CV – Matteo Mio

PERSONAL

Name: Matteo
Surname: Mio
Nationality: Italian
Date of birth: 05 July 1983

CONTACT
INFORMATION

Postal address: LIP-ENS, 46 Allée d'Italie, Lyon 69364, France
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CURRENT
POSITION

Status: CNRS, *Charge de Recherche* (CR Normale)
Institute: Laboratoire de l'Informatique du Parallélisme, Ecole Normale Superieure de Lyon

EDUCATION

University of Udine, Italy

Laurea Triennale (Bachelor degree) in Computer Science	**2002 – 2005**
Laurea Specialistica (Master degree) in Computer Science	**2005 – 2007**

University of Edinburgh, Scotland, UK

PhD in Computer Science   **2007 – 2012**
- Laboratory for Foundations of Computer Science (LFCS), School of Informatics
- Supervisor: Prof. Alex Simpson

HONOURS AND
AWARDS

AILA 3+2 Award (2008)

Prize for the best Italian master thesis in logic.
- M. Mio, *Induzione e Coinduzione nella Logic* LG$^\omega$, University of Udine, 2007.

Awarded by "*Italian Association for Logic and Applications*" (AILA).

ETAPS Best Student Paper Award (2011)

Prize for the best paper by a PhD student accepted for publication in one of the ETAPS 2011 conferences (CC, ESOP, FASE, FOSSACS, POST, TACAS)
- M. Mio, *Probabilistic Modal μ-Calculus with Independent Product*, FoSSaCS 2011.

Awarded by "*European Joint Conferences on Theory and Practice of Software*" (ETAPS).

Ackermann Award 2013

Prize for "Outstanding PhD Dissertation in Logic in Computer Science"
- M. Mio, *Game Semantics for Probabilistic μ-Calculi*, University of Edinburgh, 2012.

Awarded by *European Association for Computer Science Logic* (EACSL).

Gödel Research Prize Fellowship 2014

Prize of 100.000€ for the best research project in the category *Logical Foundations of Computer Science*
- M. Mio, *Quantitative Modal Logics*, Research Project, 2014.

Awarded by the *Kurt Gödel Society* with support of the *John Templeton Foundation*.

RESEARCH POSITIONS	**University of Edinburgh**, LFCS, Scotland, UK
	Research Assistant **Nov 2010 – April 2011**
	Ecole Polytechnique, Laboratoire d'informatique (LIX), France
	Marie Curie Fellow, Postdoc **March 2012 – February 2013**
	Centrum Wiskunde & Informatica (CWI), Netherlands
	Marie Curie Fellow, Postdoc **March 2013 – February 2014**
	University of Cambridge, Computer Laboratory, England, UK
	Research Associate **March 2014 – September 2014**
	Ecole Normale Superieure de Lyon, LIP, France
	Charge de Recherche (CR Normale) **October 2014 – Today**

RESEARCH GRANTS AND OTHER FUNDINGS	Gödel Research Prize Fellowship 2014, research grant of 100.000€ **Jul 2014 – Jul 2016** Principal Investigator.
	LIP ENS-Lyon "Project Emergent", research grant of 12.000€ **Jan 2015 – Dec 2016** Principal Investigator.
	Poland's National Science Centre grant no. 2014-13/B/ST6/03595 **Oct 2015 – Oct 2019** External Investigator.
	CNRS IN2MI "PEPS JCJC", research grant of 6.000€ **Jan 2016 – Dec 2016** Principal Investigator.
	ANR Project "Repas", national research project (total of 166.813€) **Oct 2016 – Oct 2020** Local coordinator of the ENS–Lyon site. (National coordinator is Dr. C. Palamidessi, LIX, Ecole Polytechnique)
	ANR Project "JCJC QuaReMe" ANR-20-CE48-0005 (total of 132 702,€) **Oct 2020 – Oct 2025** Principal Investigator. Website: https://perso.ens-lyon.fr/matteo.mio/quareme/

ORGANISING ACTIVITY	PC member of the ICE 2013 Workshop. PC member of the FICS 2013 Workshop. <u>PC co-chair</u> (with Ralph Matthes) of the FICS 2015 Workshop. PC-member of the LPAR 2015 conference. PC-member of the ICTAC 2015 conference. PC-member of the FoSSaCS 2016 conference. PC-member of the CMCS 2016 Workshop. PC-member of the MFCS 2017 conference. PC-member of the CILC 2017 Workshop. PC-member of the FORTE 2018 conference. PC-member of the TbiLLC 2019 conference. PC-member of the ICALP 2019 conference. PC-member of the FoSSaCS 2020 conference. PC-member of the MFCS 2021 conference. PC-member of the FICS 2023 workshop. PC-member of the LATD 2023 conference. <u>PC-chair</u> of the QUALOG 2023 workshop.

2014, Invited speaker ("Ackermann lecture") to the CSL 2013 international conference, Torino, Italy
2015, Invited speaker to the Bellairs Workshop on Duality theory, McGill University
2015, Invited speaker to the CALCO 2015 international conference, Netherlands
2017, Invited speaker to the GT Verif+ALGA 2017 workshop, Paris
2018, Invited speaker to the workshop *Games for Logic and Programming Languages*, 2018, Greece
2019, Invited speaker to the Bellairs Workshop on probabilistic computation, McGill University
2019, Invited speaker to the MFPS 2019 international conference, 2019, London, UK
2022, Invited speaker to the LATD 2022 international conference, 2022, Salerno, Italy
2023, Invited speaker to the Bellairs Workshop on quantitative logic, McGill University

Teaching and
Supervision:

In the falls 2016, 2017,2018, 2020,2021 I taught the M2 course at ENS-Lyon titled "Logic, Automata and Decidability" together with Colin Riba (2016), Denis Kuperberg (2017,2018,2020,2021) and Valeria Vignudelli (2021).

