

Prof.dr. Marcello M. Bonsangue: Curriculum Vitae

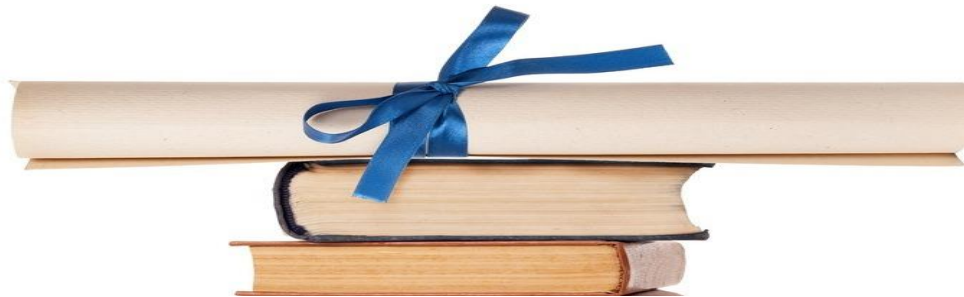
Marcello Bonsangue
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Born on 27 October 1966 in Caltanissetta, Italy. Italian nationality.



1. Educational and professional achievements



1.1 Education

- Doctorate PhD received on November 21, 1996 from the Free University of Amsterdam, The Netherlands, with dissertation titled *Topological Dualities in Semantics*. Thesis supervisors: Prof.dr. J.W. de Bakker (CWI and Free University, Amsterdam) and Prof.dr. J.N. Kok (LIACS – Leiden University). External referee Prof.dr. M.W. Mislove (Tulane University, USA).
- Master M.Sc. Computer Science (**cum laude**) received on December 21, 1991, from the Department of Informatics of the University of Milano, Italy, with dissertation titled *Abstraction and Refinement of Trace Languages*. Thesis supervisor Prof.dr. N. Sabadini.
- High school High school leaving certificate (**with the maximum grade**) received on July 1985, from the Liceo Scientifico A. Sciascia, Canicattì (AG), Italy.

1.2 Professional appointments (in reverse chronological order)

- From Jan 2022 Head of the **Theory Cluster** (ca. 35 persons) at LIACS, University of Leiden, the Netherlands.
- From Jan 2020 **Full professor** (HL 2, 1.0 fte) at LIACS, University of Leiden, the Netherlands.

- Sep 2016- Aug 2022 **Director of Education (OD)** LIACS, University of Leiden, the Netherlands.
- 2011-2019 Member of the Formal Method group, CWI, Amsterdam, as a **guest senior researcher**.
- Sep 2017-Dec 2019 **Associate professor** (UHD 1, 1.0 fte) at LIACS, University of Leiden, the Netherlands.
- Sep 2017 – Aug 2020 **Visiting Professor** at Xi'an Jiaotong University, P.R. of China.
- Nov 2011-Aug 2017 **Associate professor** (UHD 2, 1.0 fte) at LIACS, University of Leiden, the Netherlands.
- May 2006 – Oct 2011 **Assistant professor** (UD, 1.0 fte) at LIACS, University of Leiden, the Netherlands.
- May 2001 – Apr 2006 **Research fellow of the Royal Netherlands Academy of Arts and Sciences** (in Dutch: KNAW) at LIACS, Leiden University. Member of the group Foundation of Software Technology (headed by Prof.Dr. F. Arbab and Prof. Dr. J.N. Kok). Tasks: 0.8 fte research and 0.2 fte teaching.
- Jan 1999 – Apr 2001 **Postdoc** at the CWI, Amsterdam, The Netherlands, within the group SEN 3 Coordination Languages (headed by Dr. J. Rutten) of the Software Engineering cluster (headed by Prof.dr. J.W. de Bakker). Task 0.8 fte research.
- Jan 1997 – Dec 1998 **Postdoc** at LIACS, University of Leiden, the Netherlands in the context of the NWO/SION project *CoLa: Formal Methods for Coordination Languages*. Task: 1.0 fte research.
- Aug 1993 – Nov 1996 **PhD student** (AiO) at the Free University, Amsterdam, the Netherlands. Tasks: 0.8 fte research and 0.2 teaching.

1.3 Long international visits (in reverse chronological order)

- Mar 2022 – Aug 2022 **Research visitor** at the Department of Computer Science and Information Management, Asian Institute of Technology, Thailand. Host: Dr. C. Anutariya.
- Aug 2006 **Research visitor** at the Department of Mathematics, University of Stellenbosch, South Africa. Host: Prof.Dr. I. Rewtsky.
- Feb 2005 – Aug 2005 **Sabbatical leave** at the Department of Computer Science, University of Bologna, Italy. Host: Prof.Dr. R. Gorrieri
- Sep 1991 – Jun 1993 **Research visitor** at the Centre for Mathematics and Computer Science (CWI) in Amsterdam, The Netherlands. Host: Prof.Dr. J.W. de Bakker.

