



Curriculum Vitae

Marco Giunti

Marco Giunti. Completed the Doutorado di Ricerca in Informatica in 2007/01/06 by Università Ca' Foscari and Laurea in Informatica in 2002/01/07 by Università Ca' Foscari. Is Researcher in Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia, Researcher in Teesside University and Researcher in Universidade da Beira Interior. Published 3 articles in journals. Organized 1 event(s). Co-supervised 1 PhD thesis(es). Co-supervised 3 MSc dissertation(s). Has received 2 awards and/or honors. Participates and/or participated as Co-Principal Investigator (Co-PI) in 1 project(s), PhD Student Fellow in 2 project(s), Post-doc in 4 project(s), Principal investigator in 2 project(s) and Researcher in 9 project(s). Works in the area(s) of Engineering and Technology with emphasis on Electrotechnical Engineering, Electronics and Informatics, Engineering and Technology with emphasis on Electrotechnical Engineering, Electronics and Informatics and Engineering and Technology with emphasis on Electrotechnical Engineering, Electronics and Informatics. In his curriculum Ciência Vitae the most frequent terms in the context of scientific, technological and artistic-cultural output are: coq; ocaml; pi-calculus; blockchain; consensus; replication; Go; deadlock; session; session types; secrecy; compilers; z3; sat; java; consistency; cloud; vm; smart contracts; type systems; bisimulations; program transformations; cyptoprotocols; proverif; .

Identification

Personal identification

Full name
Marco Giunti
Gender
Male
Birth date
1973/10/02

Citation names

Giunti, Marco

Author identifiers

Ciência ID
8B18-7832-4109
ORCID iD
[0000-0002-7582-0308](https://orcid.org/0000-0002-7582-0308)

Email addresses

marco.giunti@gmail.com (Professional)
M.Giunti@tees.ac.uk (Personal)

Addresses

NOVA School of Science and Technology (FCT NOVA), Largo da Torre, 2829-516 Caparica, Portugal, Portugal (Professional)
Teesside University, Europa Building, TS1 3BW Middlesbrough, Middlesbrough, United Kingdom (Personal)

Websites

<http://ctp.di.fct.unl.pt/~mgiunti> (Professional)

Knowledge fields

Engineering and Technology - Electrotechnical Engineering, Electronics and Informatics

Languages

Language	Speaking	Reading	Writing	Listening	Peer-review
English	Intermediate (B1)	Intermediate (B1)	Intermediate (B1)	Intermediate (B1)	
Portuguese	Intermediate (B1)	Intermediate (B1)	Intermediate (B1)	Intermediate (B1)	
Italian (Mother tongue)					

Education

	Degree	Classification
2004/01/11 - 2007/01/06 Concluded	Informatica (Dottorato di Ricerca) Università Ca' Foscari, Italy <i>"Secure implementations of typed channel abstractions"</i> (THESIS/DISSERTATION)	
1997/01/09 - 2002/01/07 Concluded	Informatica (Laurea) Università Ca' Foscari, Italy	110/110

Affiliation

Science

	Category Host institution/organization	Employer
2023/02/15 - Current	Researcher (Research)	Teesside University, United Kingdom
2022/03/01 - Current	Researcher (Research)	Universidade da Beira Interior, Portugal
2019/03/01 - Current	Researcher (Research)	Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia, Portugal

2018/12/01 - 2019/02/28	Researcher (Research)	Universidade da Beira Interior, Portugal
2014/03 - 2014/09	Postdoc (Research)	Instituto de Engenharia de Sistemas e Computadores Tecnologia e Ciência Center for Research in Advanced Computing Systems, Portugal
2012/08/01 - 2014/03/15	Researcher (Research)	Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal
2011/02/01 - 2012/01/31	Researcher (Research)	Laboratoire d'Informatique de l'École Polytechnique, France
2009/04/01 - 2010/09/30	Researcher (Research)	Università Iuav di Venezia, Italy
2008/04/01 - 2009/03/31	Researcher (Research)	Universidade de Lisboa Laboratório de Sistemas Informáticos de Grande Escala, Portugal

Teaching in Higher Education

	Category Host institution/organization	Employer
2016/09/15 - 2018/08/31	Invited Assistant Professor (University Teacher) Universidade de Lisboa Laboratório de Sistemas Informáticos de Grande Escala, Portugal	Universidade de Lisboa Faculdade de Ciências, Portugal
2014/09/15 - 2016/09/15	Invited Assistant Professor (University Teacher) Universidade da Beira Interior, Portugal	Universidade da Beira Interior, Portugal
2015/01/09 - 2016/08/08	Invited Assistant Professor (University Teacher)	Universidade Autónoma de Lisboa, Portugal

