

Curriculum vitae

Giuseppe Perelli, PhD

Postdoctoral Research Assistant

Personal information

Place and date of birth: Naples (Italy), 1987 April

Sex: Male

Nationality: Italian

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Current position

From 2015 April: Postdoctoral Research Assistant in Computer Science

Location: Department of Computer Science, University of Oxford,

Supervisor: Prof. Dr. Michael Wooldridge.

Project: ERC advanced grant Reasoning about Computational Economies.

Research area: Logics, Theoretical Computer Science, Multi-Agent Systems, Formal Methods in Artificial Intelligence, Game Theory, .

Research Interests

Formal specification, verification, and synthesis of systems and multi-agent systems for the Artificial Intelligence; Decidability and undecidability of logic languages; Temporal and strategic logics; Games and equilibrium checking in theoretical computer science; Automata on finite and infinite objects.

Research indicators

Total number of publications: **16** (Journals: **4** – Conferences: **12**)

Total number of citations ([Scopus](#) 19/04/2017): **86** (discarding self-citation: **74**)

h-index ([Scopus](#) 19/04/2017): **5** (discarding self-citation: **5**)

Education

From March 2012 to February 2015 - PhD in Computer Science, University of Naples “Federico II”

Supervisor: Prof. Dr. Aniello Murano.

Thesis title: Logics for Multi-Agent Systems Verification.

Defended: 2015 May 21st

Final mark: Ottimo.

Note: From 2013 August to 2014 March Visiting Research Scholar, Department of Computer Science, Rice University, under the supervision of Prof. Dr. Moshe Vardi.

Research area: Mathematics, Logics, Theoretical Computer Science, Automata Theory, Model Checking, Formal Specification and Verification, Game Theory.

2011 October 27th - **Master Degree in Mathematics**, University of Naples "Federico II"

Final mark: 110/110 with honors.

Thesis title: Bounded Model Properties for Strategy Logic Fragments.

Supervisor: Prof. Dr. Aniello Murano.

2008 December 17th - **Bachelor Degree in Mathematics**, University of Naples "Federico II"

Final Mark: 107/110.

Thesis title: Modello della Corda Vibrante con Applicazioni agli Strumenti Musicali.

English title: String Vibration Models with Applications to Music Instruments.

Supervisor: Prof. Dr. Francesca Visentin.

Awards

2012 - **Premio Tesi 3+2**, from the *Italian Association of Logics for Applications (AILA)* for the best Italian Theses in Logics, with the thesis "*Bounded Model Properties for Strategy Logic Fragments*".

Teaching Activities

Tutor for the course: *Computer-Aided Formal Verification*.

Dates (From - To): October 2016 - December 2016.

Institute: University of Oxford

Location: Department of Computer Science,

Principal Instructor: by Prof. Dr. Alessandro Abate

Tutor for the course: *Computational Complexity*.

Dates (From - To): January 2017 - March 2017.

Institute: University of Oxford

Location: Department of Computer Science,

Principal Instructor: by Prof. Dr. Bernardo Cuenca Grau

Event Organization

Program committee member: SR 2017, CILC 2017, IJCAI 2017, IJCAI 2016, AAMAS 2016.

Organizing committee member: SR 2015, SR 2013, GAMES 2012.

Review activity

Reviewed journal papers: I&C 2016, SR 2015 Special Issue (I&C), JAIR 2014.

Reviewed conference papers: AiML 2012, MFCS 2012, CILC 2014 AAI 2015, FOSSACS 2015, ICALP 2015, ICTAC 2015, AAMAS 2016, IJCAI 2016, LOFT 2016, AAI 2017, FOSSACS 2017, AAMAS 2017, TARK 2017.