1.4 Qualifications, honors and distinctions

- Oct 2018 Positive assessment of the **Senior Teaching Qualification** (STQ, in Dutch: SKO) portfolio, a proof in the Netherlands of vision, working on educational quality and curriculum innovation.
- Feb 2012 Positive assessment of the **University Teaching Qualification** (UTQ, in Dutch: BKO) portfolio, a proof in the Netherlands of didactic competence for lecturers in academic education.
- Dec 2009 Nominated for the **C.J. Kok prize** for the best scientist of 2009, an annual prize of the Faculty of Mathematics and Natural Sciences of the University of Leiden, the Netherlands.

2. Research funding



Interested in formal methods for program verification and specification, model checking, testing of software systems, process and object-oriented calculi, coordination languages. Also interested in areas related to foundational aspect of computer science such as algebra, coalgebra, automata theory, modal logic, category theory, type theory, domain theory, metric spaces, program semantics.

Currently working on mathematical aspects of machine learning, including automata learning and graph neural networks with applications on fake news detection, software testing, and code smell detection.

2.1 Research projects (as applicant or co-applicant, in reverse chronological order)

Jun 2022 – Nov 2022 **Local coordinator** of the EUniWell project "SIMU-VACTION: EUniModel AI – AI and Health Disparities on a global stage", Educational and policy making project from in collaboration with Universities of Nantes (principal tier), Birmingham, Florence, Semmelweis, and Koln. Funding of 4.100 euro for students travel costs.

Jun 2019 – Jun 2022 **Coordinator** of the CSC Innovative Talents International Cooperation Training Cross-Double Doctoral Program *Artificial Intelligence and Bioscience* between Xian Jaotong University and the Faculty of Science of Leiden University (LIACS, LACDR, IBL, CML, LUMC). Funding for 10PhD students per year.

Nov 2018 – Nov 2022 **Local coordinator** of the ERASMUS+ CBHE project on developing curricula in Data Science and AI for Indonesia, Sri Lanka, and Thailand. Project coordinator Prof.dr. Matthew Dailey, School of Engineering and Technology, Asian Institute of Technology, Bangkok, Thailand. Total volume 108.000 euro.

Aug 2014 – Dec 2018 **Co-investigator** with Prof.dr. J. Rutten (CWI,RUN) of the NWO free competition project *EcoPro: Enhancing efficiency and expressiveness of the coinduction proof method*. Principal investigator: Total volume: 1 PhD student (Julian Salamanca) located at CWI Radboud Univeriteit Nijmegen, and one 1 year visiting PhD (Jana Wagemaker).

- Aug 2010 – Oct 2015 **Principal investigator** of the NWO open competition project *Core: Coinductive calculi of Regular Expressions*. Project partners: CWI (Prof.Dr. J Rutten), and LIACS. Total volume: 416.026 euro for the salary of two PhD students (Joost Winter and Jurriaan Rot), benchfee, and travel costs.
- Sep 2010 – Mar 2012 **Local coordinator** of European Cost Action *IC0701 Formal Verification of Object-Oriented Software*. Chair of the action: Prof.Dr. B. Beckert (Univ. of Koblenz, Germany). Other project partners from 17 European countries: BE, CH, DE, DK, EE, ES, FR, IE, IL, IT, NL, NO, PL, PT, RO, SE, UK.
- Sep 2005–Dec 2009 **Principal investigator** (together with Prof.dr. F. de Boer) and **local coordinator** of the NWO/DFG bilateral Dutch-German cooperation project *Mobi-J II: Assertional methods for mobile channels in Java*. Project partners: CWI, LIACS, and University of Kiel. Total volume funded by NWO: 88.000 euro for equipment, travel costs and meetings organization. DFG funded a PhD student salary for three years (Andreas Gruener) at the University of Kiel but with PhD defence at LIACS, Leiden University.
- Jul 2005 – Dec 2007 Co-applicant and **local coordinator** of the ITEA/Senter project *Trust4All*. Project partners: Philips, TU/e, LIACS, Oce, Telematica Institute, CWI, Vtt electronics, Nokia corporation, Solidtech, Robotiker, Fagor, Ikerlan, Visual tools, Esi, Csem, and Saia burgess. Total volume: 227.420 euro for a PhD student salary (Andries Stam), equipment and travel costs.
- In October 2008, the Trus4All project received the **ITEA 2 Bronze Achievement Award 2008**, an European award for high-level technical contributions based on true European collaboration that provide significant results while promoting the ITEA program and its goals.
- May 2004 – Apr 2006 **Principal investigator** of the project *Semantic component composition* funded by “research fellowship” KNAW program. Total volume: euro 135.200 for a postdoc salary and travelling costs.
- Jun 2002 – Jun 2004 Co-applicant and **local coordinator** of the project *ArchiMate: an integrated approach to architectures*, funded by the Dutch Ministry of Economic Affairs via the Telematica Institute. Project partners: Telematica Institute, LIACS, CWI, University of Nijmegen, Ordina Institute, ABN Amro, Dutch tax and Customs Administration, UVW, and ABP. Total volume: ca. 225.000 euro for a PhD student salary (Martijn Wiering), equipment, and travel costs.
- In 2006 the ArchiMate project has been nominated for the **ICTRegie Award 2006**, a Dutch yearly award for the most succesfull initiative in the field of valorisation (i.e. dissemination and exploitation of innovative project results).
- In November 2008 the team of the ArchiMate project received the **NAF Architecture Award 2008**, a Dutch yearly award an outstanding contribution to the architecture profession by an individual, team or organization.
- Oct 2001 – Nov 2004 **Principal investigator** (together with Prof.dr. F. de Boer) and **local coordinator** of the NWO/DFG bilateral Dutch-German cooperation project *Mobi-J*:

