Pierre Kibleur

Ph.D., Engineer in Computational Mathematics

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French nationality • Driving license B

With hands-on experience on complex materials and robotics, I am eager to contribute to the advancement of automation and innovative technical solutions in the industry.

Experience

UGent Center for X-ray Tomography (UGCT), Ghent, Belgium

- Consulting on industrial R&D — 2022–present

3D non-destructive testing of materials and assemblies, for quality assessment and production process evaluation. Project management, experiment design, and commercial promotion at international events.

- Research engineer — 2018–2022

Quantified the deterioration of MDF composite materials with X-rays, image processing, and FEM simulations to improve their durability. Took an active part in many external R&D projects.

Confinis AG, Geneva, Switzerland

- Consulting on regulatory compliance (4 months) — 2018–2018

Evaluated the medical viability of joint prostheses in preparation of marketing application dossiers.

University of Fribourg, Fribourg, Switzerland

- Robotics engineer — 2018–2018

Reverse-engineering and modeling of the non-human primate arm for use in tetraplegia therapy.

G-therapeutics, Lausanne, Switzerland

- Robotics engineer (9 months) — 2017–2017

Programming the Rysen medical robot for gait rehabilitation: defined the C++ control architecture, implemented training tasks for patients, and integrated embedded IMU sensors for real-time state estimation.

École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

- Teaching assistant — 2015–2016

Provided support in mathematics for a group of 20 second-year physicists.

Education

Ghent University, Ghent, Belgium

- Ph.D. Bio-science Engineering; specialized in X-ray imaging, materials analyses and testing, and artificial intelligence / deep learning for image vision. Presentation award at ICTMS2022. — 2018–2022

EPFL, Lausanne, Switzerland

- M.Sc. Computational Science and Engineering; specialized in robotics, programming, mathematics. — 2015–2018

Created an autonomous control algorithm for air/sea-borne drones.

- 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, Creativity, Problem solving
Communication: Author of 21 peer-reviewed articles, regular presenter at conferences and meetings

Languages

English/French: Fluent
Russian/Dutch: Limited proficiency

Hobbies

Rowing: two times champion of Belgium
Trainee sailor with a passion for tall ships