Europass Curriculum Vitae

Personal information	
First name(s) / Surname(s)	**Luca Reggiani**
Address(es)	Milano Bologna
E-mail	luca.reggiani@polimi.it, rl.reggiani@gmail.com, luca.reggiani@ingpec.eu
LinkedIn	http://www.linkedin.com/in/luca-reggiani-06803ba
Nationality	Italian

Work experience

Dates	Since December 2002
Occupation or position held	Researcher
Main activities and responsibilities	- Professor in "Wireless communications" ("Sistemi di radiocomunicazione") 2010-2025 [Ing. delle Telecomunicazioni (Telecommunications Eng.), Laurea Magistrale]. He held the courses "Sistemi di comunicazione" ("Communication systems") [2009-2010, Ing. delle Telecomunicazioni, Laurea 1° livello], "Fondamenti di segnali e trasmissione" ("Fundamentals of signal and transmission") [2002-2009, Ing. Informatica (Computer Science Eng.), Laurea 1° livello]. (https://reggiani.faculty.polimi.it/). - Research activity in the following areas: next generation cellular systems (5G, beyond 5G), high capacity transport networks (backhauling, fronthauling), information and communications theory and technology, wireless transmission technologies (e.g. multiple antenna systems MIMO and cognitive radio), wireless sensor networks, ultrawide band systems, positioning systems (https://reggiani.faculty.polimi.it/). - Consulting and research activity for companies in the field of telecommunications.
Name and address of employer	Politecnico di Milano, Dipartimento di Elettronica ed Informazione 32, P.zza Leonardo da Vinci, 20133, Milano, Italy Tel: +39 02 2399 3442, Fax: +39 02 2399 3413
Type of business or sector	Academic institution
Dates	Dec. 2016
Occupation or position held	Co-founder of DRB srl (http://www.drb.aero/) Spin-off company of Politecnico di Milano in the ICT field. Research Unit
	Via E. Toti, 29 - 20900 Monza (MB) – Italy
Dates	Apr. 2014
Occupation or position held	Co-founder of Nuvidea srl Start-up company in the ICT field.
Dates	Nov. 2008 – 2012
Occupation or position held	Professional activity in the field of Electronic and Communications Engineering. ICT consultant.
Dates	Nov. 2001 – Dec. 2002

Occupation or position held	Post-Doc fellowship
Main activities and responsibilities	Research program "Broadband wireless access".
Name and address of employer	Politecnico di Milano
Dates	Sept. 1999 – Apr. 2000
Occupation or position held	Visiting Scholar
Main activities and responsibilities	Research on magnetic storage systems
Name and address of employer	University of California San Diego (UCSD) – Dept. CMRR (Center for Magnetic Recording Research), 9500 Gilman Drive – La Jolla, CA 92093-0401 (USA).
Type of business or sector	Academic institution
Dates	Feb. 1998 – Dec. 2001
Occupation or position held	Consultant
Main activities and responsibilities	Design of channel detectors and error correction systems
Name and address of employer	STMicroelectronics, Via Tolomeo 1, 20010 Cornaredo (MI).
Type of business or sector	Microchip manufacturer

Education and training

Dates	Oct. 2001
Title of qualification awarded	PhD (3 years)
Principal subjects/occupational skills	Electronic and Communications Engineering
Name and type of organisation	Politecnico di Milano
Dates	June 1999
Principal subjects/occupational skills	Course in "Management of Technology" (5 months)
Name and type of organisation	Universita' degli Studi di Milano
Dates	Feb. 1998
Title of qualification awarded	Laurea (Master, 5 years), 100/100 cum laude
Principal subjects/occupational skills	Electronic and Communications Engineering
Name and type of organisation	Politecnico di Milano

Personal skills and competences

Mother tongue(s)	**Italian**

Other language(s)

Self-assessment

European level (*)

	Understanding			Speaking				Writing	
	Listening		Reading		Spoken interaction		Spoken production		
English	C1	Proficient user	C1	Proficient user	B2	Independent user	C1	Proficient user	B2	Independent user

Computer skills and competences	Programming experience in C, C++, Python and in other software platforms.
Additional information	**Main research projects**: - 2024 - : NATO Research Project SPS G7699 - "Passive Radar Observation and DeTECTion of UAVs via Cellular Networks". - 2022 - 23: Progetto 5G Audiovisivo, financed by MISE, in cooperation with Rai Way. - 2017- 21: NATO Research Project SPS G5482 - "Public Safety Communication in the Context of Terrorist Attacks". - 2012-13, 2015-16: research contracts and consulting activity for the development and implementation of LTE stations.

