europass Curriculum vitae

PERSONAL INFORMATION

Emanuele De Santis

WORK EXPERIENCE

Sep. 2019 – today

In House Consultant

Consorzio per la Ricerca nell'Automatica e nelle Telecomunicazioni (CRAT)

- Design, implementation, simulation and evaluation of multi-connectivity algorithms, design and implementation of interfaces for the Proof of Concept for *5G ALL-STAR* H2020 project (WP4, WP5)
- Description of Use Cases, functional requirements, KPIs and design, simulation implementation and validation of preliminary architecture enabling control functionalities based on 5G technology for electric loads for *5G-Solutions* H2020 project (WP1, WP2, WP5, WP9)
- Design, development, simulation and validation of control algorithms for forest fires and landslides prevention, monitoring, detection and response in *ARIES* ESA L'ART project (WP2, WP4)

Jul. 2018 – Jul. 2019

Software Engineer

Applied Research To Technologies (ARES2T)

Software maintenance and implementation of new functionalities in ChargeAdvisor electric vehicle smart charging platform. Development of an Android app for remote reservation of charging stations and remote start of smart charging sessions

EDUCATION AND TRAINING

Nov. 2019 – today

PhD Student in Automatic Control, Bioengineering and Operational Research

Sapienza University of Rome

Curriculum in Automatic Control

Sep. 2017 – Jul. 2019

Master of Science in Engineering in Computer Science

Final mark: 110 cum laude / 110, GPA: 29.64/30

Sapienza University of Rome

Thesis Title: 'Enabling electric vehicles smart charging to power systems frequency regulation functions using a web-service-based infrastructure and 5G technology.'

Feb. 2019 – Jun. 2019

Honours Programme for Master Degree

Sapienza University of Rome

Mainly focused on compilers architecture and GCC plugin development for memory access tracking

Feb. 2017 – Jun. 2017

Cyberchallenge.IT 2017 contestant

Sapienza University of Rome

Cybersecurity challenge organized by Sapienza University of Rome together with IBM and CISCO

Sep. 2014 – Jul. 2017

Bachelor of Science in Computer and Control Engineering

Final mark: 110 cum laude / 110, GPA: 29.52/30

Sapienza University of Rome

Study plan in Control Engineering - Thesis Title: 'Control of an Energy Storage System for active power regulation in a distribution grid'

Feb. 2016 – Jun. 2017

Honours Programme for Bachelor Degree

Sapienza University of Rome

Mainly focused on NUMA architectures and their support in Linux systems

Sep. 2009 – Jul. 2014

High School

Final mark: 100 / 100

Liceo Scientifico Lazzaro Spallanzani, Tivoli

PERSONAL SKILLS

Mother tongue(s): Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	C1
French	A2	A2	A2	A1	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

Computer skills

- Proficient in many programming languages like C, Python, Assembly x86 and x86_64, Java, C++, PHP, HTML, Javascript, C#, Visual Basic, Matlab, etc.
- Proficient in Windows and Linux Operating Systems.
- Proficient in Microsoft Office Suite and LaTeX

Other skills: Studying piano since 2004, now enrolled in Preparatory Courses organized by Conservatory A. Casella of L'Aquila, 3rd level (of 3)

Driving licence: B

ADDITIONAL INFORMATION

Publications

■ Journals

J1 Emilio Calvanese Strinati, Sergio Barbarossa, Taesang Choi, Antonio Pietrabissa, Alessandro Giuseppi, Emanuele De Santis, Josep Vidal, Zdenek Becvar, Thomas Haustein, Nicolas Cassiau, Francesca Costanzo, Junhyeong Kim, and Ilgyu Kim. 6g in the sky: On-demand intelligence at the edge of 3d networks (invited paper). *ETRI Journal*, 42(5):643–657, 2020. doi: https://doi.org/10.4218/etrij.2020-0205. URL https://onlinelibrary.wiley.com/doi/abs/10.4218/etrij.2020-0205

J2 F. Delli Priscoli, E. De Santis, A. Giuseppi, and A. Pietrabissa. Capacity-constrained wardrop equilibria and application to multi-connectivity in 5g networks. *Journal of the Franklin Institute*, 358(17):9364–9384, 2021. ISSN 0016-0032. doi: https://doi.org/10.1016/j.jfranklin.2021.09.025. URL https://www.sciencedirect.com/science/article/pii/S0016003221005743

J3 Roberto Germanà, Francesco Liberati, Emanuele De Santis, Alessandro Giuseppi, Francesco Delli Priscoli, and Alessandro Di Giorgio. Optimal control of plug-in electric vehicles charging for composition of frequency regulation services. *Energies*, 14 (23), 2021b. ISSN 1996-1073. doi: 10.3390/en14237879. URL https://www.mdpi.com/1996-1073/14/23/7879

■ Conference Papers

C1 Alessandro Giuseppi, Emanuele De Santis, and Alessandro Di Giorgio. Model predictive control of energy storage systems for power regulation in electricity distribution networks. In *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, pages 3365–3370, 2019. doi: 10.1109/SMC.2019.8914059

C2 Andrea Tortorelli, Alessandro Giuseppi, Federico Lisi, Emanuele De Santis, and Francesco Liberati. Operations management of satellite launch centers. In *Proceedings of the Ka and Broadband Communications (Ka conference)*, 2019

C3 Stefano Carnà, Serena Ferracci, Emanuele De Santis, Alessandro Pellegrini, and Francesco Quaglia. Hardware-assisted incremental checkpointing in speculative parallel discrete event simulation. In *2019 Winter Simulation Conference (WSC)*, pages 2759–2770, 2019. doi: 10.1109/WSC40007.2019.9004901

C4 A. Giuseppi, E. De Santis, F. Delli Priscoli, S. H. Won, T. Choi, and A. Pietrabissa. Network selection in 5g networks based on markov games and friend-or-foe reinforcement learning. In *2020 IEEE Wireless Communications and Networking Conference Workshops (WCNCW)*, pages 1–5, 2020a. doi: 10.1109/WCNCW48565.2020.9124723

C5 A. Giuseppi, S. Maaz Shahid, E. De Santis, S. Ho Won, S. Kwon, and T. Choi. Design and simulation of the multi-rat load-balancing algorithms for 5g-allstar systems. In *2020 International Conference on Information and Communication Technology Convergence (ICTC)*, pages 594–596, 2020b. doi: 10.1109/ICTC49870.2020.9289485

C6 Francesco Liberati, Roberto Germanà, Emanuele De Santis, and Alessandro Di Giorgio. Optimal control of an energy storage system and plug-in electric vehicles fast charging in a grid-connected service area. In *2021 29th Mediterranean Conference on Control and Automation (MED)*, pages 202–207, 2021. doi: 10.1109/MED51440.2021.9480262

C7 Roberto Germanà, Emanuele De Santis, Francesco Liberati, and Alessandro Di Giorgio. On the participation of charging point operators to the frequency regulation service using plug-in electric vehicles and 5g communications. In *2021 IEEE International Conference on Environment and Electrical Engineering and 2021 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I CPS Europe)*, pages 1–6, 2021a. doi: 10.1109/EEEIC/ICPSEurope51590.2021.9584495

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