

Full-time position

Experienced CFD Developer (C++ platform)

Reference: CFD-2023-BOU-01
Team: CFD Team
Salary: Based on experience
Starting date: As soon as possible
Application deadline: End of June 2023

Location: 42 avenue Gaspard Coriolis – 31057 Toulouse
Contact person: Jean-François BOUSSUGE
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Level of education required: Ph.D.

HOST LABORATORY

Cerfacs is a center for fundamental and applied research, specialized in modeling and numerical simulation. Through its resources and expertise in high-performance computing, it tackles major scientific and technical challenges in both public and industrial research. The teams at Cerfacs bring together physicists, applied mathematicians, numerical analysts, and computer scientists who design and develop innovative methods and software solutions to meet the needs of the aeronautics, space, climate, energy, and environmental sectors. Cerfacs works closely with its seven partners: **Airbus, Cnes, EDF, Météo France, Onera, Safran et TotalEnergies.**



JOB DESCRIPTION

Thematic(s): Development of advanced numerical methods (in C++) for CFD platforms.

Title: Research Engineer in CFD Code Development

Subject and job description:

We are seeking an experienced research engineer to join the CFD team at CERFACS. Your main role will involve managing activities related to an industrial CFD computing environment, with a focus on the development of the CFD solver CODA, which is a software jointly developed by Airbus, ONERA, and DLR. You will also participate in adapting CERFACS' calculation solvers to new architectures.

Your responsibilities will include:

- Participating actively in the development of new features in the CFD code CODA.
- Collaborating with CERFACS' industrial partners to address their specific needs in terms of CFD code development.
- Working closely with doctoral students, engineers, and interns, guiding them in their CFD code development tasks.
- Contributing to the adaptation of CERFACS' calculation codes to new architectures, aiming to optimize performance and resource utilization.

Ideal profile:

- You hold a Ph.D. in Computational Fluid Dynamics or a related field.
- You have significant experience (at least three years after your Ph.D.) in CFD code development, preferably with specific expertise in the CFD code CODA (<https://services.excellerat.eu/viewcode/10>).
- You are proficient in the C++ programming language and comfortable with software development techniques.
- You have in-depth knowledge of numerical methods applied to compressible flows.
- You have a strong understanding of aerodynamics in the context of aircraft and turbomachinery.
- You are independent, creative, and capable of proposing innovative solutions to fluid dynamics-related problems.
- You have good communication skills and can work effectively within a multidisciplinary team.

To apply, please send your CV along with a detailed cover letter outlining your achievements and relevant skills. We would be pleased to review your application and assess how you can contribute to our team.