Additional information	- 2010-12: leader of 2 research contracts in the field of the technological solutions for next generation cellular networks and back-hauling. - 2008-11: European Project NEWCOM++ (Network of Excellence in Wireless Communications) in the Work Package WPR.B ("Localization and Positioning Techniques"). - 2008-11: research project FIRB In.Sy.Eme (Integrated System for Emergency) within Workpackage 2 (Communication Infrastructure) in the context of localization and systems coexistence. - 2007-08: research program "Sistemi wireless futuri a larga banda – Systems beyond 3rd generation and advanced OFDM/OFDMA systems".

Member of:
- Ordine degli Ingegneri (Engineering professional order) in Bologna since October 2008.
- Commissione Telecomunicazioni Ord. degli Ing. Milano since 2015.
- IEEE, Institute of Electrical and Electronics Engineers.

Recent publications and patents

(>120 international publications and 4 patents. Complete list at
https://scholar.google.it/citations?user=sNpIXtAAAAAJ&hl=en)
- A. Facheris, L. Reggiani, "3D position error bound for wideband localization systems with application to UAVs", Vehicular Communications, Vol. 53, 2025.
- O. Elgarhy, Y. Le Moullec, L. Reggiani, M. M. Azeem, T. Taleb and M. M. Alam, "Towards Optimal Placement and Runtime Migration of Time-Sensitive Services of Connected and Automated Vehicles," in *IEEE Open Journal of Vehicular Technology*, vol. 6, pp. 13-33, 2025.
- O. Elgarhy, L. Reggiani, M. M. Alam, A. Zoha, R. Ahmad and A. Kuusik, "Energy Efficiency and Latency Optimization for IoT URLLC and mMTC Use Cases," in *IEEE Access*, vol. 12, pp. 23132-23148, 2024.
- A. Spalvieri, L. Reggiani, L. Dossi, "Decision-directed Kalman particle filter with application to the MIMO phase noise channel", Physical Communication, Vol. 55, 2022.
- O. Elgarhy, L. Reggiani, H. Malik, M. M. Alam and M. A. Imran, "Rate-Latency Optimization for NB-IoT With Adaptive Resource Unit Configuration in Uplink Transmission," in *IEEE Systems Journal*, vol. 15, no. 1, pp. 265-276, March 2021.
- H. Malik, M.M. Alam, H. Pervaiz Y. Le Moullec, A. Al-Dulaimi, S. Parand, L. Reggiani, "Radio Resource Management in NB-IoT Systems: Empowered by Interference Prediction and Flexible Duplexing," in *IEEE Network*, vol. 34, no. 1, pp. 144-151, January/February 2020.
- L. Reggiani, L. Dossi, L. Barletta, A. Spalvieri, "Extended Kalman Filter for MIMO Phase Noise Channels with Independent Oscillators", IEEE Comm. Letters, 2018.
- L. Dossi, L. Reggiani and G. Filiberti, "Performance Evaluation of LoS MIMO Microwave Radio Systems Over Frequency Selective Multipath Fading Channels", Wireless Personal Communications, pp. 1-16, May 2017.
- L. Reggiani, G. Filiberti, L. Dossi, "Phase Noise Suppression in MIMO LoS Systems for High Capacity Backhauling", Wireless Personal Communications, pp. 1-23, Jan. 2015.
- L. Reggiani, B. Baccetti, L. Dossi, "The Role of Adaptivity in MIMO Line-of-Sight Systems for High Capacity Backhauling", Wireless Personal Communications, pp. 1-17, July 2013.

- Patent WO 2018/229681, "Radio Beacon System", L. Reggiani, D. Piazza, G. Mena, 2017.

- U.S. Patent No. 6,882,689, "Pseudo-chaotic communication method exploiting symbolic dynamics", G.M. Maggio, L. Reggiani, April 19, 2005.

- U.S. Patent No. 6,981,201, "Process for decoding signals and system and computer program product therefore", L. Reggiani, G. Betti, F. Brenna, A. Dati, D. Giovenzana, A. Rossi, Dec. 27, 2005.

Best Paper Award at Baltic Electronics Conference, 2018.

Best Paper Award Francesco Carassa 2008 at GTTI meeting (Gruppo nazionale Telecomunicazioni e Teoria dell'Informazione), Florence, June 2008.

TPC member of many conferences in the communications field and Editor of International Journal of Distributed Sensor Networks.

Autorizzo il trattamento dei dati personali presenti nel CV in base all'art. 13 del GDPR 679/16.

Il sottoscritto, Luca Reggiani, consapevole delle sanzioni penali previste dall'art. 76 T.U. N. 445 del 28.12.2000 sulle disposizioni legislative e regolamentari in materia di documentazione amministrativa nel caso di mendaci dichiarazioni o esibizione di atti falsi o contenenti dati non rispondenti a verità, dichiara sotto la propria responsabilità che quanto sopra riportato risponde a verità.