Assertional methods for mobile channels in Java. Project partners: CWI, LIACS, and University of Kiel. Total volume funded by NWO: 81.641 euro for equipment, travel costs and meeting organization. DFG funded two PhD student salaries for three years (Erika Abraham and Marcel Kyas) at the University of Kiel but with PhD defence at LIACS, Leiden University.

- May 2001–Apr 2004 **Principal investigator** of the project *A semantics approach to component-based software* funded by the “research fellowship” KNAW program. Total volume: euro 163.110 for a postdoc salary (M. Bonsangue) and travelling costs.
- Sep 1991 – Jul 1992 **Principal investigator** of the project *Semantica Formale dei linguaggi di programmazione* funded by University of Milano, Italy in the context of a fellowship for visiting research centers abroad. Total volume: one year post-master salary (M. Bonsangue) for visiting Prof.Dr. J.W. de Bakker at the Centre for Mathematics and Computer Science (CWI) in Amsterdam, The Netherlands.
- Aug 1992 – Jun 1993 **Principal investigator** of the project *Sulla Semantica dei Linguaggi Traccia* funded by the Italian National Research Fund (CNR) in the context of a fellowship for visiting research centers abroad. Total volume: one year post-master salary (M. Bonsangue) for visiting Prof.Dr. J.W. de Bakker at the Centre for Mathematics and Computer Science (CWI) in Amsterdam, The Netherlands.

2.3 Participation in other research projects (in reverse chronological order)

- Jan 2022 – Dec 2022 Co-applicant of NGI assure project *Verified Reowolf* for 1 year PhD at LIACS in collaboration with Hans-Dieter Hiep, Frank de Boer, and Max Henger (CWI).
- Sep 2020 – Aug 2023 Co-applicant of CSC scholarship for three years PhD position for Jinting Bian on the project *Verification of Mainstream Java Libraries*. Volume: 1 PhD student.
- Nov 2018 Applicant of the open competition at the Shanghai Lab for Trustworthy Computing with the project “*Stochastic Learning of Finite State Machines*”. Volume: ca. 5000 Euro for travel costs for 3 person to East China Normal University, Shanghai, P.R. of China.
- Sep 2018 – Aug 2022 Co-applicant of CSC scholarship for full PhD position for Wengjin Chu for the project “*Learning Finite State Machines: from weighted to quantum models*”. Volume: 1 PhD student.
- Dec 2017 – Nov 2026 Member of the *Quantum Software Consortium*, a Dutch NWO gravitation project. Principal investigator Prof.Dr. H. Buhrman (CWI, Amsterdam). Other participants: QuSoft, Leiden University, TUDelft, University of Amsterdam and Free University of Amsterdam. Total volume: 19.627.000 Euro over a period of 10 years.