Projects

Grant

	Designation	Funders
2023/02/15 - Current	Quantified Information Flow Control in Cloud Computing Systems ACC2028868: Researcher	Defence Science and Technology Laboratory, United Kingdom Ongoing
2023/01/03 - Current	Smart Types and Smart Virtual Machines for Validated Smart Contracts (SMARTY) 2022.09138.PTDC Co-Principal Investigator (Co-PI) Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal	Fundação para a Ciência e a Tecnologia, Portugal Ongoing
2021/11/04 - Current	European Research Network on Formal Proofs CA20111 Researcher Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal	European Cooperation in Science and Technology, Belgium Ongoing
2020/01/07 - Current	Rapid prototyping, reasoning and simulation of consensus protocols and algorithms (COPES) CoEnzyme Researcher	COENZYME, France Ongoing
2018/03/01 - Current	Behavioural Application Program Interfaces (BEHAPI) EU H2020 RISE 778233 Researcher	EU Framework Programme for Research and Innovation Marie Skłodowska-Curie Actions, Belgium Ongoing
2019/03/15 - 2022/02/28	Distributed Data-Centric Concurrency Control (DeDuCe) PTDC/CCI-COM/32166/2017 Researcher Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal	Fundação para a Ciência e a Tecnologia, Portugal Concluded

2019/04/01 - 2020/03/31	PROSE (Provers for Sessions). PROSE Researcher	Inria Centre de Recherche Sophia Antipolis Méditerranée, France Concluded
2016/03/21 - 2020/03/20	The European research network on types for programming and verification (EUTypes) CA15123 Researcher	European Cooperation in Science and Technology, Belgium Concluded
2018/12/01 - 2019/03/15	Functional ApproaCh Teaching pOrtuguese couRses (FACTOR) TEZOS Researcher	Tezos Foundation, France Concluded
2012/10/01 - 2016/10/31	Behavioural Types for Reliable Large-Scale Software Systems (BETTY) COST Action IC1201 Researcher	European Cooperation in Science and Technology, Belgium Concluded
2014/03/01 - 2014/09/30	Languages And Tools for Critical rEal-time Systems. NORTE-07-0124-FEDER-000062 Post-doc Universidade do Porto Departamento de Ciência de Computadores, Portugal	Programa Operacional Regional do Norte, Portugal Concluded
2012/08/01 - 2014/03/15	Liveness, statically: Behavioural Types for Statically Checking Liveness Properties PTDC/EIA-CCO/117513/2010 Post-doc	Fundação para a Ciência e a Tecnologia, Portugal Concluded
2014/01/01 - 2014/01/01	Modeling and verification of safety-critical software systems BILATERAL-AGREEMENT Principal investigator Universidade da Beira Interior Departamento de Informática, Portugal	Not funded
2013/01/01 - 2013/01/01	Foundations of static deadlock resolution EXPL/EEI-ESS/0570/2013. Principal investigator Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal	Not funded

2010/01/01 - 2011/01/31	Concurrency, Mobility and Transactions (Comete) INRIA Post-doc	Inria, France Concluded
2008/04/01 - 2009/03/31	Software Engineering for Service-Oriented Overlay Computers (SENSORIA) EU-IST Post-doc	European Commission Sixth Framework Programme, Belgium Concluded
2005/01/01 - 2007/01/06	Models and Types for Security in Mobile Distributed Systems (MyThS) IST-2001-32617 PhD Student Fellow	EU Fifth Framework Programme, Belgium Concluded
2005/01/01 - 2006/01/01	Abstract interpretation and model checking for the verification of embedded systems IT-FIRB PhD Student Fellow	Ministero dell'Istruzione dell'Università e della Ricerca, Italy Concluded

Outputs

Publications

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|------------------|---|--|
| Conference paper | 1 | Paulino, Hervé; Almeida Matos, Ana; Jan Cederquist; Ravara, António; João Matos. "AtomiS: Data-centric synchronization made practical". Paper presented in <i>OOPSLA, 2023</i> .
Accepted |
| | 2 | Bacchiani, Lorenzo; Bravetti, Mario; Joao A. Mota; Ravara, António. "Behavioural up/down casting for statically typed languages". Paper presented in <i>30 Years of Session Types, 2023</i> .
Accepted |
| | 3 | Giunti, Marco; Mota, Joao; Ravara, António. "On using VeriFast, VerCors, Plural, and KeY to check object usage". Paper presented in <i>European Conference on Object-Oriented Programming (ECOOP 2023), Seattle, 2023</i> .
Published |
| | 4 | Giunti, Marco; Paulino, Hervé; Ravara, António; Almeida Matos, Ana; Jan Cederquist; João Matos. "Type qualifier inference and code synthesis for a better data-centric synchronisation experience.". Paper presented in <i>ICE 2023 - 16th Interaction and Concurrency Experience, 2023</i> .
Published |

