Curriculum Vitae et Studiorum

Tullio Vardanega

Latest update: 12 May 2024

1. Personal data

Family name: Vardanega
Given name: Tullio
Citizenship: Italian
Date of birth: 12 January1963
Birth place: La Spezia (SP), I-19124 Italy
Home address: via G.C. Abba, 24/A, I-35138 Padova (PD)
Current employment: Professor (Associate)
Language abilities: Italian (mother tongue), English (fluent), French (fluent), Spanish (fluent), Dutch (average)
Professional home page: https://didattica.unipd.it/off/docente/BD33E4F435AC4372A99ED59CDD3FB10A

2. Education

- PhD in Computer Science, Technical University of Delft, Netherlands, October 1998.

- MSc in Computer Science, University of Pisa, Italy, July 1986.

3. Professional Experience

October 2004 – .

Associate professor, Computer Science, Department of Mathematics, University of Padua, Italy. <https://www.math.unipd.it/en/>.

- See §4-§7, mapped to the relevant time period, for the record of achievements in this position.

December 2001 – September 2004

Assistant professor, Computer Science, Department of Mathematics, University of Padua, Italy. <https://www.unipd.it/en/>, Italy.

- See §4-§7, mapped to the relevant time period, for the record of achievements in this position.

July 1991 – November 2001

Member of technical staff at the European Space Agency Technology and Research Center <https://www.esa.int/About_Us/ESTEC>, Noordwik, Netherlands.

- Technical officer, expert in onboard embedded software technologies, development and verification methods for industrial projects and research investigations.

- Author of STR-260 (1999) "**Development of On-Board Embedded Real-Time Systems: An Engineering Approach**", published by the European Space Agency with ISBN: 90-9092-334-2, 132 pages <http://www.esa.int/esapub/bulletin/bullet101/bul101_publicat.pdf>.

December 1987 – June 1991

Member of the "Operating Systems Group" at Intecs <http://www.en.intecs.it/>, Pisa, Italy.

- Team leader (6 FTE) in EC-funded collaborative project "IOLE" <https://cordis.europa.eu/project/rcn/14471/factsheet/en>, grant R1017, Research and Development in Advanced Communications Technologies (RACE) program, 1988-1992.

- Team leader (3 FTE) in National research project "**General Purpose Distributed Memory Parallel Operating System**", under grant from National Research Council.

- External lecturer, "Processor Architectures" course, Diploma in Informatics, Department of Computer Science, University of Pisa, Italy.

4. University-level Teaching and Service Duties

Teaching duties

- *Software Engineering*, BSc, 3rd year, 13 credit points. Since 2002.

- *Runtimes for Concurrency and Distribution*, MSc, 1st year, 6 credit points. Since 2004.

- *Real-Time Kernels and Systems*, MSc, 2nd year, 6 credit points. Since 2004.

Service duties

- Representative of the University of Padua in the Board of Directors of the National Inter-University Consortium on Informatics (CINI) <https://www.consorzio-cini.it/index.php/en/> since 2014. Member of the administrative committee of the same, since 2022.

- **Coordinator of the internship program** of the BSc curriculum. Since 2004. <http://informatica.math.unipd.it/organizzazione/index.html>

- Supervisor of BSc final projects (322 since 2003, 18.6% of the full student cumulative population in the curriculum).

- Supervisor of MSc final projects (59 since 2006, 13.2% of the full student cumulative population in the curriculum).

- Supervisor of PhD students (12 since 2008, 9 national, 3 international; 1 international co-supervision 1999-2002, Spain).

- Member of external PhD Juries (5 since 2007; France, Spain)

- Member of the PhD Course in Brain, Mind and Computer Science <http://hit.psy.unipd.it/BMCS-Overview> (2014 - .), University of Padua, Italy; **representative of the "Computer Science and Innovation for Societal Challenges" curriculum** (see <http://hit.psy.unipd.it/Faculty>)

- Member of the PhD Course in Computer Science (2012-2016), University of Padua, Italy; **representative of the curriculum** (2014-2016).

- Member of the PhD Course in Computer Science (2006-2011), joint undertaking with the University of Bologna, Italy.

5. University-level Research and Collaboration Work

Real-Time Systems

Group size (PhD students, post-docs, master students), peaking at 10 units.

- Principal Investigator in study projects for the European Space Agency (ESA). **Total volume of funding: 400k euro**.

  ○ P4S, 2014-2016 (execution-time analysis for multicore processors).

  ○ DE4FMLC, 2013-2015 (operating systems for multicore processors).

