

# Enrico Magnago

PHD CANDIDATE · SOFTWARE DEVELOPER

🏠 [www.enricomagnago.com](http://www.enricomagnago.com) - 📧 [EnricoMagnago](mailto:EnricoMagnago@gmail.com) - ☎ 0000-0001-7218-1355 - 🌐 [enrico-magnago](https://www.linkedin.com/in/enrico-magnago)

**Expertise:** Symbolic Model Checking, Temporal Logics, SAT, SMT (Satisfiability Modulo Theory), Timed Systems, Hybrid Systems.

## Experience

- **PHD STUDENT/CANDIDATE** Trento, Italy  
**University of Trento, Fondazione Bruno Kessler** 01/11/2018 - 31/05/2022 (expected)
  - Symbolic Model Checking of Temporal Properties on Infinite-state Systems.
- **TEACHING ASSISTANT: FORMAL METHODS COURSE, MASTER IN COMPUTER SCIENCE** Trento, Italy  
**University of Trento** 15/03/2019 - 31/12/2020
  - Gave the laboratory lectures, defined the exam exercises and evaluated the students' solutions.
- **INTERN** Trento, Italy  
**Fondazione Bruno Kessler, Embedded Systems unit** 28/03/2018 - 28/06/2018
  - Design, implementation and testing of **new compiler module** in nuXmv to meet re-usability and extensibility requirements.
- **SOFTWARE DEVELOPER** Trento, Italy  
**Fondazione Bruno Kessler, Embedded Systems unit** 27/03/2017 - 31/10/2018
  - Development of the nuXmv symbolic model checker and related tools.
- **SOFTWARE DEVELOPER (INTERNSHIP)** Trento, Italy  
**Fondazione Bruno Kessler, Data & Knowledge Management (DKM) unit** 20/07/2015 - 20/10/2015
  - Implemented a Semantic Web application database interface using **Elasticsearch Java API**.

## Education

- **PHD IN INFORMATION AND COMMUNICATION TECHNOLOGY** Trento, Italy  
**Fondazione Bruno Kessler, University of Trento** 01/11/2018 - 31/05/2022 (expected)
  - Advisor: Alessandro Cimatti, Co-advisor: Alberto Griggio
- **MASTER DEGREE IN COMPUTER SCIENCE** Trento, Italy  
**University of Trento** 08/08/2016 - 10/10/2018
  - Final Grade: **110L/110**, Average Grade: **29.24/30**.
  - Thesis title: "Timed-nuXmv", formal verification of timed transition systems.
  - Notable project: distributed consensus protocol in Go.
- **POST-GRADUATE ERASMUS STUDENT** Edinburgh, United Kingdom  
**University of Edinburgh, School of Informatics** 05/09/2016 - 24/12/2016
  - Notable project: algorithms using Hadoop Map-Reduce.
- **BACHELOR DEGREE IN COMPUTER SCIENCE** Trento, Italy  
**University of Trento** 08/08/2013 - 18/07/2016
  - Final Grade: **110L/110**, Average Grade: **28.11/30**.
  - Thesis title: Analysis of graph representing scientific publications and authors.
  - Notable project: multi-process question-answer game in C.

## Skills

PROGRAMMING: ●●●●● Python    ●●●●● C    ●●●●● C++    ●●●●● Java  
LANGUAGES:    ●●●●● Italian    ●●●●● English  
HOBBIES:    ●●●●● Trumpet    ●●●●● Skiing    ●●●●● Tenor singer

## Publications

- [1] Alessandro Cimatti, Alberto Griggio, and Enrico Magnago. Automatic discovery of fair paths in infinite-state transition systems. In *The 19th International Symposium on Automated Technology for Verification and Analysis, ATVA 2021, Gold Coast, Australia, October 18-22, 2021, Lecture Notes in Computer Science*, 2021.
- [2] Alessandro Cimatti, Alberto Griggio, and Enrico Magnago. Proving the existence of fair paths in infinite-state systems. In Fritz Henglein, Sharon Shoham, and Yakir Vizel, editors, *Verification, Model Checking, and Abstract Interpretation - 22nd International Conference, VMCAI 2021, Copenhagen, Denmark, January 17-19, 2021, Proceedings*, volume 12597 of *Lecture Notes in Computer Science*, pages 104–126. Springer, 2021.

- [3] Alessandro Cimatti, Alberto Griggio, Enrico Magnago, Marco Roveri, and Stefano Tonetta. Extending nuxmv with timed transition systems and timed temporal properties. In *Computer Aided Verification - 31st International Conference, CAV 2019, New York City, NY, USA, July 15-18, 2019, Proceedings, Part I*, pages 376–386, 2019.
- [4] Alessandro Cimatti, Alberto Griggio, Enrico Magnago, Marco Roveri, and Stefano Tonetta. Smt-based satisfiability of first-order ltl with event freezing functions and metric operators. *Information and Computation*, page 104502, 2019.

Authors in alphabetical order.

## Professional Activities

---

- Artifact Evaluation Committee FORMATS 2022, 20th International Conference on Formal Modeling and Analysis of Timed Systems.
- Artifact Evaluation Committee CAV 2020, 32nd International Conference on Computer-Aided Verification.
- Peer-reviewer for a total of 10 International Conferences .

## Public Talks

---

- **PRESENTER AT ATVA 2021** Online  
**19th International Symposium on Automated Technology for Verification and Analysis** 18-22 October 2021
  - Presentation of paper: *Automatic discovery of fair paths in infinite-state transition systems.*
- **PRESENTER AT VMCAI 2021** Online  
**22nd International Conference on Verification, Model Checking, and Abstract Interpretation** 17-19 January 2021
  - Presentation of paper: *Proving the existence of fair paths in infinite-state systems.*
- **PRESENTER AT CAV 2019** New York, NY USA  
**31st International Conference on Computer-Aided Verification** 13-18 July 2019
  - Presentation of paper: *Extending nuXmv with Timed Transition Systems and Timed Temporal Properties.*

## Summer/Winter Schools

---

- **SUMMER SCHOOL ON SAFETY AND SECURITY OF SOFTWARE SYSTEMS: LOGICS, PROOFS, APPLICATIONS** Marktoberdorf, Germany  
**Technical University of Munich** 31/07/2019 - 09/08/2019
- **SUMMER SCHOOL ON FORMAL METHODS FOR CYBER-PHYSICAL SYSTEMS** Verona, Italy  
**University of Verona** 03/06/2019 - 07/06/2019
- **WINTER SCHOOL ON VERIFICATION, MODEL CHECKING, AND ABSTRACT INTERPRETATION** Lisbon, Portugal  
**University of Lisbon** 09/01/2019 - 12/01/2019