

Alice Plebe

CONTACT INFORMATION E-mail: alice.plebe@unitn.it
Website: www.aliceplebe.com
Skype: [aliceplebe](#)

CURRENT POSITION **Visiting PhD student** 2020 – present
TU Delft, the Netherlands
Collaboration with the Intelligent Vehicles group from the Cognitive Robotics department.
Supervisor: Prof. Julian F. P. Kooij

PhD student in Information and Communication Technology 2017 – present
University of Trento, Italy
Development of deep neural networks for perception in autonomous driving using cognitive-inspired architectures, as a contribution to the European H2020 [Dreams4Cars](#) project.
Supervisor: Prof. Mauro Da Lio

EDUCATION **Research scholarship** 2017
University of Catania, Italy
Development of computational geometry algorithms for the simulation of fire propagation in industrial plants, as a contribution to the European H2020 SafeMod project.

Master's degree in Computer Science, 110/110 cum laude 2016
University of Catania, Italy

Bachelor's degree in Computer Science, 110/110 cum laude 2014
University of Catania, Italy

AWARDS **Best Student Paper Award** 2019
5th International Conference on Vehicle Technology and Intelligent Transport Systems
for the paper entitled “Mental imagery for intelligent vehicles”.

SUMMER SCHOOLS AND TRAINING **Workshop on Deep Learning for Autonomous Vehicles – Perception** 2018
NVIDIA Deep Learning Institute
8 hours of instructor-led training on the development of autonomous vehicle applications using deep neural architectures and specialized NVIDIA computing platforms.

International Summer School on AI and Games 2018
University of Crete, Chania, Greece
40 hours of lectures dedicated to the uses of artificial intelligence techniques for playing games, for generating content for games, and for modeling players.

International Summer School on Deep Learning 2017
University of Deusto, Bilbao, Spain
50 hours of lectures covering deep learning theoretical and application aspects including computer vision, speech recognition, language processing.

- JOURNALS AND CHAPTERS
- A. Plebe, M. Da Lio, and D. Bortoluzzi, “On reliable neural network sensorimotor control in autonomous vehicles,” *IEEE Transactions on Intelligent Transportation Systems*, vol. 21, pp. 711–722, 2019
- A. Plebe, V. Cutello, and M. Pavone, “Optimizing costs and quality of interior lighting by genetic algorithm,” in *Studies in Computational Intelligence* (C. Sabourin, J. J. Merelo, K. Madani, and K. Warwick, eds.), vol. 829, pp. 19–39, Springer, Cham, 2019
- A. Plebe and G. Grasso, “Conceptual integrity without concepts,” *International Journal of Software Engineering and Knowledge Engineering*, vol. 28, no. 7, pp. 955–981, 2018
- CONFERENCES
- A. Plebe and M. Da Lio, “Visual perception for autonomous driving inspired by convergence–divergence zones,” in *Proceedings of the 11th International Symposium on Image and Signal Processing and Analysis*, pp. 204–208, IEEE, 2019
- A. Plebe and M. Da Lio, “Variational autoencoder inspired by brain’s convergence-divergence zones for autonomous driving application,” in *Proceedings of the 20th International Conference on Image Analysis and Processing*, vol. 11751 of *Lecture Notes in Computer Science*, pp. 367–377, Springer, Cham, 2019
- A. Plebe, R. Donà, G. P. Rosati Papini, and M. Da Lio, “Mental imagery for intelligent vehicles,” in *Proceedings of the 5th International Conference on Vehicle Technology and Intelligent Transport Systems*, pp. 43–51, Science and Technology Publications, 2019
- A. Plebe, G. P. Rosati Papini, R. Donà, and M. Da Lio, “Dreaming mechanism for training bio-inspired driving agents,” in *Proceedings of the 2nd International Conference on Intelligent Human Systems Integration*, pp. 429–434, Springer, Cham, 2019
- M. Da Lio, A. Plebe, D. Bortoluzzi, G. P. Rosati Papini, and R. Donà, “A system for human-like driving learning,” in *Proceedings of the 25th Intelligent Transport Systems World Congress*, 2018
- M. Da Lio, A. Plebe, D. Bortoluzzi, G. P. Rosati Papini, and R. Donà, “Autonomous vehicle architecture inspired by the neurocognition of human driving,” in *Proceedings of the 4th International Conference on Vehicle Technology and Intelligent Transport Systems*, pp. 507–513, Science and Technology Publications, 2018
- A. Plebe, V. Cutello, and M. Pavone, “Evolving illumination design following genetic strategies,” in *Proceedings of the 9th International Joint Conference on Computational Intelligence*, pp. 289–296, Science and Technology Publications, 2017
- A. Plebe and M. Pavone, “Multi-objective genetic algorithm for interior lighting design,” in *Proceedings of the 3rd International Workshop on Machine learning, Optimization, and Big Data*, vol. 10710 of *Lecture Notes in Computer Science*, pp. 222–233, Springer, Cham, 2017
- A. Plebe and G. Grasso, “Particle physics and polyedra proximity calculation for hazard simulations in large-scale industrial plants,” in *Proceedings of the 12th International Conference of Computational Methods in Sciences and Engineering*, pp. 090003–1–090003–4, American Institute of Physics Publishing, 2016

