Pierre Kibleur

Ph.D., Engineer in CSE

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French nationality • Driving license B

Experience

UGent Center for X-ray Tomography (UGCT), Ghent, Belgium
-Industrial consulting on 3D data analysis, using non-destructive testing to answer intricate R&D questions on materials, product development, and processes. Group promotion at several conferences and seminars. Lecturer on "Advanced applications of deep learning for X-ray CT" — 2022–present

-Academic researcher on bio-sourced, fiber-based composite materials, and quantitative image processing. Presenter at 6 international conferences. I received a presentation award at ICTMS2022. Supervisor of 3 M.Sc. theses on precision imaging; deep learning; robotics — 2018–2022

Confinis AG, Geneva, Switzerland
Consulting on the regulatory compliance of medical devices, specifically joint prosthetics, in preparation of marketing application dossiers — 2018–2018

University of Fribourg, Fribourg, Switzerland
Bio-robotic modeling of the primate arm to guide the outputs of a brain-computer interface — 2018–2018

G-therapeutics, Lausanne, Switzerland
Programming the Rysen body weight support robot for gait rehabilitation, with Motek Medical — 2017–2017

Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
Teaching assistant providing support in mathematics for a group of 20 second-year physicists — 2015–2016

Education

Ghent University, Ghent, Belgium
Ph.D. Bioscience Engineering; thesis on "4D X-ray micro-tomography investigation of water-induced swelling of wood fiberboards" — 2018–2022

EPFL, Lausanne, Switzerland
-M.Sc. Computational Science and Engineering; thesis on "Biomechanical model of the primates' upper limb: design of stimulation protocols for the recovery of reaching movements in tetraplegia" — 2015–2018

-B.Sc. Physics; Erasmus+ exchange at ULB, Brussels — 2011–2015

Competencies

Coding: C/C++, Python, Matlab, Bash, shell, CUDA, Basic, C#, LaTeX
Libraries: Pandas, Scipy, scikit-image, OpenCV, TwinCAT, Keras, PyTorch, TensorFlow, numpy
Software: Git, Dragonfly, Avizo, VGStudio Max, Fiji, Abaqus, Solid Works, Fusion 360, Visio
Environments: Linux/Windows, Vim, Atom, Visual Studio, Jupyter, Overleaf, Microsoft Office Suite
Soft skills: Project management, Multidisciplinary collaboration, Communication, Adaptability

Selected publications (3/24)

Composites Science and Technology: Implemented the deep learning segmentation of 3D aggregates in complex composite fiber materials, doubling the accuracy of other works — 2022

Scientific Reports: Exploited the advanced physico-chemical properties of materials and X-rays to optimize the detectability of adhesives embedded in renewable composite materials — 2022

International Conference on Intelligent Robots and Systems: Developed a 3D algorithm for the autonomous control and navigation of air/sea-borne robots, which has been cited over 30 times — 2017

Languages

English/French: Fluent
Russian/Dutch: Limited proficiency

Hobbies

Competition rowing: twice Belgian champion
Sailing, flute and saxophone