

VITTORIO CORTELLESA - *CURRICULUM VITAE*

PERSONAL INFORMATION

Role: Full Professor (since March 2018)

Employer: Università degli Studi dell'Aquila, Department of Computer Engineering and Science, and Mathematics (DISIM)

Education: PhD in Computer Science, October 1995, Università di Roma Torvergata; PhD dissertation: "Performance optimization of Time Warp-based concurrent simulators".

MAIN POSITIONS COVERED (in reverse chronological order)

Long term (more than 6 months)

(March 2005 – February 2018)

Associate Professor - Università degli Studi dell'Aquila, Department of Computer Science

(November 2001 – February 2005)

Researcher - Università degli Studi dell'Aquila, Department of Computer Science

(January 2000 - October 2001)

Research Assistant Professor - Lane Computer Science and Electrical Engineering Department, College of Engineering and Mineral Resources, West Virginia University, Morgantown, WV (USA).

(April 2000 - October 2001)

Assegnista di Ricerca - Dipartimento di Informatica, Sistemi e Produzione, Università di Roma Torvergata.

(January 1998 - December 1999)

Post-Doc - Dipartimento di Informatica, Sistemi e Produzione, Università di Roma Torvergata.

(July 1997 - December 1997)

Post-Doc Fellow - European Space Agency (ESRIN, Frascati, Italy).

(November 1991 - October 1995)

PhD student - Università di Roma Torvergata.

Short term (less than 6 months)

Visiting Professor - Lane Computer Science and Electrical Engineering Department, College of Engineering and Mineral Resources, West Virginia University, Morgantown, WV (USA): April - July 2012 ; April - June 2005 ; November - December 2002.

CERTIA Research Center (Università di Roma Torvergata), research contract on the EVAS project funded by Eurocontrol: 01/10/1997 - 31/12/1997

CERTIA Research Center (Università di Roma Torvergata), research contract on the PAMPAS project funded by Eurocontrol: 01/06/1996 - 31/12/1996

Istituto di Informatica (Università di Ancona), research contract on the ECRAN project funded by European Community: 01/07/1996 - 31/10/1996

Visiting research associate - Concurrent Engineering Research Center, West Virginia University, Morgantown, WV (USA): 19/2/1994 – 19/9/1994

Systems&Management (Italy), research contract on the RAPT project funded by European Community: 01/11/1993 - 28/02/1994

CERTIA Research Center (Università di Roma Torvergata), research contract on the GAAS project funded by European Community: 01/03/1993 - 31/08/1994

CONFERENCE ORGANIZATION

General co-Chair

- 2nd ACM/SPEC International Conference on Performance Engineering (ICPE 2011)
- Working IEEE/IFIP Conference on Software Architecture and Component-Based Software Engineering and Software Architecture (WICSA and COMPARCH 2016)
- 8th ACM/SPEC International Conference on Performance Engineering (ICPE 2017)

Program co-Chair

- 6th ACM International Workshop on Software and Performance (WOSP 2007)
- 7th European Performance Engineering Workshop (EPEW 2010)
- 38th Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2012)
- 16th International Conference on Fundamental Approaches to Software Engineering (FASE 2013)
- 7th International Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2013)
- 12th ACM/SPEC International Conference on Performance Engineering (ICPE 2021)

Program Committee Member (major conferences)

- IEEE International Symposium on High-Assurance Systems Engineering (HASE): 2004
- ACM International Workshop on Software and Performance (WOSP): 2010, 2008, 2005
- IEEE/ACM International Conference on Automated Software Engineering (ASE): 2017, 2016, 2015, 2014, 2012, 2011, 2010, 2009, 2006
- International Conference on Fundamental Approaches to Software Engineering (FASE): 2020, 2015, 2014, 2010, 2008
- SPEC International Performance Evaluation Workshop (SIPEW): 2008
- IEEE/ACM International Conference on Software Engineering (ICSE): 2021 (Journal First Track), 2017, 2016 (Program Board), 2014 (Program Board), 2012, 2011, 2009