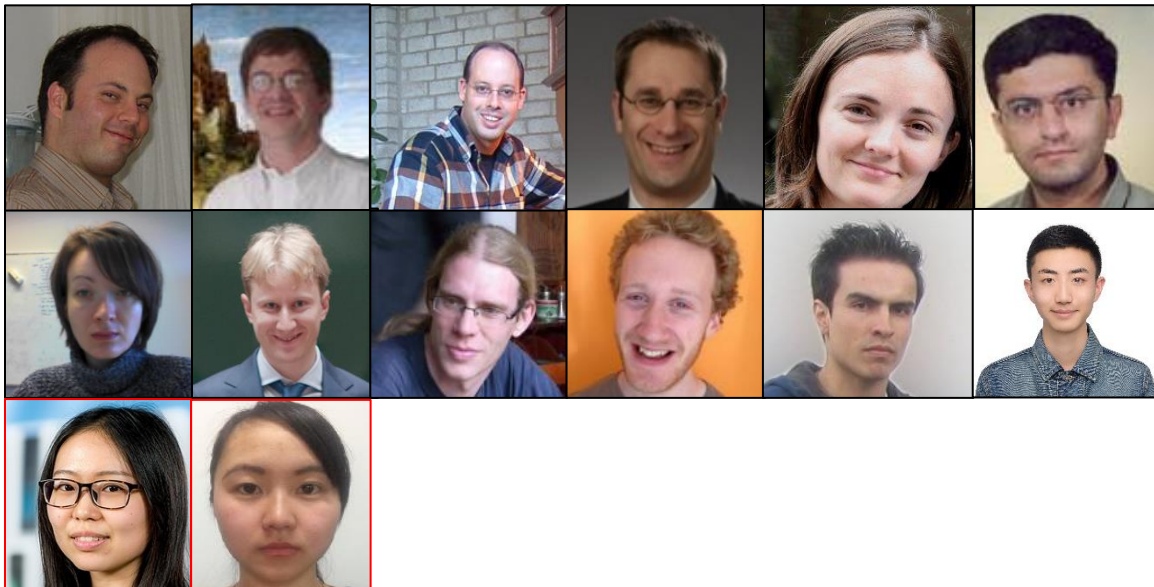
- Sep 2017 – Aug 2021 Co-applicant of CSC scholarship for full PhD position for FENG Hui for the project "*Verification and Performance Evaluation of Software-Defined Networks*". Volume: 1 PhD student.
- Nov 2017 – Jul 2018 Co-applicant CSC scholarship for long-term visit of Cong PENG for the project "*Cooperative and autonomous safety control for cyber-physical systems*". Volume: 1 visiting PhD student for 9 months and 1 month visiting assistant professor.
- Feb 2018 – Jan 2019 Co-applicant CSC scholarship for long-term visit of ShuangQing XIANG for the project "*Verification and Validation of Multi-Controller Software Defined Networks*". Volume: 1 visiting PhD student for 12 months.
- Jan 2009 – Mar 2011 Member of the European Artemis project *SCaLoPES: Scalable LOw Power Embedded platformS*. Project leader: Dennis Alders (NXP-Semiconductors, NL). In total 36 project partners from 11 European countries (BE, CZ, FI, FR, GR, HU, IT, NL, PT, SP, UK).
- Sep 2006 – Dec 2009 Member of the 6th framework European Project IST 2005- 33826 *CREDO Modeling and analysis of evolutionary structures for distributed services*. Project partners: CWI, University of Oslo, University of Kiel, TU Dresden, Uppsala, United Nation University, Almende, Rikshospitalet, Norsk Regnesentral.
- Jan 2006 – Dec 2009 Member of the NWO/DFG bilateral Dutch-German cooperation project *SYANCO: Synthesis and Analysis of Component Connectors*. Project partners: CWI, Technical University of Dresden, LIACS, and University of Mannheim.
- Oct 2002 – Sep 2006 Member of the European Research Training Network *SeGraVis: Syntactic and Semantic Integration of Visual Modelling Techniques*. Partner sites are: University of Paderborn, University of Antwerp, Universitat Politecnica de Catalunya, Technical University of Berlin, University of Bremen, University of Kent at Canterbury, LIACS, University College London, University of Milano Bicocca, Technical University of Darmstadt, University of Pisa, and University of Roma La Sapienza.
- Oct 2002 – Sep 2005 Member of the 5th framework European Project IST 2001-33522 *OMEGA: real time UML for embedded systems*. Project partners: Verimag, CWI, University of Kiel, Weizmann Institute, University of Nijmegen, OFFIS, France Telecom, NLR, EADS and IAI.
- Jan 2001 – Dec 2005 Member of the FSR Scientific Research Network *WOG-EVOL: Foundation of Software Evolution*. Partner sites are: Vrije Universiteit Brussels, University of Antwerpen, University of Leuven, University of Gent, University of Louvain-la-Neuve, Technical University of Vienna, University of Bern, University of Lisbon, University of Paderborn, LIACS.
- Jan 1997 – Dec 1998 **PostDoc** at LIACS, Leiden University for the NWO/SION project *CoLa: Formal Methods for Coordination Languages*. Project partners: CWI, LIACS, Hollandse Signaalapparaten B.V..

- 1997 – 2000 Member of the European Esprit Working Group 24512 *Coordina: Coordination Languages - theory and applications*. Partner sites: University of Lisbon, University of Berne, CWI, LIACS, Hollandse Signaalapparaten B.V., University of Pisa, University of Bologna, University of Namur.
- 1992 – 1995 Member of the SCIENCE project *MASK: Mathematical Structures in Semantics for Concurrency*. Project partners: CWI, INRIA Rennes, University of Pisa, University of Udine, University of Mannheim, and Koblenz University.