  ○ PEAL, 2004-2008 (execution-time analysis).

  ○ COLA, 2009-2010 (execution-time analysis).

- Principal Investigator in collaborative projects funded by the European Commission. **Total volume of funding: 600k euro**.

  ○ PROXIMA <http://www.proxima-project.eu/>, FP7, 2013-2016, grant 611085.

  ○ PROARTIS <http://www.proartis-project.eu/>, FP7, 2010-2012, grant 249100.

- Networking actions

- ○ Member of the steering group of the COST Action "TACLe" <http://www.tacle.eu/>, 2013-2016, grant IC1202.

Software Engineering, Development Processes, and Programming Languages

Group size (PhD students, post-docs, master students), peaking at 5 units.

- Principal Investigator in study projects for the European Space Agency (ESA). **Total volume of funding: 120k euro**.
  - ○ CORDET-2, 2010-2012 (software reference architectures and software reuse).
  - ○ CORDET 2006-2009 (software reference architectures and software reuse)
  - ○ NPI 2008-2010 (software reference architectures)
- Principal Investigator in collaborative projects funded by the European Commission. **Total volume of funding: 500k euro**.
  - ○ CONCERTO <http://www.concerto-project.org/>, ARTEMIS, 2013-2016, grant JTI-333053.
  - ○ CHESS <http://www.chess-project.org/>, ARTEMIS, 2009-2012, grant 100022.
  - ○ ASSERT <https://cordis.europa.eu/project/rcn/71564/factsheet/en>, FP6-IST, 2004-2008, grant 004033.
- National representative (Head of Delegation) for Italy in standardization groups
  - ○ ISO/JTC 1/SC 22/WG 9 <http://www.open-std.org/jtc1/sc22/wg9/> (Ada programming language).
    - ■ Co-author of: ISO/IEC TR 24718:2005, **Guide for the Use of the Ada Ravenscar Profile in High Integrity Systems** <http://standards.iso.org/ittf/PubliclyAvailableStandards/c038828_ISO_IEC_TR_24718_2005(E).zip>
    - ■ Co-author of: ISO/IEC TR 15942:2000, **Guide for the Use of the Ada Programming Language in High Integrity Systems** <http://standards.iso.org/ittf/PubliclyAvailableStandards/c029575_ISO_IEC_TR_15942_2000(E).zip>
  - ○ ISO/JTC 1/SC 22/ WG 23 <http://www.open-std.org/jtc1/sc22/wg23/> (Programming languages vulnerabilities).
- **President of Ada-Europe** <http://www.ada-europe.org/info/board/> since 2007.

High-Performance and Embedded Computing Systems

- Member of the HiPEAC network <https://www.hipeac.net/> since 2014.
  - ○ Co-authored the "HiPEAC Vision 2019" on the future of computing systems <https://www.hipeac.net/vision/#/>.
  - ○ Invited lecturer at the ACACES Summer School 2015 <http://acaces.hipeac.net/2015/index.php?page=courseinfo&lecturer=vardanega#bio>.

Advice and Knowledge Transfer to Industry

- Constant flow of short-term consultancy contracts and on-site coaching to local industry on themes of digital transformation, software development methods, software quality, functional safety (2004 - .). **Total volume of funding: 200k euro**.

6. Individual Undertakings

Expert Evaluator for the European Commission

- H2020, call April 2016
- ARTEMIS JU, call December 2009

- FP7, call December 2010, June 2007

- FP6, call October 2003

- FP5, call October 2001, September 2000

- ESPRIT, call May 1997

- ESSI, call March 1995

Expert Reviewer for the European Commission

- HE-957210 XANDAR (X-by-Construction Design framework for Engineering Autonomous & Distributed Real-time Embedded Software Systems), 2021-2024

- IST-2008-214777 IRMOS (Interactive Real-time Multimedia Applications on Service Oriented Infrastructure), 2009-2011.

- IST-2008-216682 JEOPARD (Java Environment for Parallel Real-time Development), 2008-2010.

- IST-2004-511718 HIJA (High Integrity Java), 2005-2007.

- IST-2001-32460 HYBRIDGE (Distributed Control and Stochastic Analysis of Hybrid Systems Supporting Safety Critical Real-Time Systems Design), 2004-2005.

- IST-2001-34140 FIRST (Flexible Integrated Real-Time Systems), 2003-2005.

- IST-2001-37269 FLEXICON (Flexible Control Systems Development and Integration Environment for Distributed Systems), 2003-2005.