- ACM/IEEE International Conference on Model-Driven Engineering Languages and Systems (MODELS): 2012, 2010
- European Performance Engineering Workshop (EPEW): 2016, 2011
- IEEE International Symposium on Software Reliability Engineering (ISSRE): 2015, 2011
- ACM/SPEC International Conference on Performance Engineering (ICPE): 2020, 2019, 2018, 2016, 2015, 2014, 2012
- International Conference on Quality Software (QSIC): 2012
- ACM SIGSOFT International Symposium on Architecting Critical Systems (ISARCS): 2013
- Joint meeting of the European Software Engineering Conference and the ACM Symposium on the Foundations of Software Engineering (ESEC/FSE): 2021, 2019, 2013
- International Conference on the Quality of Software Architectures (QoSA): 2015, 2014
- ACM/IEEE International Conference on Software Architecture (ICSA): 2021, 2020, 2019, 2018, 2017
- International Conference on Ambient Systems, Networks and Technologies (ANT): 2017
- European Dependable Computing Conference (EDCC): 2018, 2017
- European Conference on Software Architecture (ECSA): 2021, 2020, 2017

Steering Committee Member

- ACM International Workshop on Software and Performance (WOSP): 12/07/2005 - 30/01/2010
- ACM/SPEC International Conference on Performance Engineering (ICPE): 14/03/2011 - today
- European Joint Conference on Theory and Practice of Software (ETAPS): 26/03/2011 - 13/04/2014

Co-Organizer

- Third International Workshop on Software Engineering for Sensor Network Applications (SESENA 2012)
- 12th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Model-Driven Engineering (SFM 2012)

EDITORIAL BOARD PARTICIPATION

- Empirical Software Engineering journal (Springer): 01/09/2013 - today
- ACM Transactions on Software Engineering and Methodology: 01/01/2014 - 31/12/2020

TUTORIALS AND INVITED TALKS

Tutorials

- "Performance Validation of Mobile Software Architectures", Vittorio Cortellessa, Vincenzo Grassi, Raffaella Mirandola: 1) IFIP Performance Conference, Rome (Italy), September 2002; 2) ACM International Workshop on Software and Performance, Redwood City (USA), January 2004

- "Transformations of Software Models into Performance Models", Vittorio Cortellessa, Antinisca Di Marco, Paola Inverardi: 1) Quantitative Evaluation of Systems Conference, Enschede (NED), September 2004; 2) International Conference on Software Engineering, St. Louis (USA), May 2005
- "Transformations from software models to quality models: mechanisms, approaches, technologies, tools", Vittorio Cortellessa, Antinisca Di Marco, Luca Berardinelli: ACM International Workshop on Software and Performance, Princeton (USA), June 2008

Invited Talks

- "Software Performance Antipatterns: Modeling and Analysis", 12th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Model-Driven Engineering, 18-23 June 2012, Bertinoro (Italy)
- "Optimization models for non-functional requirements validation", The 25th CREST Open Workshop: Requirements and Test Optimisation, UCL, London (UK), February 2013
- "Tradeoff analysis of software quality attributes through optimization models", 10th International Workshop on Formal Engineering approaches to Software Components and Architectures , FESCA@ETAPS, Rome (Italy), March 2013
- "Performance Antipatterns: state-of-art and future perspectives", 10th European Workshop on Performance Engineering, EPEW, Venice (Italy), September 2013
- "Performance-Driven Software Model Refactoring", 1st International Workshop on Software Refactoring, IWor@ASE 2016, Singapore, September 2016
- "Performance-Driven Software Model Refactoring", 1st International Workshop on Testing Extra-Functional Properties and Quality Characteristics of Software Systems (ITEQS@ICST), Tokyo (Japan), May 2017

