



Giovanni Interdonato

PhD in Electrical Engineering, Researcher

Ph.D. degree in Electrical Engineering with specialization in Communication Systems from Linköping University. My research interests include massive MIMO systems, 5G NR communication protocols and beyond-5G technologies.

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WORK EXPERIENCE

Researcher ERICSSON AB

11/2015 - 10/2020

Linköping, Sweden

Radio Network Modelling and Control, Ericsson Research

- Development of novel digital signal processing algorithms for modern communication systems. Focus on 5G NR communication protocols.
- Development of flexible, cost-efficient architectures for practical distributed massive MIMO deployments. Co-inventor of the Ericsson Radio Stripes: ericsson.com/en/blog/2019/2/radio-stripes.
- Co-inventor of 7 inventions resulting in +20 filed patent applications.

Contact: Dr. Nicklas Johansson (former manager) - nicklas.johansson@ericsson.com

EDUCATION

PhD in Electrical Engineering Linköping University

11/2015 - 10/2020

Contact: Prof. Erik G. Larsson (former advisor) erik.g.larsson@liu.se

- Analysis, design and optimization of smart and distributed device-centric cellular architectures. Focus on 5G large-scale multiple-antenna technologies (massive MIMO, cell-free massive MIMO).
- Co-author in 14 scientific publications (Google Scholar H-index 8).
- Teaching assistant in tutorial and laboratory sessions, in the following courses: TSKS14 Multiple Antenna Communications, Master level. TSKS13 Wireless Communications, Master level.
- Main supervisor in Master's degree projects involving collaborations with Ericsson AB and the Swedish Defence Research Agency (FOI)
- Participation in international conferences, 5G events and schools (GLOBECOM 2016, GlobalSIP 2018, ICC 2019, IEEE 5G Summit 2016, IEEE SPS and EURASIP School on Signal Processing for 5G, 2017).
- 240 ECTS achieved by passing advanced courses in: MIMO systems, neural networks and deep learning, nonlinear and convex optimization, detection and estimation of signals, data compression. Course in higher education teaching, research ethics, and entrepreneurship.
- PhD dissertation: "Cell-Free Massive MIMO: Scalability, Signal Processing and Power Control"

Degree of Licentiate of Engineering Linköping University

09/2018

Linköping, Sweden

- Thesis: "Signal Processing Aspects of Cell-Free Massive MIMO"

M.Sc. Computer and Telecommunication Systems Engineering

Mediterranea University of Reggio Calabria

03/2015

Contact: Prof. Giuseppe Araniti (former advisor) email: araniti@unirc.it

- Master Thesis: "A Novel LTE Random Access Scheme for Massive Machine Type Communications"

SKILLS

Matlab C/C++/Java Python massive MIMO

Digital Signal Processing 3GPP, LTE, 5G IPR

Wireless Comm. Systems Detection and Estimation

Optimization Mathematical Analysis Teaching

PROJECTS AND VISITING

H2020 Marie-Curie ITN "5Gwireless" (11/2015 - 10/2018)

- Research on innovative architectures, wireless technologies and tools for high capacity and sustainable 5G ultra-dense cellular networks.
- Training activities on standardization and patents, EC funding and project management, entrepreneurship, market exploitation and business plan.

Visiting Researcher at Universitat Politècnica de Catalunya (UPC), Barcelona, Spain (11/2017 - 03/2018)

- Training on network interference modeling for ultra-dense networks. Exploiting interference statistics for introducing interference-awareness in device-centric architectures.

Visiting Researcher at the Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Barcelona, Spain. (04/2014 - 09/2014)

- Design, implementation and performance analysis of novel LTE random access protocols for supporting QoS of massive machine type communications, and for ensuring coexistence between M2M and H2H communications.

AWARDS

Marie-Curie Research Fellowship (11/2015 - 10/2018)

Grant from the Ericsson Research Foundation (05/2019)

LANGUAGES

Italian ● ● ● ● ●

English ● ● ● ● ○

Spanish ● ○ ○ ○ ○

Swedish ● ○ ○ ○ ○

INTERESTS

Travelling Reading Cross-fit Web design