2.4 Other grants and subsidies (in reverse chronological order)

- 2022 Lorentz Center subsidy for the organization of the Workshop on Semantics of Programming Languages, November 2022. Total volume: 6.500 euro.
- 2007 NWO and IPA subsidies for the organization of the 6th international symposium on Formal Methods for Components and Objects (FMCO 2007). Total volume: 4.500 euro, and 2.250 euro, respectively.
- 2006 NWO, KNAW and IPA subsidies for the organization of the 5th international symposium on Formal Methods for Components and Objects (FMCO 2006). Total volume: 4.500 euro, 4.000 euro and 2.250 euro, respectively.
- 2005 NWO, KNAW and IPA subsidies for the organization of the 4th international symposium on Formal Methods for Components and Objects (FMCO 2005). Total volume: 4.500 euro, 3.500 euro and 2.250 euro, respectively.
- Feb – Aug 2005 LUF grant for a research visit to University of Bologna. Total volume 850 euro.
- Jul 2004 KNAW subsidy for a research visit to University of Cape Town, South Africa.
- 2004 KNAW and IPA subsidies for the organization of the 3rd international symposium on Formal Methods for Components and Objects (FMCO 2004). Total volume: 5.000 euro and 2.250 euro, respectively.
- 2003 Lorentz Center, Microsoft, KNAW, and IPA subsidies for the organization of the 2nd international symposium on Formal Methods for Components and Objects (FMCO 2003). Total volume: 3.037 euro, 2.000 euro, 1.664 euro and 791 euro, respectively.
- 2002 Lorentz Center and Microsoft subsidies for the organization of the 1st international symposium on Formal Methods for Components and Objects (FMCO 2002). Total volume: 7.000 euro and 2.500 euro, respectively.

3. PhD students



3.1 Past PhD students

- Jul 2001 – Jan 2007 Co-promotor of **Juan Guillen Scholten**, LIACS and CWI Amsterdam, for his PhD thesis *Mobile Channels for Exogenous Coordination of Distributed systems: Semantics, Implementation, and Composition*, defended at the University of Leiden on 10th January 2007. Promotor: Prof.dr. F. Arbab. Other co-promotor: Dr. F. de Boer.
- Mar 2003 – Sep 2004 Co-supervisor of Martijn Wiering, LIACS, Leiden University. On 30th September 2003 he decided to not continue his academic career.
- Sep 2003 – Oct 2008 Co-promotor of **Joost Jacob**, LIACS and CWI Amsterdam, for his PhD thesis *Domain Specific Modeling and Analysis*, defended at the University of Leiden on 13th October 2008. Promotor: Prof.dr. F. de Boer.
- Jul 2005 – Dec 2009 Co-promotor of **Andries Stam**, LIACS, Leiden University, for his PhD thesis *Interaction Protocols in PARADIGM -- Extensions to a Modeling Language through Tool Development*, defended at the University of Leiden on 8th December 2009. Promotor: Prof.Dr. J.N. Kok. Other Co-promotor: Dr. E. de Vink (Tue).
- Apr 2005 – Dec 2010 Co-promotor of **Andreas Grüner**, LIACS and Kiel University, for his PhD thesis *Testing Object Interactions*, defended at the University of Leiden on 15th December 2010. Promotor: Prof.dr. F. de Boer. Other co-promotor: Dr. M. Steffen (University of Oslo, Norway).
- Oct 2006 – Dec 2010 Co-promotor of **Alexandra Silva**, CWI, Amsterdam for her PhD thesis *Kleene Coalgebras*. Defended at the Radboud University of Nijmegen on 21st December

2010. Promotor: Prof. Dr. J. Rutten (CWI, RUN). The PhD thesis of Dr. A. Silva has been awarded with a **cum laude** distinction.

- Mar 2006 – Dec 2011 Co-promotor of **Mohammad Izadi**, Sharif University of Teheran, Iran, for his PhD thesis *Model Checking Component Connectors*, defended at the University of Leiden on 11th December 2011. Promotors: Prof.dr. F. Arbab and Prof.dr.A. Movaghar (Sharif University of Teheran, Iran).
- Jan 2011 – Dec 2013 Co promotor of **Georgiana Caltai**, Reykjavik University, Island for her PhD thesis *From Bisimilarity to Decorated Trace and Testing Semantics: Coalgebraic Modelling, Verification Algorithms and Tools*. Defended at the Radboud University of Nijmegen on 16th December 2013. Promotors: Prof. Dr. J. Rutten (CWI, RUN) and Prof.Dr. Anna Ingolfsdottir (Reykjavik University, Island). Other co-promotor: Dr. Alexandra Silva (RUN).
- Sep 2009 – Dec 2013 Co-promotor of **Stijn de Gouw**, LIACS and CWI, Amsterdam, for his PhD thesis *Combining Monitoring with Run-Time Assertion Checking*, defended at the University of Leiden on 18th December 2013. Promotor: Prof.dr. F. de Boer.
- Aug 2010 – Jul 2014 Co-promotor of **Joost Winter**, CWI, Amsterdam, for his PhD thesis *Coalgebraic Characterizations of Automata-Theoretic Classes*, defended at the Radboud University of Nijmegen on 15th July 2014. Promotors: Prof.dr. J. Rutten (CWI, RUN).
- Jan 2012 – Oct 2015 Co-promotor of **Jurrian Rot**, LIACS, for his PhD thesis *Enhanced coinduction*, defended at Leiden University on 15th October 2015. Promotor: Prof.dr. F. de Boer and Prof.dr. J. Rutten (CWI, RUN). The PhD thesis of Dr. J. Rot has been awarded with a **cum laude** distinction.
- Aug 2014 – Apr 2018 Co-promotor of **Julian Salamanca**, CWI, Amsterdam, for his PhD thesis *Coequations and Eilenberg-type Correspondences*, defended at the Radboud University of Nijmegen on 24th April Promotors: Prof.dr. J. Rutten (CWI, RUN).
- Oct 2019 – Oct 2022 Promotor of **Xueqin Chen**, LIACS, for his PhD thesis *Information diffusion in Online Social Network based on Deep Representation Learning*. Other promotor: Fengli Zhang (UESTC) and co-promotor Dr. Fan Zhou (UESTC).