I have supervised the internships of the following students at ENS-Lyon: Vincent Michelini (M2 ENS-Lyon, 2017), Christophe Lucas (M2 ENS-Lyon, 2018), Gurpinar Emirhan (M1 ENS-Lyon, 2019), Raph Sarkis (M2 ENS-Lyon, 2020), Serge Lechenne (L3 ENS-Cachan, 2022).

I have supervised the PhD thesis of:
- Christophe Lucas (2019-2022), ENS-Lyon, co–supervised with Damien Pous,
    Thesis defended: "Proof Theory of Riesz Modal Logic", ENS-Lyon, September 2022.
- Ralph Sarkis (2021,2024), ENS-Lyon, co–supervised with Russ Harmer.

I have acted as postdoc-supervisor of:
- Valeria Vignudelli (2020,2021), funded by ANR project REPAS.
- Alexandre Goy (2021, 2022), funded by ANR project QuaReMe.

Conference
Publications:

- Matteo Mio, Ralph Sarkis, Valeria Vignudelli: Beyond Nonexpansive Operations in Quantitative Algebraic Reasoning. LICS 2022: 52:1-52:13
- Christophe Lucas, Matteo Mio: Free Modal Riesz Spaces are Archimedean: A Syntactic Proof. RAMiCS 2021: 275-291
- Matteo Mio, Ralph Sarkis, Valeria Vignudelli: Combining Nondeterminism, Probability, and Termination: Equational and Metric Reasoning. LICS 2021: 1-14 2020
- Matteo Mio, Valeria Vignudelli: Monads and Quantitative Equational Theories for Nondeterminism and Probability. CONCUR 2020: 28:1-28:18
- Christophe Lucas, Matteo Mio: Towards a Structural Proof Theory of Probabilistic μ-Calculi. FoSSaCS 2019: 418-435 2018
- Matteo Mio: Riesz Modal Logic with Threshold Operators. LICS 2018: 710-719
- Matteo Mio, Robert Furber, Radu Mardare: Riesz Modal logic for Markov processes. LICS 2017: 1-12
- Henryk Michalewski, Matteo Mio: Measure Quantifier in Monadic Second Order Logic. LFCS 2016: 267-282
- Henryk Michalewski, Matteo Mio, Mikolaj Bojanczyk: On the Regular Emptiness Problem of Subzero Automata. ICE 2016: 1-23
- Henryk Michalewski, Matteo Mio: On the Problem of Computing the Probability of Regular Sets of Trees. FSTTCS 2015: 489-502
- Henryk Michalewski, Matteo Mio: Baire Category Quantifier in Monadic Second Order Logic. ICALP (2) 2015: 362-374
- Matteo Mio: Upper-Expectation Bisimilarity and Łukasiewicz μ-Calculus. FoSSaCS 2014: 335-350
- Tomasz Gogacz, Henryk Michalewski, Matteo Mio, Michal Skrzypczak: Measure Properties of Game Tree Languages. MFCS (1) 2014: 303-314

- Matteo Mio, Alex Simpson: Łukasiewicz mu-Calculus. FICS 2013: 87-104
- Matteo Mio: Probabilistic Modal μ-Calculus with Independent Product. FoSSaCS 2011: 290-304
- Matteo Mio: The Equivalence of Game and Denotational Semantics for the Probabilistic mu-Calculus. FICS 2010: 53-59
- Matteo Mio: A Proof System for Reasoning about Probabilistic Concurrent Processes. PSPL@LICS 2010: 8-11
- Silvia Crafa, Matteo Mio, Marino Miculan, Carla Piazza, Sabina Rossi: PicNIc - Pi-calculus non-interference checker. ACSD 2008: 33-38

JOURNAL
PUBLICATIONS:

- Christophe Lucas, Matteo Mio: Proof Theory of Riesz Spaces and Modal Riesz Spaces. Log. Methods Comput. Sci. 18(1) (2022)
- Robert Furber, Radu Mardare, Matteo Mio: Probabilistic logics based on Riesz spaces. Log. Methods Comput. Sci. 16(1) (2020)
- Matteo Mio, Michal Skrzypczak, Henryk Michalewski: Monadic Second Order Logic with Measure and Category Quantifiers. Log. Methods Comput. Sci. 14(2) (2018)
- Matteo Mio: Regular Languages of Infinite Trees and Probability. FLAP 4(10): 3505-3516 (2017)
- Matteo Mio, Alex Simpson: Łukasiewicz μ-calculus. Fundam. Informaticae 150(3-4): 317-346 (2017)
- Tomasz Gogacz, Henryk Michalewski, Matteo Mio, Michal Skrzypczak: Measure properties of regular sets of trees. Inf. Comput. 256: 108-130 (2017)
- Matteo Mio: On the equivalence of game and denotational semantics for the probabilistic mu-calculus. Log. Methods Comput. Sci. 8(2) (2012)
- Matteo Mio: Probabilistic modal μ-calculus with independent product. Log. Methods Comput. Sci. 8(4) (2012)