FORENSIC EXPERIENCE	Forensic virtual reconstruction for the Public Prosecutor's office of Pordenone. Criminal proceeding 4853/18 R.G.N.R./mod.21 of Court in Pordenone, Italy.	2019
	Forensic virtual reconstruction for the Public Prosecutor's office of Vicenza. Criminal proceeding 2089/2018 R.G.N.R./mod.21 of Court in Vicenza, Italy.	2018
	Forensic virtual reconstruction for the Defence Attorney. Criminal proceeding 12604/2016 R.G.N.R./mod.21 of Court in Palermo, Italy.	2018
	Forensic virtual reconstruction for the Public Prosecutor's office of Caltanissetta. Criminal proceeding 3013/2016 R.G.N.R./mod.21 of Court in Caltanissetta, Italy.	2017
	Forensic virtual reconstruction for the Public Prosecutor's office of Siracusa. Criminal proceeding 1504/2017 R.G.N.R./mod.21 of Court in Siracusa, Italy.	2017
	Forensic virtual reconstruction for the Public Prosecutor's office of Busto Arsizio. Criminal proceeding 3942/2016 R.G.N.R./mod.21 of Court in Busto Arsizio (VA), Italy.	2016
	Forensic virtual reconstruction for the Defence Attorney. Criminal proceeding 376/2014 R.G.N.R./mod.21 of Court in Lanusei (NU), Italy.	2016
	Forensic virtual reconstruction for the Public Prosecutor's office of Busto Arsizio. Criminal proceeding 9340/2015 R.G.N.R./mod.21 of Court in Busto Arsizio (VA), Italy.	2015
	Forensic virtual reconstruction for the Public Prosecutor's office of Catania. Criminal proceeding 1411/2015 R.G.N.R./mod.21 of Court in Catania, Italy.	2015
	Forensic virtual reconstruction for the Public Prosecutor's office of Busto Arsizio. Criminal proceeding 7515/2014 R.G.N.R./mod.21 of Court in Busto Arsizio (VA), Italy.	2015
Forensic virtual reconstruction for NoviaCOM SC. Criminal proceeding 30/2011 R.G.N.R./mod.21 of Court in Siracusa, Italy.	2014	
PROFESSIONAL EXPERIENCE	Production of 3D computer graphics animations <i>Morpheos Srl, Catania, Italy</i> Virtual presentation of a smart lamp for domotics application.	2017
	Production of 3D computer graphics animations <i>Temix Communication Engineering, Catania, Italy</i> Virtual demonstration of a communication and surveillance system for homeland security, simulating war scenarios.	2015
	Software development internship <i>NCE Network Consulting Engineering, Catania, Italy</i> Development of Python and XML modules for the open-source business management software OpenERP.	2013
LANGUAGES	<i>English:</i> C1 level – IELTS Academic Certification, score 7.5 <i>Italian:</i> native	