Currently, four of the past PhD students work as (senior) consultant in a private company, one is a researcher in a private company, and the other seven continue working in an academic context.

3.2 Current PhD students

- From Sep 2017 Supervisor of Feng Hui. Her PhD defence is planned for mid 2023 at Leiden University. Position funded by a CSC scholarship. Other supervisor: Prof.dr. Farhad Arbab.
- From Jan 2018 Supervisor with Prof.Dr Farhad Arbab of Kasper Dokter. His PhD defence is planned mid 2023. He had a position funded by CWI for three years and by LIACS for one year.

- From Sep 2018 Supervisor of Wenjing Chu. Her PhD defence is planned for the end of 2023 at Leiden University. Position funded by a CSC scholarship. Other supervisor: Prof.dr. Frank de Boer.
- From 2019 Supervisor of Jinting Bian Her PhD defence is planned for the end of 2023 at Leiden University. Other promotor Prof.Dr. F.S. de Boer. She has a three years funded PhD position until 31 August 2023 by a CSC scholarship on the project "Verification of Mainstream Java Libraries".
- From 2020 Supervisor of Tanjona Ralaivaosaona together with Dr. Henning Basold. She has 6 years teaching PhD position funded by LIACS.
- From 2020 Supervisor together with Prof.Dr. Fons Verbeek of Shima Javanmardi on *Deep learning for Image datasets and Image Captions*. Her PhD defence is planned at the end of 2023.

4. Educational experience



4.1 Teaching (in reverse chronological order)

- From Fall 2022 Course developer and lecturer together with Dalia Papuc of the course on *Foundations of Computer Science* for Computer Science undergraduate students at LIACS, Leiden University.
- From Fall 2009 Course developer and lecturer (with Prof.Dr. F. de Boer until 2021), of the course *Foundations of Software Testing* (previously named seminar *Testing Object-Oriented System*) for master students in computer science at LIACS, Leiden University. The course is yearly evaluated by the students with an average total score above 7.5.
- 2011– 2019 Developer and lecturer of the course on *Introduction to Logic* for computer science and mathematics undergraduate students at LIACS and MI, Leiden University. The course is yearly evaluated by the students with an average total score above 7.0.
- 2006 – 2019 Course developer and lecturer of the course on *Foundations of Computer Science, part 2* for Computer Science undergraduate students at LIACS, Leiden University. The course is yearly evaluated by the students with an average total score above 7.5.
- Fall 2014 Course developer and organizer for the seminarium *Introduction to the Theory of Coalgebras* for master student in Computer Science, LIACS, Leiden University.
- 2002 – 2010 Developer and lecturer of the course on *Program Correctness* for undergraduate students at LIACS, Leiden University. From 2008 the course has been yearly evaluated by the students with an average total score above 7.5.
- 2009 – 2010 Organizer, together with Dr. H. Nikolov, of the *Student Seminar*, a research seminar for undergraduate students at LIACS, Leiden University.

- 2008 – 2009 Course developer and organizer together with Dr. J. Kleijn of the *Student Seminar*, a research seminar for undergraduate students at LIACS, Leiden University.
- 2003 – 2005 Course developer and lecturer of the seminar on *Component-based Software Engineering* for master students in Computer Science at LIACS, Leiden University.
- Spring 2001 Course developer, and lecturer of the course on *Semantics of Programming Languages* for master students in Computer Science at LIACS, Leiden University.
- 2000 – 2001 Developer and lecturer of the course *Software Architectures* for evening students at LIACS, Leiden University.
- Fall 1998 Course developer and lecturer of the seminar on *Coordination Languages and Models* for master students in Computer Science at LIACS, Leiden University.
- Spring 1997 Instructor for the practice classes of the course *Algorithms and Data Structures*, for undergraduate students at LIACS, Leiden University.
- 1994 – 1995 Instructor for the practice classes of the courses *Introduction to Computer Science* and *Formal Languages* for undergraduate students at the Computer Science Department of the Free University, Amsterdam.

Further, several extra-curricular teaching activities and guest lectures, at summer schools, Honour College, and during research visit. Also organisation and development of several outreach activities for high school students and elementary school children.

Yearly supervision of several master and bachelor students.

