Luc Vedrenne

Curriculum Vitae

PERSONAL DETAILS

Birth	September 4, 1996
Mail	vedrenneluc@gmail.com

EDUCATION

MSc. Computer sciences 2017-2020

IMT Atlantique, Brest

Optimization, Information theory, Statistical learning, Computer vision, Deep Learning.

BSc. Mathematics & Physics 2014-2017

Lycée Kléber, Strasbourg

Intensive preparation courses for entrance exams to top French engineering schools.

PROFESSIONAL EXPERIENCE

Phd student 2022-present

ICube, Strasbourg

Multiviews registration of highly degraded point clouds using deep learning. Application to SMLM. Advisors: Denis Fortun, Sylvain Faisan.

Teaching assistant 2022-present

Telecom Physique Strasbourg

Image processing (graduate level), reference: Vincent Mazet.
Random signal processing (graduate level), reference: Celine Meillier.

Intern 2020-2021

ICube, Strasbourg

Detection of isolated particles on fluorescent microscopy (particle picking). Development of a deep learning pipeline in a weakly supervised setup. Advisors: Denis Fortun, Etienne Baudrier.

Intern 2020-2021

Onconeural, Paris

Main Pytorch Developer. Cancer detection on CT scans with deep neural network. Advisor: Benoit Tinetti.

PUBLICATIONS

CONFERENCES

Optimizing failure mode analysis of dental restorative materials: balancing efficiency and accuracy 2024

B. Cournault, L. Vedrenne, P. Teyagirwa, Erkel, G. Hattenberger, H. Jmal, N. Kharouf, O. Etienne

International Symposium on Biomedical Imaging (ISBI)

Particle detection based on few shot learning in 3D fluorescence microscopy 2024

L. Vedrenne, E. Baudrier, D. Fortun
International Symposium on Biomedical Imaging (ISBI)

Fast and interpretable unsupervised domain adaptation for FIB-SEM cell segmentation 2023

A. Stenger, L. Vedrenne, P. Schultz, S. Faisan, E. Baudrier, B. Naegel
International Symposium on Biomedical Imaging (ISBI)

JOURNALS

Multiview Point Cloud Registration via Optimization in an Autoencoder Latent Space 2025

L. Vedrenne, S. Faisan, D. Fortun
IEEE Transactions on Image Processing (TIP)

IN PREPARATION

Plug-and-Play Global Initializer for Robust and Efficient Point Cloud Registration 2024

L. Vedrenne, D. Fortun, S. Faisan

SKILLS

Languages	French (mother tongue) English (fluent)
Software	Python (PyTorch, Jax), Matlab, C++, CUDA.
O.S	Linux

SELECTED DEVELOPPED TOOLS

JRMPC	PyTorch portage of the JRMPC algorithm. `https://github.com/ListIndexOutOfRange/JRMPC-PyTorch`
POLAR	Implementation of our paper *Point Cloud Latent Registration.* `pypolar.github.io/polar`