

Stefano Demarchi

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EMPLOYMENT AND EXPERIENCE **Università degli Studi di Genova**
Adjunct Professor 2024 - 2025
B. Sc. course “101448 — Fondamenti di Informatica” (7 CFU)
An introduction to Computer Science and Python programming.
Post-Doc Researcher 2022 - Present
PhD student 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
Research Engineer 2018 - 2019
Development of a backend framework for a commercial platform (**PILOW**), research and design of optimization algorithms for logistics.
AI-Lift
R&D collaborator 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**
Ph.D in Computer Science, May 2023
Experimenting with Constraint Programming Techniques in AI: Automated System Design and Verification of Neural Networks
M.Sc. in Computer Engineering, October 2018
Product Configuration for Complex Systems: a case study in Computer-automated Design of Elevators
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**

PROGRAMMING AND SOFTWARE **Programming:** Python, Java, C
Frameworks: PyQt5/6, SPRING Java, Vaadin
Markup: \LaTeX , HTML5, CSS
Environments: Microsoft Windows, Ubuntu Linux, Microsoft Office Suite, Microsoft Visual Studio, JetBrains, Oracle mySQL, GitHub

LANGUAGES	Italian:	Mothertongue		
	English:	Fluent	B1 (certificate)	C1 estimated
	French:	Fluent	B1 (certificate)	C1 estimated
PUBLICATIONS	S. Demarchi, D. Guidotti, L. Pulina and A. Tacchella, <i>NeVer2: Learning and Verification of Neural Networks</i> , to appear in <i>Soft Computing</i> , 2024			
	S. Demarchi, A. Gimelli and A. Tacchella, <i>Improving Abstract Propagation for Verification of Neural Networks</i> , in <i>International Conference on Modelling and Simulation, ECMS 2024, Cracow, Poland, June 4-7, 2024, Proceedings</i> , 2024.			
	S. Demarchi, D. Guidotti, L. Pulina and A. Tacchella, <i>Supporting Standardization of Neural Networks Verification with VNN-LIB and CoCoNet</i> , in <i>Workshop on Formal Methods for ML-Enabled Autonomous Systems, FoMLAS 2023, Paris, France, July 17-18, 2023</i> .			
	S. Demarchi, <i>Experimenting with Constraint Programming Techniques in Artificial Intelligence: Automated System Design and Verification of Neural Networks</i> , PhD Thesis, 2023.			
	D. Guidotti, S. Demarchi, <i>Counter-Example Guided Abstract Refinement for Verification of Neural Networks</i> , in <i>Cyber-Physical Systems Summer School workshop, CPSWS 2022, Pula, Italy, September 19, 2022, Proceedings</i> , 2022.			
	S. Demarchi, D. Guidotti, A. Pitto and A. Tacchella, <i>Formal Verification of Neural Networks: a Case Study about Adaptive Cruise Control</i> , in <i>International Conference on Modelling and Simulation, ECMS 2022, Aalesund, Norway, May 30th-June 3rd, 2022, Proceedings</i> , 2022.			
	G. Cicala, S. Demarchi, M. Menapace, L. Annunziata and A. Tacchella, <i>A Comparison of Declarative AI Techniques for Computer Automated Design of Elevator Systems</i> , in <i>Intelligenza Artificiale 16 (1)</i> , 131-150, 2022			
	S. Demarchi, M. Menapace and A. Tacchella, <i>Automated Design of Elevator Systems: Experimenting with Constraint-Based Approaches</i> , in <i>International Conference of the Italian Association for Artificial Intelligence, AIxIA 2021, Online, Proceedings</i> , 2022.			
	S. Demarchi, M. Menapace and A. Tacchella, <i>Automating Elevator Design with Satisfiability Modulo Theories</i> , in <i>IEEE International Conference on Tools with Artificial Intelligence, ICTAI 2019, Portland, Oregon, November 4-6, 2019, Proceedings</i> , 2019.			
	S. Demarchi, <i>Automated Design of Complex Systems with Constraint Programming Techniques</i> , in <i>Cyber-Physical Systems Summer School workshop, CPSWS 2019, Alghero, Italy, September 23, 2019, Proceedings</i> , 2019.			
ROLES	<i>Reviewer</i> , PeerJ Computer Science (2024)			
	<i>Sub-reviewer</i> , ICAPS (2023)			
HONORS AND AWARDS	<i>Best Paper</i> award, ECMS 2022 Conference			
	<i>Best “Creative Lab Idea”</i> award, CPS 2022 Summer School			