5. Professional services



5.1 Editorial and scientific boards (in reverse chronological order)

- From Dec 2015 **Associate editor** for the Specialty Section Formal Methods of the open access journal *Frontiers in ICT*.
- Nov 2015 – Nov 2020 Member of the **steering committee** and **scientific advisory board** of the International Joint Lab of Trustworthy Software, led by East China Normal University (China). Other partners: Ecoles Normale Superiores (France), Leiden University, Centrum voor Wiskunde en Informatica, LIP at ENS (France) and IRISA and ENS Rennes (France).
- Sep 2015 – Sep 2017 Member of the **editorial board** of *Open Computer Science* (Online ISSN: 2299-1093), De Gruyter Open.
- May 2013 – Sep 2022 Member of the **steering committee** of the international workshop serie Coalgebraic Methods in Computer Science (CMCS).
- Feb 2005 – Sep 2017 Member of the **editorial board** of the *Journal of Software* (ISSN 1796-217X), Academy Publisher.
- Nov 2002 – Sep 2013 Member of the **steering committee** of the International Symposium on Formal Methods for Components and Objects (FMCO).
- Sep 2010 – Mar 2012 Substitute member for the Netherlands of the **management committee** for the European Cost Action IC0701.
- Jun 2007 – Jun 2010 Member of the **steering committee** of the IFIP International Conference on Formal Methods for Open Object-based Distributed Systems (FMOODS).
- 1999 – 2002 Member of the **user committee** of the project EIF.3959 Formal design of industrial safety critical systems funded by the Dutch Technological Foundation STW.

5.2 Service to profession

- From Jun 2012 Member of the IFIP WG 1.3 Foundations of System Specification.
- From Jan 2009 Member of the IEEE Benelux Embedded System Chapter.
- Jan 2001 – Dec 2020 Visiting member of the Foundation of Software Engineering group at CWI, headed by Prof.dr. F.S. de Boer.
- From Jan 1996 Member of the Dutch research school Institute for Programming research and Algorithmics (IPA).
- From Jan 1996 Member of the Dutch Association for Theoretical Computer Science, NVTI.
- Jun 2005 – Dec 2011 Member of the ArchiMate Forum.
- Jan 2003 – Dec 2006 Member and LIACS coordinator of the Dutch Architectural Forum (NAF).

5.3 Department and university services (in reverse chronological order)

- From Jan 2022 Head of the theory cluster at LIACS.
- From Mar 2021 Member of the Board of VERSEN, the **Dutch National Association for Software Engineering**.
- Jan 2021 – Sep 2022 Member of the Board of KION: **Kunstmatige Intelligentie-Opleidingen in Nederland** since January 2021.
- From May 2018 Member of the Board of the Dutch national inter-universities research school **Institute for Programming research and Algorithmics** (IPA), representing the University of Leiden.
- From Apr 2018 Member of **the Advisor Board of the Leiden University Honour College** and **Profiling lecturer *Fundamentals of the Honour College*** of the Faculty of Science and Leiden University Medical Center (LUMC).
- From Apr 2018 Member of the **China group University of Leiden**.
- Apr 2018 – May 2020 Member of the **Admission Committee** of the Honour College of the Faculty of Science and Leiden University Medical Center (LUMC).
- From Dec 2017 Member of the **Gender and Diversity Council** of the Quantum Software Consortium.
- Sep 2016 – Aug 2022 **Educational director** LIACS.
- May 2016-Apr 2018 Co-chair with Dr. M. Lew and Dr. E. Bakker of the advisory committee for the LIACS research seminars.

- Mar 2016 –Aug 2022 Member of the **management team** LIACS.
- Jan 2016 –Aug 2020 Head of the theory research group at LIACS.
- From Jan 2016 Member of the **Faculty of Science China group**.
- From Jan 2015 Member of the LIACS **scientific council**.
- From Sep 2014 Coordinator **Erasmus and international student** programme for LIACS.
- From Nov 2013 Member of the **admission committee** MSc computer science, MSc ICT in business, and MSc media technology.
- Jan 2015 – Jul 2016 **Program director** master computer science.
- Apr 2014 – Jul 2016 Chair of the Bachelor Educational committee (OC) computer science.
- Sep 2013 – Jul 2016 **Study advisor** master computer science.
- Sep 2007 – Oct 2015 Chair of the **institute council** (IR) of LIACS.
- Jun 2011 Member of the ISSC-LIACS working group.
- Jun 2006 – Dec 2007 Coauthor (with Dr. Jetty Kleijn) of the advisory report on implementing the link between research and teaching at LIACS.
- Jan 2006 Organization for LIACS of the SOCRATES/ERASMUS bilateral agreement with the University of Catania for the years 2006-2007.

Organisation of several international meetings and member of more than 100 programme committee, sometimes acting as chair and sometimes as publicity chair.

