

PERSONAL INFORMATION **STAN Ionel Eduard**

## EDUCATION AND TRAINING

01 Nov 2019 – Present **Doctor of Philosophy (Ph.D.) Degree in Mathematics**

Università degli Studi di Parma, Parma (Italy)

<https://smfi.unipr.it/it/didattica/dottorato-di-ricerca-matematica>

Research Formal methods applied to temporal learning  
Supervisor Prof. **SCIAVICCO Guido**  
Administration HQ Università degli Studi di Parma, Parma (Italy)  
Research HQ Università degli Studi di Ferrara, Ferrara (Italy)  
Addendum The Ph.D. degree is a joint program among three universities: **Ferrara, Modena-Reggio Emilia,** and **Parma**

01 Oct 2017 – 18 Oct 2019 **Master of Science (MSc) Degree in Computer Science**

Università degli Studi di Udine, Udine (Italy)

<https://www.dmif.uniud.it/magistrale/informatica/>

Thesis Multiple Formulas and Multiple Models Finite Interval-based Model Checking  
Supervisors Prof. **DELLA MONICA Dario**, Prof. **MONTANARI Angelo**, and Prof. **SCIAVICCO Guido**  
Keywords Model Checking, (Interval) Temporal Logics  
Score 110/110 *cum laude*  
Selected profile Algorithms and Automated Reasoning (*Algoritmi e Ragionamento Automatico*, in italian)

01 Oct 2014 – 13 Jul 2017 **Bachelor of Science (BSc) Degree in Computer Science**

Università degli Studi di Ferrara, Ferrara (Italy)

<http://www.unife.it/scienze/informatica>

Thesis Implementation of a Tableau-based Satisfiability Checker for the Logic HS<sub>3</sub>  
Supervisor Prof. **SCIAVICCO Guido**  
Keywords Modal and Temporal Logics, (Un)Decidability, Satisfiability Problem  
Score 110/110 *cum laude*

01 Sept 2016 – 01 Feb 2017 **Erasmus<sup>+</sup> European Learning Program in Computer Engineering**

Universidad de Murcia, Murcia (Spain)

<http://www.um.es/informatica/>

Courses – Computer Graphics  
– Development of Intelligent Systems  
– Multimedia Communication

- Awards – Best student (*Matrícula de Honor*, in spanish) out of  $\approx 40$  students in the Development of Intelligent Systems course  
– Team leader for the best project (check the **Hall of Fame**) out of  $\approx 10$  teams in the Development of Intelligent Systems course

15 Aug 2016 – 26 Aug 2016 **28th European Summer School in Logic, Language and Computation (ESLLI)**

Free University of Bolzano, Bolzano (Italy)

<https://essli2016.unibz.it>

- Courses – A Journey through the Possible Worlds of Modal Logic  
– Formal Semantics of Natural Language  
– Foundations of Graph Transformations and Graph Grammars  
– Logical Foundations of Databases  
– Theory of Reasoning: Logic and Cognition

## WORK EXPERIENCE

Spring 2020 **Teaching Assistant**

Università degli Studi di Ferrara, Ferrara (Italy)

Course Databases and Laboratory

Link <http://www.unife.it/scienze/informatica/insegnamenti/basi-dati-1-laboratorio>

Students 90

Fall 2019 **Teaching Assistant**

Università degli Studi di Ferrara, Ferrara (Italy)

Course Algorithms and Data Structures

Link <http://www.unife.it/scienze/informatica/insegnamenti/algoritmi-strutture-dati>

Students 110

01 Aug 2018 – 31 Oct 2018 **Curricular Internship**

Università degli Studi di Udine, Udine (Italy)

Topic Machine Learning

Supervisor Prof. **MICHELONI Christian**

About A Python implementation of a novel machine learning algorithm: the interval-based temporal extension of the well-known ID3 decision tree learning algorithm. Such method extracts a statistical theory from temporal data (i.e., data with an explicit time dimension) expressed in terms of the well-studied Halpern and Shoham's multi-modal interval temporal logic (HS).

01 Sept 2016 – 31 Jun 2017 **Curricular Internship**

Università degli Studi di Ferrara, Ferrara (Italy)

Topics Algorithms and Data Structures, Computational Complexity

Supervisor Prof. **SCIAVICCO Guido**

About Study of the state-of-the-art on deductive methods for temporal logics and the implementation in C++ of a tableau-based method for a new logic, namely the coarser fragment  $HS_3$  (that has been proven to be PSPACE-hard in the interesting cases) of HS (that is undecidable).