AWARDS

- Best Paper Award at 1st Conference on Simulation Modeling and Applications (CSMA 1998)
Title : "An Analysis of the Efficiency of Optimistically Synchronized Parallel Simulators"
Authors : Vittorio Cortellessa, Francesco Quaglia
- ACM Best Paper Award at 14th IEEE/ACM Workshop on Parallel and Distributed Simulation (PADS 2000)
Title : "Grain sensitive event scheduling in time warp parallel discrete event simulation"
Authors : Francesco Quaglia, Vittorio Cortellessa
- EASST Best Paper Award at 13th European Joint Conferences on Theory and Practice of Software (ETAPS 2010)
Title : "Performance Modeling and Analysis of Context-Aware Mobile Software Systems"
Authors : Luca Berardinelli, Vittorio Cortellessa, Antinisca Di Marco
- ACM Best Poster Award at 8th Component-Based Software Engineering and Software Architecture Conference (COMPARCH 2014)
Title : "Performance-based Selection of Software and Hardware Features under Parameter Uncertainty"
Authors : Leire Exteberria, Catia Trubiani, Vittorio Cortellessa, Goiuria Sagardui
- IEEE/ACM Distinguished Reviewer Award at 31st IEEE/ACM International Conference on Automated Software Engineering (ASE 2016)
- 10-Years Most Influential Paper Award at ACM/IEEE International Conference on Software Architecture (ICSA 2017)

Title : "A Modeling Approach to Analyze the Impact of Error Propagation on Reliability of Component-Based Systems" @ CBSE 2007
Authors : Vittorio Cortellessa, Vincenzo Grassi

PARTICIPATION TO RESEARCH PROJECTS

- EU IST FP6 (STREP project), Grant number: 026955, PLASTIC : Providing Lightweight and Adaptable Service Technology for pervasive Information and Communication: 01/04/2004 - 31/03/2007
- EU IST FP6 (STREP project), Grant number: 034241, POPEYE : Peer-to-Peer Collaborative Working Environments over Mobile Ad-Hoc Networks: 01/05/2006 - 31/07/2008
- ERC FP7 (IDEAS Project), Grant number: 240555, VISION : Video-oriented UWB-based Intelligent Ubiquitous Sensing: 01/04/2010 - 31/03/2015
- ARTEMIS Joint Undertaking Programme, Grant number: ARTEMIS-2010-1-269362, PRESTO : Improvement of Industrial Realtime Embedded Systems Development Process: 01/04/2011 - 31/03/2015
- ARTEMIS Joint Undertaking Programme, Grant number: ARTEMIS-2011-1-295371, CRAFTERS : ConstRaint and Application driven Framework for Tailoring Embedded Real-time Systems: 01/06/2012 - 31/03/2015

RESPONSIBILITY OF RESEARCH PROJECTS

Principal Investigator

- "Bayesian framework for reliability prediction of component based software", funded by NASA IV&V Facility (Fairmont, WV, USA): 01/04/2000 - 01/03/2001
- "Verification and validation of UML dynamic specifications", funded by NASA IV&V Facility (Fairmont, WV, USA): 01/10/2000 - 30/09/2001
- "Global Software Project (GSP V3.0)", funded by Siemens Corporate Research (Princeton, USA): 01/10/2007 - 30/09/2008
- "Dynamic Positioning System Architecture", funded by Chemtech Servicos de Engenharia e Software Ltda. (Rio de Janeiro, Brazil): 01/10/2009 - 30/09/2010
- "Consistent evolution of software artifacts and non-functional models", funded by European Office for Aerospace Research and Development (EOARD - Air Force), Award for Grant/Coperative Agreement no.FA-8655-11-1-3055: 01/10/2011 - 30/09/2014

Research Unit Responsible

- "Progettazione e validazione delle prestazioni in sistemi mobili", funded by MIUR, Progetto Giovani Ricercatori: 01/01/1999- 31/12/1999
- "Performability-Aware Computing: Logics, Models, and Languages (PaCO)", PRIN funded by MIUR , D.M. 1175 del 18/09/2007 (PRIN 2007): 22/09/2008 - 21/09/2010
- "MegaModelling at Runtime - scalable model-based framework for continuous development and runtime validation of complex systems (MegaM@Rt2)", Programme/Call: H2020-ECSEL-2016-1-RIA-two-stage, Proposal: 737494-2 - MegaMaRt2: 01/04/2017 – today