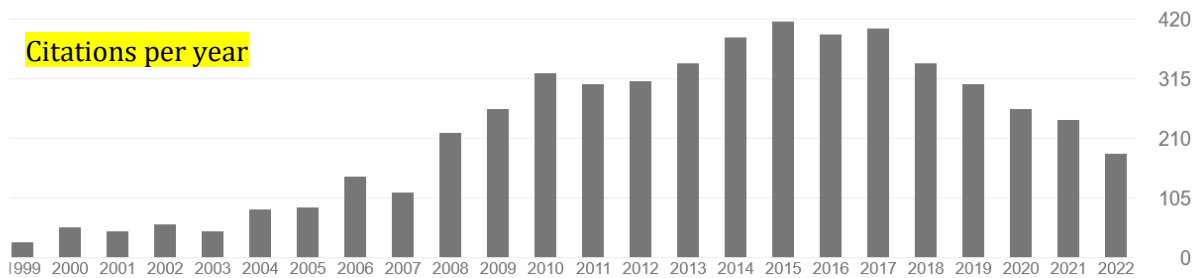
Regularly invited for lectures and keynote speeches at international conferences.

Member of reading and opposition committees of more than 40 PhD thesis, sometimes outside Leiden University.

Project reviewer of several national funded Dutch, Polish and Italian projects. Reviewer of ERC advanced grant proposals.

Reviewer for various international journals (e.g., Information and Computation, Theoretical Computer Science, Fundamenta Informaticae, Logical Methods in Computer Science, Science of Computer Programming, Software and System Modelling, Journal of Software), and major conferences (LICS, ETAPS, ICALP, CONCUR, MFCS, FMCO, SEFM, COORDINATION, Petri Nets, CMCS, CALCO, EuroMicro, IRI, ICISOFT, SAC, FSEN etc.).

6. Academic Publications



Total publications: 151 (23 in the last 5 years)
h-index²: 32 (15 in the last 5 years)

Total citations¹: 5657 (1737 in the last 5 years)
i10-index³: 75 (24 in the last 5 years)

6.1 Thesis

- [t1] M.M. Bonsangue. *Abstraction and refinement of trace languages*, Master Thesis, University of Milano, Italy, December 1990. Supervisor: Prof.Dr. N. Sabadini. Second supervisor: Prof.Dr. G. Mauri.
- [t2] M.M. Bonsangue. *Topological Duality in Semantics*. PhD thesis, 258 pages + vi, Vrije Universiteit Amsterdam, November 1996. Promotors: Prof.dr. J.W. de Bakker and Prof.dr. J.N. Kok. Referent: Prof.dr. M.W. Mislove. An abstract appeared in Bulletin of the EATCS, 61:231-234, February 1997.

6.2 Books

- [b1] M.M. Bonsangue. *Topological Duality in Semantics*, volume 8 of Electronic Notes in Theoretical Computer Science, pages 1 - 299, Elsevier 1998. Revised version of author's Ph.D. thesis.
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6.3 Edited books and special issues of international journals

- [e1] F.S. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever (editors). *Revised lectures of the First International Symposium on Formal Methods on Components and Objects (FMCO 2002)*, volume 2852 of Lecture Notes on Computer Science, Springer-Verlag, 2003.
- [e2] F.S. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever (editors). *Revised lectures of the Second International Symposium on Formal Methods on Components and Objects (FMCO 2003)*, volume 3188 of Lecture Notes on Computer Science, pages 1--368, Springer-Verlag, October 2004.

¹ Source: google scholar on 30 April 2018.

² The largest number h of publication each of which has been cited in other papers at least h times.

³ The number of publications with at least 10 citations in other papers.

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- [e6] F.S. de Boer and M.M. Bonsangue (editors). *Selected papers from the second International symposium of Formal Methods on Components and Objects (FMCO 2003)*, volume 343 issue 3 of Theoretical Computer Science, pages 285 -- 530, Elsevier Science, October 2005.
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- [e8] F. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever (editors). *Fourth International Symposium on Formal Methods on Components and Objects (FMCO 2005) -- revised lectures*, volume 4111 of Lecture Notes in Computer Science, pages 1 -- 447, Springer, June 2006.
- [e9] F.S. de Boer and M.M. Bonsangue (editors). *Formal Methods for Components and Objects*, volume 365, issues 1--2 of Theoretical Computer Science, pages 1 -- 168, Elsevier Science, November 2006.
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- [e11] F. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever (editors). *Fifth International Symposium on Formal Methods on Components and Objects (FMCO 2006) -- revised lectures*, volume 4709 of Lecture Notes in Computer Science, pages 1 -- 300, Springer, December 2007.
- [e12] F. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever (editors) *Sixth International Symposium on Formal Methods on Components and Objects (FMCO 2007) -- State-of-the-Art Survey*, volume 5382 of Lecture Notes in Computer Science, pages 1--320, Springer, December 2008.
- [e13] M.M. Bonsangue, E. Broch Johnsen, A. Murphy, and Jan Vitek (editors). *Distributed Computing Techniques*, volume 410, issues 2--3 of Theoretical Computer Science, pages 113 -- 280, Elsevier Science, February 2009.
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6.8 Manuscripts under review

None.