

Alexander Kocian

alexander.kocian@unibas.it • <https://www.linkedin.com/in/alexander-kocian-423263175/> • ORCID 0000-0001-8847-0768 • Pisa, Italy

Profile

RTT Researcher in Computer Science at the University of Basilicata. Scientific activity integrates Internet of Things, cyber-physical systems, artificial intelligence, and dynamic probabilistic models, with applications to digital agriculture, sensor time series, and agri-food traceability. International experience in research and teaching, technology transfer, and technical coordination of interdisciplinary activities.

Academic Positions

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| 2026–present | University of Basilicata — RTT Researcher, IINF-05/A, Department of Engineering (DIING). |
| 2023–2025 | University of Pisa — RTDa Researcher, INF/01, Department of Computer Science; PNRR AGRITECH, Spoke 9. |
| 2014–2022 | University of Pisa — Research fellow/grant holder and research collaborator in Computer Science and Agriculture; IoT, precision agriculture, and health informatics. |
| 2012–2014 | CNR, Pisa — Research fellow, Institute of Informatics and Telematics; DSP and MIMO radio systems. |
| 2004–2008 | Aalborg University / BIT Muscat — Researcher and university lecturer in digital communications and signal processing. |

Education and Qualifications

- **National Scientific Habilitation (ASN) as Associate Professor:** 01/B1 Computer Science (2025–2037) and 09/H1 Information Processing Systems (2025–2037).
- **Ph.D. in Electronic Engineering**, Aalborg University, Denmark (2003); visiting scholar, Georgia Institute of Technology (2001).
- **Master's degree in Electronic/Telecommunications Engineering with honors**, TU Wien, Austria (1997).

Research, Projects, and Achievements

- **Research lines:** IoT and cyber-physical systems; machine learning and dynamic Bayesian networks; continual learning and time series; digital agriculture and DSS; data spaces, blockchain, and traceability; signal processing and health informatics.
- **Recent projects:** PNRR AGRITECH–Spoke 9 (crop models, interoperable traceability, METRIQA platform); ORTO-VF (reinforcement learning for vertical farming); FuorisuoloSmart (smart lysimeter and autonomous irrigation).
- **Output:** 21 journal articles, 2 book chapters, and 36 conference proceedings contributions; 4 patent families; software/hardware prototypes and agro-environmental datasets.
- **Metrics as of 21/09/2026:** 902 citations and h-index 14 (Google Scholar); 582 citations and h-index 12 (Scopus).

Teaching and Academic Service

Lecturer in *Big Data and IoT*, *Principles of Digitalization in Agriculture*, hospital information systems, and AGRITECH modules; thesis advisor/supervisor in computer science, IoT, and telecommunications. Associate Editor of *IEEE Access* (since 2025) and member of the Editorial Boards of *Signals* (since 2020) and *Stats* (since 2019). IEEE Senior Member (2024) and EAI Fellow (2022).

Languages

German (native); English (excellent); Italian (certified B2); Danish and Arabic (school level).