- 5 Giunti, Marco; Paulino, Hervé; Ravara, António. "Anticipation of Method Execution in Mixed Consistency Systems". Paper presented in *ACM/SIGAPP Symposium On Applied Computing*, 2023.
Published
- 6 Giunti, Marco; Ravara, António; Mota, João. "Java Typestate Checker". Paper presented in *International Conference on Coordination Languages and Models (COORDINATION)*, 2021.
Published
- 7 Giunti, Marco. "GoPi: Compiling Linear and Static Channels in Go". Paper presented in *International Conference on Coordination Languages and Models (COORDINATION)*, 2020.
- 8 Giunti, Marco. "Compiling linear and static channels in Go.". Paper presented in *INFORUM*, 2019.
- 9 Giunti, Marco; Adrian Francalanza; Antonio Ravara. "Unlocking Blocked Communicating Processes". Paper presented in *Automated Specification and Verification of Web Systems (WWW)*, 2015.
- 10 Giunti, Marco. "Static Semantics of Secret Channel Abstractions". Paper presented in *Nordic Conference on Secure IT Systems (NordSec)*, 2014.
- 11 Giunti, Marco; Antonio Ravara. "Towards Static Deadlock Resolution in the pi-Calculus". Paper presented in *Trustworthy Global Computing (TGC)*, 2013.
- 12 Giunti, Marco; Catuscia Palamidessi; Frank D. Valencia. "Hide and New in the Pi-Calculus". Paper presented in *EXPRESS/SOS 2012*, 2012.
- 13 Giunti, Marco. "A type checking algorithm for qualified session types". Paper presented in *Automated Specification and Verification of Web Systems (WWW)*, 2011.
- 14 Giunti, Marco; VASCONCELOS, VASCO THUDICHUM. "A Linear Account of Session Types in the Pi Calculus". Paper presented in *Concurrency Theory (CONCUR)*, 2010.
- 15 Giunti, Marco; Honda, Kohei; Vasconcelos, Vasco; Yoshida, Nobuko. "Session-based type discipline for pi calculus with matching". Paper presented in *Programming Language Approaches to Concurrency and Communication-cEntric Softwar*, 2009.
- 16 Giunti, Marco; Bugliesi, Michele. "Secure implementations of typed channel abstractions". Paper presented in *Principles of Programming Languages (POPL)*, 2007.
10.1145/1190216.1190253
- 17 Giunti, Marco. "Preventing intrusions through non-interference". Paper presented in *IEEE Mexican Conference on Informatics Security.*, 2006.

- 18 Giunti, Marco; Bugliesi, Michele. "Typed Processes in Untyped Contexts". Paper presented in *Trustworthy Global Computing (TGC)*, 2005.

Published

Journal article

- 1 Bacchiani, Lorenzo; Bravetti, Mario; Giunti, Marco; Mota, João; Ravara, António. "A Java typestate checker supporting inheritance". *Science of Computer Programming* 221 (2022): 102844. <http://dx.doi.org/10.1016/j.scico.2022.102844>.
10.1016/j.scico.2022.102844
- 2 GIUNTI, MARCO; VASCONCELOS, VASCO THUDICHUM. "Linearity, session types and the Pi calculus". *Mathematical Structures in Computer Science* 26 2 (2016): 206-237. <http://dx.doi.org/10.1017/s0960129514000176>.
10.1017/s0960129514000176
- 3 Giunti, Marco. "Algorithmic type checking for a pi-calculus with name matching and session types". *The Journal of Logic and Algebraic Programming* 82 8 (2013): 263-281. <http://dx.doi.org/10.1016/j.jlap.2013.05.003>.
10.1016/j.jlap.2013.05.003

Online resource

- 1 Giunti, Marco; Paulino, Hervé; Ravara, António; Almeida Matos, Ana; Jan Cederquist; João Matos. *AtomIS-Coq : soundness of inference of atomicities*. 2022. [Artifact #61 has been accepted by the ECOOP 2022 Artifact Evaluation program committee.](https://zenodo.org/record/6382015)
<https://zenodo.org/record/6382015>
- 2 Giunti, Marco. *The GoPi compiler*. 2019. <https://github.com/marcogiunti/gopi>.