TECHNOLOGICAL TRANSFER

- Participation to the MISE-funded project: RIDITT "Ricostruire" - Trasferimento tecnologico e creazione di nuove imprese nell'ambito delle tecnologie ICT avanzate applicate allo sviluppo economico e territoriale post sisma: 01/04/2012 - 31/03/2015
- Responsible for the Dipartimento di Informatica dell'Università dell'Aquila, as subcontractor of Thales Italia (Chieti), in the context of the MIUR-funded project entitled: "Reti di sensori e architetture distribuite di controllo e comunicazione wireless: un progetto di prevalente ricerca industriale per il riorientamento e la riqualifica professionale della struttura di ricerca di Thales Italia SpA in Chieti" (2012-2015)
- Responsible for the Dipartimento di Informatica dell'Università dell'Aquila, as subcontractor of Thales Italia (Chieti), in the context of the European Defense Agency (EDA)-funded project entitled: "TACTICal Service oriented architecture" (2012-2016)

EVALUATION OF RESEARCH ACTIVITIES

- Research proposal reviewer for the Netherland Organization for Scientific Research (NWO), Jacquard Research Programme (2009)
- Research proposal reviewer for the Natural Science and Engineering Research Council of Canada, Discovery Grants program (2010)
- Member of the visiting committee (Agence d'evaluation de la recherche et de l'enseignement superieur (AERES)) for the evaluation of research activities at Laboratoire d'Informatique de Nantes Atlantique (LINA – UMR 6241) (2010)
- Research proposal reviewer for the Information and Communication Technology Call, Vienna Science and Technology Fund (WWTF), Austria (2012)
- Research proposal reviewer for the Swiss National Science Foundation (2013)

SUPERVISION/EVALUATION OF PHD STUDENTS AND CANDIDATES

Advisor of PhD Students

- Pasqualina Potena (Università "G. D'Annunzio" di Chieti-Pescara, 2004-2008) – PhD Dissertation: "Decision Supporting Models for Component-Based and Service-Oriented Software Development" (*co-advised*)
- Carlo Rosa (Università dell'Aquila, 2005-2010) - PhD Dissertation: "Cross-layer Protocols in MANETS"
- Luca Berardinelli (Università dell'Aquila, 2007-2011) – PhD Dissertation: "Non-Functional Modeling and Analysis of Context-Aware Software Systems"
- Catia Trubiani (Università dell'Aquila, 2007-2011) – PhD Dissertation: "Automated generation of architectural feedback from software performance analysis results"
- Davide Arcelli (Università dell'Aquila, 2011-2015) – PhD Dissertation: "Model-based Software Refactoring Driven by Performance Analysis"
- Daniele Di Pompeo (Università dell'Aquila, 2015-2019) - PhD Dissertation: "Automated Software Refactoring driven by non-functional properties"
- Luca Traini (Università dell'Aquila, 2017-ongoing) (*co-advised*)

- Michele Tucci (Università dell'Aquila, 2017-ongoing) (*co-advised*)
- Tiziano Lombardi (Università dell'Aquila, 2018-ongoing) (*co-advised*)

International PhD Committee Member – Final Exam

- Genaina Nunes Rodrigues, University College London (UK), Advisor : David Rosenblum (2008)
- Jing Xu, Carleton University (Canada), Advisor : Murray Woodside (2008)
- Egor Bondarev, Technical University of Eindhoven (Netherlands), Advisor : Michel Chaudron (2009)
- Lorea Belategui Olascoaga, Mondragon Unibertsitatea (Spain), Advisor : Goiuria Sargadui (2012)
- Diego Perez Palacin, Universidad de Zaragoza (Spain), Advisor : Jose Merseguer (2012)
- Dorin B. Petriu, Carleton University (Canada), Advisor : Murray Woodside (2014)
- Yasmeen Rafiq, University of York (UK), Advisor : Radu Calinescu (2015)
- Mehrdad Saadatmand, Malardalen University (Sweden), Advisor : Michael Sjodin (2015)
- Shadi Ghaith, University College Dublin (Ireland), Advisor : John Murphy (2015)
- Teerat Pitakrat, Universitat Stuttgart (Germany), Advisor: Andre van Hoorn (2018)
- Sergiy Kolesnikov, Universitat Passau (Germany), Advisor: Sven Apel (2019)
- Tanwir Amad, University of Helsinki (Finland), Advisor: Dragos Truscan (2020 - only review)