Publications

Journals

- [4] F. Mogavero, A. Murano, G. Perelli, and M.Y. Vardi. Reasoning about Strategies: On the Satisfiability Problem. volume 13. 2017. doi:10.23638/LMCS-13(1:9)2017.
- [3] O. Kupferman, G. Perelli, and M. Y. Vardi. Synthesis with Rational Environments. In Nils Bulling, editor, *Annals of Mathematics and Artificial Intelligence (AMAI)*, volume 8953 of *Lecture Notes in Computer Science*, chapter Synthesis with Rational Environments, pages 219–235. Springer International Publishing, 2016. doi:10.1007/978-3-319-17130-2_15.
- [2] A. Molinari, A. Montanari, A. Murano, G. Perelli, and A. Peron. Checking Interval Properties of Computations. In *ACTA Informatica*, pages 1–33. Springer Berlin Heidelberg, 2016. doi:10.1007/s00236-015-0250-1.
- [1] F. Mogavero, A. Murano, G. Perelli, and M.Y. Vardi. Reasoning about Strategies: On the Model-Checking Problem. In *ACM Transactions on Computational Logic*, volume 15(4), pages 34:1–34:47. ACM Association for Computing Machinery, 2014. doi:10.1145/2631917.

Conferences

- [12] J. Gutierrez and G. Perelli and M. Wooldridge. Iterated Games with LDL Goals. In *AAMAS 2017*, To appear.
- [11] G. Fontaine and F. Mogavero and A. Murano and G. Perelli and L. Sorrentino. Cycle Detection in Computation Tree Logic. In *Gandalf 2016*, pages 164–177, 2016.
- [10] A. di Stasio and A. Murano and G. Perelli and M. Y. Vardi. Solving Parity Games by Using an Automata-Based Algorithm. In *CIAA 2016*, pages 64–76, 2016.
- [9] J. Gutierrez and P. Harrenstein and G. Perelli and M. Wooldridge. Expressiveness and Nash Equilibrium in Iterated Boolean Games. In *AAMAS 2016*, pages 707–715, 2016.
- [8] J. Gutierrez and G. Perelli and M. Wooldridge. Imperfect Information in Reactive Module Games. In *KR 2016*, pages 390–400, 2016.
- [7] M. Wooldridge, J. Gutierrez, P. Harrenstein, E. Marchioni, G. Perelli, and A. Toumi. Rational Verification: From Model Checking to Equilibrium Checking. In *AAAI 2016*, pages 4184–4191, 2016.
- [6] A. Murano and G. Perelli and S. Rubin. Multi-Agent Path Planning in Known Dynamic Environments. In *PRIMA 2015*, pages 218–231.
- [5] F. Mogavero and G. Perelli. Binding Forms in First-Order Logic. In *CSL 2015*, pages 648–665.
- [4] A. Murano and G. Perelli. Pushdown multi-agent system verification. In *IJCAI 2015*, pages 1090–1097.
- [3] O. Kupferman and G. Perelli and M. Y. Vardi. Synthesis with Rational Environments. In *EUMAS 2014*, pages 219–235.
- [2] A. Montanari, A. Murano, G. Perelli, and A. Peron. Checking Interval Properties of Computations. In *TIME 2014*, pages 59–68.
- [1] F. Mogavero, A. Murano, G. Perelli, and M.Y. Vardi. What Makes ATL* Decidable? A Decidable Fragment of Strategy Logic. In *CONCUR 2012*, LNCS 7454. Springer.

Scientific communication

2015 December - *Logics for Multi-Agents System Verification* (Invited Talk, Imperial College London).

2014 November - *Strategy Logic: a Powerful Formalism for Game-Theoretical Issues* (Invited Talk, University of California Santa Cruz).

2012 November - *Strategy Logic Fragments*. (Invited Talk, Università degli studi di Roma La Sapienza)

References

1. Prof. Dr. Aniello Murano - University of Naples. Email: murano@na.infn.it
2. Prof. Dr. Moshe Y. Vardi - Rice University. Email: vardi@cs.rice.edu
3. Prof. Dr. Michael Wooldridge - University of Oxford. Email: mjw@cs.ox.ac.uk

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