Report

- 1 Giunti, Marco; Paulino, Hervé; Ravara, António. 2023. *Anticipation of Method Execution in Mixed Consistency Systems - Technical Report*. <https://arxiv.org/abs/2212.14651>.
- 2 Mota, João; Ravara, António; Giunti, Marco. 2022. *On using VeriFast, VerCors, Plural, and KeY to check object usage*. <https://arxiv.org/abs/2209.05136>.
- 3 Giunti, Marco. 2019. *A mechanized proof of correctness of the Horn algorithm*. https://release.di.ubi.pt/factor/pdfs/A_mechanized_proof_of_correctness_of_the_Horn_algorithm.pdf.
- 4 Giunti, Marco. 2019. *Rewinding functions through CPS*. https://release.di.ubi.pt/factor/pdfs/rewind_exp_report.pdf.
- 5 Giunti, Marco; Honda, Kohei; Vasconcelos, Vasco; Yoshida, Nobuko. 2010. *Type safety without subject reduction for session types*. http://di.ciencias.ulisboa.pt/~vv/papers/vasconcelos.giunti.etal_type-safety-session-types.pdf.
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Activities

Oral presentation

	Presentation title	Event name Host (Event location)
2015	Theory and practice of software analysis (Invited Talk)	Instituto Gulbenkian de Ciência (Portugal)
2012	Programming secrecy in untrusted networks (Invited Talk)	Instituto Superior Tecnico
2012	Programming secrecy in untrusted networks (Invited Talk)	LSV, École normale supérieure de Cachan (France)
2011	A linear type system for the pi-calculus (Invited Talk)	Behavioural Types Workshop Universidade Nova de Lisboa
2010	A linear type system for the pi-calculus (Invited Talk)	INRIA Grenoble-Rhone Alpes

Supervision

	Thesis Title Role	Degree Subject (Type) Institution / Organization
2021/09/20 - Current	Typestate-oriented language: theory and implementation Co-supervisor	(PhD) Universidade Nova de Lisboa Departamento de Informática, Portugal
2019/10 - 2021/03/31	Coping with the reality: adding crucial features to a typestate-oriented language Co-supervisor	Mestrado em Engenharia Informática (Master) Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal
2020 - 2021	Consensus Protocols Environments and Specifications Co-supervisor	mestrado em engenharia informatica (Master)
2018 - 2018/01/10	Solução Mobile - Banking Pagamentos Co-supervisor	Mestrado em Engenharia Informática (Master) Universidade de Lisboa Laboratório de Sistemas Informáticos de Grande Escala, Portugal

Event organisation

Event name Type of event (Role)	Institution / Organization
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2023/06/01 - Current	39th ACM/SIGAPP Symposium On Applied Computing. Co-chair of Programming Languages Track (2023/06/01) Conference (Co-organisor)
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Jury of academic degree

Theme Role	Candidate name (Type of degree) Institution / Organization
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2022	Automatic detection and resolution of deadlocks in go programs Jorge Gabriel Grave Coelho (Master) Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal
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2016	Behavioral type inference for concurrent object-oriented languages. (Thesis) Main arguer Claudio Jose Albino de Vasconcelos (Master) Universidade Nova de Lisboa Laboratório para a Ciência da Computação e Informática, Portugal
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2014	Tools and Techniques for the Static Verification of Progress in Communication-Centred Systems (Thesis) Main arguer Andre Filipe Marinhas Henriques da Silva Camacho. (Master) Universidade de Lisboa Laboratório de Sistemas Informáticos de Grande Escala, Portugal
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Association member

Society Organization	Role
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2023/06/01 - Current	ACM SIGAPP
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Course / Discipline taught

Academic session	Degree Subject (Type)	Institution / Organization
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2017 - 2018	Teoria da Computação (Regente)	Engenharia Informática (Mestrado) Universidade de Lisboa Faculdade de Ciências, Portugal
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2015 - 2016	Paradigmas da Programação (Regente)	Engenharia Informática (Licenciatura) Universidade Autónoma de Lisboa, Portugal
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2015 - 2016	Lógica Computacional (Regente)	Engenharia Informática (Licenciatura) Universidade da Beira Interior, Portugal
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2015 - 2016	Programação Orientada a Objectos (Regente)	Engenharia Informática (Licenciatura) Universidade Autónoma de Lisboa, Portugal
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2014 - 2015	Programação II (Regente)	Engenharia Informática (Licenciatura)	Universidade da Beira Interior, Portugal
2014 - 2015	Programação (Regente)	Ciências Biomédicas (Licenciatura)	Universidade da Beira Interior, Portugal

Distinctions

Other distinction

2011	Marie Curie ESR Fellowship Grant
2004	PhD Grant