, July 2007.
- 2006 V. Cardellini, **E. Casalicchio**, V. Grassi, R. Miranda, *A framework for optimal service*

- 2004 *selection in broker-based architectures with multiple QoS classes*, Proc. of Int'l Workshop on Modeling, Design, and Analysis for Service-oriented Architecture (mda4soa 2006) (in conjunction with IEEE SCC 2006 and IEEE ICWS 2006), Chicago, IL, Sept. 2006.
- 2004 D.A.Menascé, **E.Casalicchio**, *.A framework for Resource Allocation in Grid Computing.*, MASCOOTS2004 Conference, IEEE/ACM, Oct. 2004.

References

Prof. Salvatore Tucci
Computer Science System and Production Department
University of Roma - Tor Vergata
Via del Politecnico, 1
00133 Roma, Italy
E-mail: s.tucci@governo.it
Phone: +39 06 67794185 +39 329 4308002

Prof. Daniel A. Menasce
Senior Associate Dean
The Volgenau School of Information Technology and Engineering,
George Mason University,
4400 University Drive, MS 5C8
Fairfax, VA 22030
E-mail: menasce@gmu.edu
Phone: (703) 993-1499

Dr. Sandro Bologna
Project Manager,
Modelling and Simulation Department
ENEA, Italian National Agency for New Technology, Energy and the Environment,
C.R. Casaccia,
Via Anguillarese, 301,
Roma 00123, Italy
E-mail: bologna@casaccia.enea.it
Tel: +39 06 30483708

Prof. Michele Colajanni,
Full Professor
Dipartimento di Ingegneria dell'Informazione
University of Modena e Reggio Emilia
Via Vignolese 905
41100 Modena, Italy
E-mail: colajanni@unimo.it
Tel.: +39 059 2056137

Prof. Vincenzo Grassi,
Full Professor
Computer Science System and Production Department,
University of Roma – Tor Vergata,
Via del Politecnico 1,
00133 Roma, Italy
E-mail: vgrassi@info.uniroma2.it
Tel: +39 06 72597380