Igor Krawczuk
PhD Student
École polytechnique fédérale de Lausanne
Email: igor@krawczuk.eu
Web: https://krawczuk.eu

(a) Education & Training

École polytechnique fédérale de Lausanne	Lausanne, CH	Electrical Engineering	Ph.D., ongoing
Technical University of Munich	Munich, DE	Electrical Engineering	M.Sc. 2017

(b) Research & Professional Experience

Sep. 2017 – present	Doctoral Student at EPFL with Prof. Volkan Cevher
2018 - 2019	Research Internship at IBM
Summer 2018	Research Internship at Samsung Korea
2018 – present	Scientific advisor at Syntherion, a risk management startup
March 2017 – Sep.2017	Trainee at SCI-STI-MM@EPFL
2016 – March 2017	Resident consultant at Blik, an intra-logistics startup
2014 – present	Freelance consultant, software engineering and ML system prototyping

Experienced Software Engineer
Years of experience delivering high quality software projects. Extensive experience with

C/C++ (10 years)	Python(8 years)	Tensorflow/Pytorch (4/3 years)
Rust(6 years)	MatLab(4 years)	Julia (3 years)

Familiar with ML in breadth and depth
Studied and worked with a wide array of machine learning methods during freelancing and PhD. Examples include:

CNNs for automated salmon health monitoring	Robust and interpretable fundus classification
Robust model based RL controllers	MRI reconstruction via GANs
GANs for graphical data	Transformers for EEG and protein analytics

Teaching experience:
Served as TA for EE-618 (Theory and Methods for RL), EE-559 (Deep Learning) and EE-556 (Mathematics of Data)
Supervised over a dozen student projects, focusing on GANs and RL.

(c) Publications

Peer reviewed

1. I. Boybat, C. Giovinazzo, E. Shahrabi, I. Krawczuk, I. Giannopoulos, C. Piveteau, M. Le Gallo, C. Ricciardi, A. Sebastian, and E. Eleftheriou, in *IEEE International Symposium on Circuits and Systems (ISCAS)* (2019).
2. J. Sandrini, B. Attarimashalkoubeh, E. Shahrabi, I. Krawczuk, and Y. Leblebici, in *IEEE International Conference on the Science of Electrical Engineering (ICSEE)* (2016).

Preprints

3. T. Sanchez, I. Krawczuk, Z. Sun, and V. Cevher, Uncertainty-driven adaptive sampling via GANs (2020), under review.
4. T. Sanchez, I. Krawczuk, Z. Sun, and V. Cevher, Closed loop deep bayesian inversion: Uncertainty driven acquisition for fast mri (2019).
5. M. Brundage *et al.*, Toward trustworthy AI development: Mechanisms for supporting verifiable claims (2020).