

Stefano Demarchi

CONTACT INFORMATION	DIBRIS - Viale Causa, 13 16145 Genova, IT	(+39) 01033 - 52150 stefano.demarchi@edu.unige.it github.com/sdemarch
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EMPLOYMENT AND EXPERIENCE	Università degli Studi di Genova	
	<i>Researcher</i>	2022 - Present
	<i>PhD student</i>	2019 - 2022
	Study and development of AI techniques for the formal verification of Neural Networks, part of the NeVerTools development team.	
	Teaching support activities for an introductory course to Computer Science and Python programming.	

Università degli Studi di Sassari Athena Sardegna	
<i>Research Engineer</i>	2018 - 2019
Development of a backend framework for a commercial platform (PILOW), research and design of optimization algorithms for logistics.	

AI-Lift	
<i>R&D collaborator</i>	2017 - 2019
Part of the development team of LiftCreate , a tool for the design of elevator systems enabled by AI techniques.	

EDUCATION	Università degli Studi di Genova, Genova, IT
	M.Sc. in Computer Engineering, October 2018
	<i>Product Configuration for Complex Systems: a case study in Computer-automated Design of Elevators</i>
	108/110

Université de Technologie de Compiègne, Compiègne, FR
European Master in Complex Systems in Interaction, September 2018
Double-degree program in collaboration with Università degli Studi di Genova
A, mention

LANGUAGES	Italian:	Mothertongue		
	English:	Fluent	B1 (certificate)	C1 estimated
	French:	Fluent	B1 (certificate)	C1 estimated

PROGRAMMING AND SOFTWARE	Programming:	Python, Java, C++, C, MATLAB
	Frameworks:	SPRING Java, VAADIN, PyQt5/6
	Markup:	L ^A T _E X, HTML5, CSS
	Environments:	Microsoft Windows, Ubuntu Linux, Microsoft Office Suite, Visual Studio, IntelliJ IDEA, PyCharm, mySQL, GitHub

PUBLICATIONS

D. Guidotti, S. Demarchi, *Counter-Example Guided Abstract Refinement for Verification of Neural Networks*, in Cyber-Physical Systems Summer School workshop, CPSWS 2022, Pula, Italy, September 19, 2022, Proceedings, 2022.

S. Demarchi, D. Guidotti, L. Pulina, A. Tacchella, *Evaluating Reachability Algorithms for Neural Networks in NeVer2*, in RCRA workshop on Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion, RCRA 2022, Genova, Italy, September 5, 2022, Proceedings, 2022.

S. Demarchi, D. Guidotti, A. Pitto and A. Tacchella, *Formal Verification of Neural Networks: a Case Study about Adaptive Cruise Control*, in International Conference on Modelling and Simulation, ECMS 2022, Aalesund, Norway, May 30th-June 3rd, 2022, Proceedings, 2022.

G. Cicala, S. Demarchi, M. Menapace, L. Annunziata and A. Tacchella, *A Comparison of Declarative AI Techniques for Computer Automated Design of Elevator Systems*, in *Intelligenza Artificiale* 16 (1), 131-150, 2022

S. Demarchi, M. Menapace and A. Tacchella, *Automated Design of Elevator Systems: Experimenting with Constraint-Based Approaches*, in International Conference of the Italian Association for Artificial Intelligence, AIxIA 2021, Online, Proceedings, 2022.

S. Demarchi, M. Menapace and A. Tacchella, *Automating Elevator Design with Satisfiability Modulo Theories*, in IEEE International Conference on Tools with Artificial Intelligence, ICTAI 2019, Portland, Oregon, November 4-6, 2019, Proceedings, 2019.

S. Demarchi, *Automated Design of Complex Systems with Constraint Programming Techniques*, in Cyber-Physical Systems Summer School workshop, CPSWS 2019, Alghero, Italy, September 23, 2019, Proceedings, 2019.

HONORS AND AWARDS

Best Paper award at the ECMS 2022 Conference

Best “Creative Lab Idea” award at the CPS 2022 Summer School