Piotr Krasnowski

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R&D Experience

7/2021 - present **Senior Research Engineer:** *Huawei Paris Research Center, France*

- Distributed learning, large models, and semantic communication for 6G networks
- Collaboration for 6G standardization (3GPP, 6G ANA)
- 20+ patents, high-impact publications (NIPS 2023, ISIT 2024)
- Paris Research Center President Award of 2021

1/2021 - 6/2021 **Research engineer:** *I3S-CNRS, Sophia Antipolis, France*

- Automatic detection, classification and analysis of biotic and anthropogenic sounds using Machine Learning, GPU computing and audio signal processing

12/2017 - 1/2020 **Research engineer:** *BlackBoxSécu, Sophia Antipolis, France*

- Speech codecs, cryptography, 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, coding, airborne radar remote sensing

Education

12/2017 - 12/2020 **Doctor of Philosophy in Computer Science**
I3S-CNRS, The University of Côte d'Azur, France

- Speech/audio signal processing, digital telecommunications, cryptography, GPU-accelerated Machine Learning on large speech corpora
- Best PhD award of 2021 in Computer Science from l'Ecole Doctorale STIC
- Cooperation with the start-up BlackBoxSécu (Sophia Antipolis, FR)
- Supported and co-funded by the Agence de l'Innovation de Défense

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

- Machine Learning, GPU computing, Tensorflow, PyTorch, C/C++, Python, MATLAB
- Signal processing and telecommunications (speech/audio, 5G/6G networks, sensing)
- Cybersecurity (key exchange protocols, TCP/IP, cryptography)
- Advanced English, intermediate French, basic German, native Polish

Selected Publications

- 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).