

# Piotr Krasnowski

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## R&D Experience

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- 7/2021 - present     **Senior Research Engineer:** *Huawei Paris Research Center, France*
- 6G AI-Native Systems: distributed ML, agentic AI, multi-modal data fusion, semantic communication
  - Contributing to 30+ technical inventions and high-impact publications (NeurIPS 2023, ISIT 2024, ICLR 2025)
  - Collaboration for 6G standardization at scientific and industrial organizations (3GPP, 6G ANA, IEEE)
  - Leading projects on distributed ML; supervising and mentoring junior consultants and intern students
  - Awards: Best Consultant of Huawei Paris Research Center, Best Patent Contribution, Huawei Future Star
- 1/2021 - 6/2021     **Research engineer:** *I3S-CNRS, Sophia Antipolis, France*
- Automatic detection, classification, and analysis of underwater biotic and anthropogenic sounds using Machine Learning, GPU computing, and advanced audio signal processing
- 12/2017 - 1/2020     **Research engineer:** *BlackBoxSécu, Sophia Antipolis, France*
- Focus on speech codecs, real-time cryptographic algorithms, error correction coding, system integration
- 10/2014 - 6/2017     **Research student:** *R&D Group of Electronics for Spacecrafts, WRUST, Poland*
- ESA's satellite testing, EM compatibility measurements, coding, airborne radar remote sensing

## Education

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- 12/2017 - 12/2020     **Doctor of Philosophy in Computer Science**  
*I3S-CNRS, The University of Côte d'Azur, France*
- Research topics: real-time speech/audio signal processing, digital telecommunications, cryptographic algorithms and protocols, GPU-accelerated Machine Learning on large speech corpora
  - Best PhD award of 2021 in Computer Science from l'Ecole Doctorale STIC
  - Cooperation with the cybersecurity start-up BlackBoxSécu (Sophia Antipolis, FR)
  - Supported and co-funded by the Agence de l'Innovation de Défense and the Ministère des Armées
- 10/2012 - 9/2017     **Master of Engineering in Telecommunications**  
*The University of Nottingham, UK • The Wroclaw University of Technology, Poland*
- 10/2012 - 6/2016     **Bachelor of Mathematics**  
*The Wroclaw University of Science and Technology, Poland*

## Skills

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- Signal processing and telecommunications (wireless/speech, 5G/6G networks, sensing)
- Machine Learning, GPU computing, Tensorflow, PyTorch, C/C++, Python, MATLAB
- Leadership, mentoring, collaboration, and organizational skills
- Patenting (writing invention disclosure forms, collaboration with patent attorneys, etc.)
- Advanced English, intermediate French, basic German, native Polish

## Selected Publications

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- Krasnowski, Piotr, Jerome Lebrun, and Bruno Martin. "A novel distortion-tolerant speech encryption scheme for secure voice communication." *Speech Communication* 143 (2022)
- Sefidgaran, Milad, Abdellatif Zaidi, and Piotr Krasnowski. "Minimum Description Length and Generalization Guarantees for Representation Learning." *Advances in Neural Information Processing Systems* 36 (2024).