

CUSTODIANS OF OPENFOAM®

FRED MENDONCA

Director at ESI-OpenCFD Global Operations

We acknowledge a strong legacy behind CFD in academia, research and industry. This branch of engineering science is fast approaching its half centenary. Its impact is already far reaching.

In all strains of software, we begin also to see a strong complementarity between commercially licensed software and open-source. It is no different in CFD. More than 10 years since it was first released, OpenFOAM has found, but continues to re-position, it's natural place in this evolving system.

On the face of it OpenFOAM+, at worst, is simply another fork, even if one cannot ignore the pedigree behind its release.

At best, it can honour the sentiments espoused by the community of users, funders, supporters and maintainers. Then it becomes an answer to "needs" in an ecosystem which is open, sustainable and importantly, professional. Let's start by seeking this community to converge.



Fred Mendonca gained his Masters Degree in 1986 from Imperial College, London, and values 28 years of technical specialism in Computational Fluid Dynamics as key to understanding, meeting and sometimes driving software expectations in CAE. He has authored several journal and technical papers and book chapters in advanced engineering applications, and is a major contributor to European Best Practice Standards for CFD. His expertise lie with Turbomachinery and Aeroacoustics, focusing on market expectations and expert knowledge-capture towards best practice. He is presently Director of Operations at OpenCFD, originator of OpenFOAM open-source CFD code.

He studied Aeronautical Engineering at Imperial College, affording opportunity to work for Peter Bradshaw on experimental smoke-wire flow visualisation techniques in turbulent flows, and with Richard Hillier on Gudonov-based compressible flow solvers. In 1986, Fred joined British Aerospace, Civil Aircraft Division in Bristol, UK (now Airbus) developing 3D Euler and Navier-Stokes solvers, including multi-block, multi-grid, vectorised code for full aircraft configurations, and together with Anthony Jameson on coupled CFD solver techniques.

In 1989, Fred moved to CHAM, Brian Spalding's company, working there for 5 years in Support, Consulting and EU Project management, before joining CD-adapco in London where he has worked for 20 years, as Head of Support, then Director of Turbomachinery and latterly as Director of Aeroacoustics. Today, as Director of Operations at OpenCFD, his main focus is developing the complementarity between commercial and open-source CFD, running a profitable business while catering for the demands of the OpenFOAM Community.

In his spare time Fred enjoys music, composing sacred scores for piano, woodwind, guitar, voice, and is assisted in performance by all family members, wife Anne-Marie, son Joseph, daughter Sarah, and with longstanding group members as Director of Music in the local parish. He currently also acts in the capacity of Chairman of the Parish Pastoral Council, Foundation Governor at the local primary school, and fundraiser for the UK Overseas Development Aid Agency CAFOD.