- ESPRIT 26456 RAPIER (Rapid Prototyping Environment for Real-Time Distributed Systems), 1998-2000.

Program Committees

Conferences

- ACM Technical Symposium on Computer Science Education (ACM SIGCSE), 2020-2024

- Innovation and Technology in Computer Science Education (ACM ITiCSE), 2018-2024

- International Conference on Cloud Computing and Services Science (CLOSER), 2020-2024

- Engineering of Complex Computer Systems (IEEE ICECCS), 2012-2023

- Federated Conference on Computer Science and Intelligence Systems (FedCSIS), 2021-2024

- International Conference on Software Technologies (ICSOFT), 2022-2024

- Pervasive Intelligence and Computing (PICom), 2015-2023

- Design, Automation and Test in Europe (DATE), 2019-2020

- Reliable Software Technologies – Ada Europe, 1998-2024; program co-chair 2005, 2008, 2010, 2011, 2014, 2015, 2017, 2019; conference chair 2008, 2022

- Quality of Information and Communications Technology (QUATIC), 2021

- Computer Communication Networks (IEEE ICCCN), 2011

- Embedded Software and Systems (IEEE ICESS), 2011-2013

- Computer Safety, Reliability & Security (SAFECOMP), 2017, 2019-2020

- Software Reuse (ICSR) (2013)

- Euromicro Conference on Real-Time Systems (ECRTS), 2003, 2005-2008, 2012-2013

- IEEE Real-Time Systems Symposium (RTSS), 2011, 2013-2014, 2024

- IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), 2012-2013, 2015

- Int'l Symposium on Industrial Embedded Systems (SIES), 2014-2018

- IEEE Symposium on object/component/service-oriented real-time distributed computing technology

(ISORC), 2014-2016, 2019

- Embedded Software (EMSOFT), 2009

- Emerging Technologies and Factory Automation (ETFA), 2012-2013

- Dependable Systems and Networks (DSN), 2004

Workshops

- Compositional Theory and Technology for Real-Time Embedded Systems (CRTS), 2010-2011, 2013-2017

- Worst-Case Execution Time Analysis (WCET), 2009, 2012 program chair, 2013-2016, 2018

- Analysis Tools and Methodologies for Embedded and Real-Time Systems (WATERS), 2014-2017: program co-chair 2015

- Formal and Model-Driven Techniques for Developing Trustworthy Systems (FMMDD), 2016

- Security and Dependability for Resource Constrained Embedded Systems (S&D4RCES), 2010-2012

- Hands-on Platforms and tools for model-based engineering of Embedded Systems, 2010

- UML and Formal Methods Workshop, 2008-2011

- Java Technologies for Real-Time and Embedded Systems (JTRES), 2006-2009, 2012-2013

- Real-Time Ada Workshop (IRTAW), 1996-2020; program chair 2003, 2020, local chair 2009

- Model Based Architecting and Construction of Embedded Systems (ACES^MB @ MODELS), 2008-2016

- Model-Driven Engineering for Component-Based Software Systems (ModComP @ MODELS), 2014-2017, 2019 (keynote speaker), 2020

- Real-Time Software, 2008-2011

- Cyber-Physical Systems, 2012-2017; then Joint IEEE Software Engineering Workshop and International Workshop on Cyber-Physical System, 2018-2021

- Critical Software Component Reusability and Certification across Domains, 2013 (organizer) @ 13th Int'l Conference on Software Reuse (ICSR)

- Exception Handling for a 21st Century Programming Language, 2001.

Editorship and Peer Reviewing

- Associate editor for "Real-Time System", Springer <http://www.springer.com/computer/communication+networks/journal/11241?detailsPage=editorialBoard>. Since 2013.

- Guest editor for "Journal of Systems Architecture", Elsevier, Special Issue "Advances in Reliable Software Technologies: An Ada Perspective" (2019-2020).

- Public record of peer reviewing (since 2006): <https://www.webofscience.com/wos/author/record/P-1739-2015>.

7. Publications

- Scopus <https://www.scopus.com/authid/detail.uri?authorId=6701737010>, H-Index: 19.

- Google Scholar <https://scholar.google.it/citations?user=arxht7cAAAAJ&hl=en>, H-Index: 32.

- ResearchGate <https://www.researchgate.net/profile/Tullio_Vardanega>, H-Index: 23.

- ORCID <http://orcid.org/0000-0002-0089-0889>.

- DBLP <http://dblp.uni-trier.de/pers/hd/v/Vardanega:Tullio>.