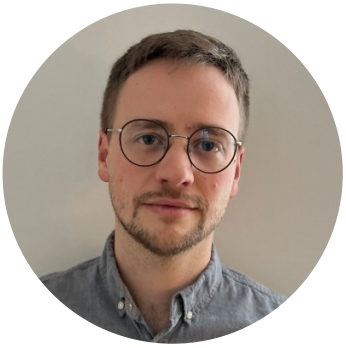

AMAURY BILOCQ

Aerospace Engineer

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EDUCATION

Ph.D. in Aerospace Engineering
University of Liège
October 2020 – Ongoing Liège, Belgium

M.Sc. in Aerospace Engineering
University of Liège
2020 Liège, Belgium

M.Sc. in Industrial Engineering (Automation)
Henallux-Pierrard
2018 Virton, Belgium

ABOUT ME

Aerospace engineer with expertise in compressible aerodynamics, turbulence modeling, and numerical methods. Experienced in both low- and high-fidelity CFD, turbomachinery, and multidisciplinary collaboration. Passionate about automation, coding, and solving complex problem.

EXPERIENCE

PhD candidate
University of Liège
2020 – Ongoing Liège, Belgium

Numerical research on high-speed turbulent flows and shock capturing methods for aerospace applications.

- Developed from scratch a massively parallel high-order discontinuous Galerkin solver (C++/Python).
- Investigated shock-capturing strategies for accurately resolving compressible turbulence in high-speed flows.
- Implemented advanced co-processing tools for statistical analysis of large simulation data.
- Contributed to DevOps workflows with GitLab CI/CD and Docker for code testing and deployment.
- Supervised master's students on research projects related to numerical methods and solver development.

Teaching Assistant
University of Liège
2021 – 2023 Liège, Belgium

Courses: Computational Fluid Dynamics and Flow in Turbomachines

- Computational Fluid Dynamics: Prepared, supervised, and corrected exams; developed and delivered practical sessions on numerical methods and turbulence modeling.
- Flow in Turbomachines: Provided simulation data for student projects on 3D rotor/stator blade flows in both design and off-design conditions. Conducted ParaView tutorials for post-processing and flow visualization.

Internship, Aircraft Design
University of Liège
February-August 2020 Liège, Belgium

Development of a low-fidelity model for preliminary aircraft design

- Integrated a viscous–inviscid interaction model into an existing full potential solver.

- Improved aerodynamic performance predictions compared to base model.

Internship, Satellite Avionics Production

LuxSpace

February – June 2018 | Betzdorf, Luxembourg

Design of a production cell for an integrated avionics unit

- Designed a microsatellite avionics production cell using Lean 3P methodology.
- Integrated Industry 4.0 principles into early-stage design workflows.

Internship, Mechanical Design

Jindal Film

September-November 2015 | Virton, Belgium

Professional immersion in mechanical design and manufacturing processes

- Translated 2D mechanical drawings of a cutting blade station for plastic film production into functional 3D CAD assemblies using Inventor (AutoCAD).
- Collaborated with the machine shop to produce and install the station.

SKILLS

C/C++ | Python | Matlab/Simulink

LaTeX latex | git | Linux

AutoCAD/Fusion 360 | Siemens NX | TIA Portal | GMAT

OpenFOAM | SU2 | GMSH | ParaView

LANGUAGES

French
Native speaker

English
Full professional proficiency

German
Beginner