Member of Committee for the Admission to National PhD programs

- Informatica ed Applicazioni presso l'Università dell'Aquila - XIX ciclo (2003)
- Ingegneria e Scienze dell'Informazione presso l'Università dell'Aquila - XXXII ciclo (2016)

Chair of Committee for the Admission to National PhD programs

- Informatica ed Applicazioni presso l'Università dell'Aquila - XXIV ciclo (2008)

Member of National Committee for PhD Title Assignment

- Dottorato in Scienze presso l'Università "G. D'Annunzio" di Chieti-Pescara (2008)
- Dottorato in Informatica presso l'Università di Roma Torvergata (2009)
- Dottorato in Informatica ed Ingegneria dell'Automazione presso l'Università di Roma Torvergata (2010)
- Dottorato in Ingegneria dell'Informazione presso il Politecnico di Milano (2012)

Chair of National Committee for PhD Title Assignment

- Dottorato in Ingegneria e Scienze dell'Informazione presso l'Università dell'Aquila (2017)

Member of PhD Boards

- Informatica ed Applicazioni (Università dell'Aquila) - from XIX to XXVII ciclo (2003–2012)
- Ingegneria e Scienze dell'Informazione (Università dell'Aquila) - from XXVIII ciclo to today (2012-today)

TEACHING

Regular courses at Università dell'Aquila

- Operating Systems (undergrads, 6 credits) : since 2001-2002 up today
- Advanced Software Engineering (grad. stud., 6 credits) : since 2004 -2005 up today
- Advanced Models for Software Engineering (grad. stud., 3 credits) : since 2016-2017 up today
- Software Engineering Project (grad. stud., 3 credits) : 2010-2011
- Foundations of Computer Science (undergrads at Economics, 3 credits) : 2003-2004
- Software Engineering I (undergrads, 6 credits) : 2001-2002

Thesis Supervisor

- About 60 Bachelor Degree and 35 Master Degree theses supervised (in Computer Science, Computer Engineering, Mathematics) at Università dell'Aquila (2002-today)
- 3 Master theses (in Computer Science) co-supervised at West Virginia University (2000-2001)

Adjunct Lecturer @ West Virginia University (USA)

- Formal Methods in Software Engineering (CS376) : Fall Semester 2000

Re-qualifying industry employee courses

- "Model-Driven Engineering" at Thales Italy (Chieti) in the context of a MIUR-funded project entitled: "Reti di sensori e architetture distribuite di controllo e comunicazione wireless: un progetto di prevalente ricerca industriale per il riorientamento e la riqualifica professionale della struttura di ricerca di Thales Italia SpA in Chieti" (2012-2015)
- "UML" at Ericsson Italy (Roma) in the context of a peer-to-peer agreement for the re-qualification of Ericsson researchers (2008)

OTHER COMMITTEES

- Member of Committee for the selection of a Senior Lecturer (full time - permanent employment) at School of Innovation, Design and Engineering of Malardalen University (Sweden, 2015)
- Member of Committee for the confirmation in their role of Associate Professors (Italy, 2008-09)
- Chair of Committee for the selection of a Computer Engineer at Azienda Regionale per la Tutela dell'Ambiente (ARTA) dell' Abruzzo (Italy, 2007-08)

UNIVERSITY SERVICES

- Member of the Scientific Committee of the DEWS Excellence Center (2005-2011)
- Member of the Coordination Council of the DEWS Excellence Center (2011 - today)
- Member of the Department Orientation Committee (2003-today)
- Member of the Department Spaces and Laboratories Committee (2016-today)
- Member of the Department Committee for the Analysis of Curricula (2016-today)

WEB SITE: <http://people.disim.univaq.it/cortelle/>

GOOGLE SCHOLAR PROFILE: <http://scholar.google.com/citations?user=s4JPUOEAAAAJ>

LIST OF PUBLICATIONS (DBLP) : <http://dblp.uni-trier.de/pers/hd/c/Cortellessa:Vittorio>