01 May 2014 – 31 Jul 2014 **Technical Sales Representative**

Kirby Group, Bologna (Italy)

01 Apr 2012 – 31 Dec 2012 **Technical Sales Representative**

DEK S.R.L., Bologna (Italy)

**MEMBERSHIPS**

- 01 Feb 2020 – Present Member of the **Applied Computational Logic and Artificial Intelligence Laboratory** (ACLAI Lab.) of the Department of Mathematics and Computer Science at the Università degli Studi di Ferrara, Ferrara (Italy)
- 27 Nov 2019 – Present Member of the **Formal Verification, Logic, Automata, and Synthesis** (OVERLAY) research group
- 26 Mar 2020 – Present Member of the **Doctoral Students and Ph.Ds Association in Italy** (ADI) (*Associazione Dottorandi e Dottori di Ricerca in Italia*, in italian)
- 01 Oct 2018 – 31 Jul 2019 Student member of the Quality of Assurance Commission (*Commissione Assicurazione Qualità*, in italian) at the University of Udine for the following degrees:
- Bachelor of Science degree in Computer Science,
  - Bachelor of Science degree in Internet of Things, Big Data and Web,
  - Master of Science degree in Computer Science, and
  - International Master of Science degree in Computer Science; joint collaboration with the University of Klagenfurt, Klagenfurt (Austria).
- 01 Oct 2018 – 31 Jul 2019 Student member of the Addressing Committee for periodic consultations with the labour market (*Comitato di indirizzamento per le consultazioni periodiche con il mondo del lavoro*, in italian) at the University of Udine

**PERSONAL SKILLS**

Mother tongue Romanian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Italian	C2	C2	C2	C2	C1
English	C1	C1	B2	B2	B2
Spanish	C2	C2	C2	C2	C1
French	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](#)

**Communication skills** Various collaborations with the scientific community have strengthened the communication skills over the years that allowed to achieve good results, witnessed by the related publications.

**Organisational / managerial skills** Challenges like, e.g., deadlines and team-leading skills mixed with the hard study are the agenda in the scientific community, where organizational skills are a *must*.

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

[Digital competences - Self-assessment grid](#)

**Programming languages** – Advanced: C, C++, Python, Java, Matlab, R, PostgreSQL, SQL, Haskell  
– Medium: Prolog, Minizinc, Answer Set Programming (ASP)  
– Basic: Curry, PHP

**Other** He likes interdisciplinarity. He enjoys when people are motivated. As being a team player, he likes to share with others and to work with people that come from different research areas. Moreover, he loves animals (especially dogs) and snowboarding.

**Driving licence** B

## PUBLICATIONS

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- [1] G. Sciavicco and I.E. Stan. “Knowledge Extraction with Interval Temporal Logic Decision Trees”. In: *Accepted for publication on the Proceedings of the 27th International Symposium on Temporal Representation and Reasoning (TIME)*.
- [2] W. Conradie, D. Della Monica, E. Muñoz-Velasco, G. Sciavicco, and I.E. Stan. “Time Series Checking with Fuzzy Interval Temporal Logics”. In: *Accepted for publication on the Proceedings of the 21st Italian Conference on Theoretical Computer Science (ICTCS)*.
- [3] J. Kamínska, E. Lucena-Sánchez, G. Sciavicco, and I.E. Stan. “Rule Extraction via Dynamic Discretization with an Application to Air Quality Modelling”. In: *Accepted for publication on the Proceedings of the 14th International RuleML+RR Rule Challenge (RuleML+RR)*.
- [4] E. Lucena-Sánchez, E. Muñoz-Velasco, G. Sciavicco, I. E. Stan, and A. Vaccari. “Towards Interval Temporal Logic Rule-Based Classification”. In: *Proceedings of the 1st Workshop on Artificial Intelligence and Formal Verification, Logic, Automata, and Synthesis (OVERLAY)*. Vol. 2509. CEUR Workshop, 2020, pp. 65–70. URL: <http://ceur-ws.org/Vol-2509/paper10.pdf>.
- [5] E. Muñoz-Velasco, M. Pelegrín, P. Sala, G. Sciavicco, and I. E. Stan. “On coarser interval temporal logics”. In: *Artificial Intelligence* 266 (2019), pp. 1–26. URL: <http://www.sciencedirect.com/science/article/pii/S0004370218305964>.
- [6] A. Brunello, G. Sciavicco, and I. E. Stan. “Interval Temporal Logic Decision Tree Learning”. In: *Proceedings of the 16th European Conference on Logics in Artificial Intelligence (JELIA)*. Lecture Notes on Computer Science (subseries in Artificial Intelligence) 11468. 2019, pp. 778–793. URL: [https://link.springer.com/chapter/10.1007/978-3-030-19570-0\\_50](https://link.springer.com/chapter/10.1007/978-3-030-19570-0_50).
- [7] G. Sciavicco, I. E. Stan, and A. Vaccari. “Towards a General Method for Logical Rule Extraction from Time Series”. In: *Proceedings of the 8th International Workshop on the Interplay between Natural and Artificial Computation (IWINAC)*. Lecture Notes in Computer Science 11487. 2019, pp. 3–12. URL: [https://link.springer.com/chapter/10.1007/978-3-030-19651-6\\_1](https://link.springer.com/chapter/10.1007/978-3-030-19651-6_1).
- [8] E. Muñoz-Velasco, G. Sciavicco, and I. E. Stan. “Implementation of a Tableau-Based Satisfiability Checker for HS3”. In: *Proceedings of the 32nd Italian Conference on Computational Logic (CILC)*. Vol. 1949. CEUR Workshop, 2017, pp. 326–340. URL: <http://ceur-ws.org/Vol-1949/CILCpaper09.pdf>.