

Franco Auteri, Curriculum vitae

Education

- 2000: Ph. D. in Aerospace Engineering, Politecnico di Milano, thesis “A hierarchical triangular spectral element method for incompressible fluid dynamics simulation”.
- 1995: Master degree in Aeronautical Engineering with honors, Politecnico di Milano.

Academic positions

- 2005- Assistant Professor of Fluid Mechanics, Dipartimento di Ingegneria Aerospaziale, Politecnico di Milano.
- 2001-2004 Laboratory Engineer, Aerodynamics Laboratory, Dipartimento di Ingegneria Aerospaziale, Politecnico di Milano.
- 2000-2001 Assistant researcher, CIRIC (Computational Engineering Research Centre), Politecnico di Milano.

Teaching activity

- Lecturer, courses of Fluid dynamics I, Aerodynamics I and Fluid dynamics;
- Readings, exercises and labs in the courses of Fluid dynamics and aerodynamics II, Experimental fluid dynamics, Computational fluid dynamics.

Research interests and scientific production

- stability and control of low Reynolds number flows,
- bluff body flows
- vertical take-off aircraft aerodynamics
- numerical and experimental methods for fluid mechanics

Co-author of 20 papers published in international peer-reviewed journals and of several contributions to national and international conference proceedings.

Other activities

- Member of the Politecnico di Milano group which is partner in the VI European Framework Programme NICETRIP project.

- Member of the Politecnico di Milano group which is partner in the VI European Framework Programme GOAHEAD project.
- Member of the Politecnico di Milano group in the VII European Framework Programme CleanSky GUM project.
- HPC-Europa2 visiting researcher at LadHyx, Ecole Polytechnique, Palaiseau.
- TRACS visiting researcher at Edinburgh Parallel Computing Centre (EPCC), Edinburgh University, UK.
- Referee for several international journals.

Foreign languages

Fluent english and french, both written and spoken.

Publications in refereed international journals

- F. AUTERI E L. QUARTAPELLE, Galerkin–Laguerre spectral solution of self-similar boundary layer problems, *Communications in Computational Physics*, in press (2011).
- F. AUTERI E L. QUARTAPELLE, Spectral Matrix Conditioning in Cylindrical and Spherical Elliptic Equations, *Numerical Mathematics: Theory, Methods and Applications*, **4**, 113–141 (2011).
- G. GIBERTINI, F. AUTERI, G. CAMPANARDI, C. MACCHI, A. ZANOTTI, A. STABELLINI, Wind-Tunnel Tests of a Tilt-Rotor Aircraft, *Aeronautical Journal*, **115**, 315–322 (2011).
- F. AUTERI, A. BARON, M. BELAN, G. CAMPANARDI, M. QUADRIO, Experimental Assessment of Drag Reduction by Traveling Waves in a Turbulent Pipe Flow, *Physics of Fluids*, **22**, 115103 (2010).
- F. AUTERI, M. BIAVA E L. QUARTAPELLE, Navier-Stokes Spectral Solver in a Finite Cylinder, *Communications in Computational Physics*, **8**, 663–689 (2010).
- F. AUTERI, M. BELAN, C. CASSINELLI, G. GIBERTINI, Interacting Wakes of Two Normal Flat Plates an Investigation Based on Phase Averaging of Lda Signals, *Journal of Visualization*, **12**, 307–321 (2009).
- F. AUTERI E L. QUARTAPELLE, Navier-Stokes Spectral Solver in a Sphere, *Journal of Computational Physics*, **228**, 7197–7214 (2009).
- F. AUTERI E L. QUARTAPELLE, Spectral elliptic solvers in a finite cylinder, *Communications in Computational Physics*, **5**, 426–441 (2009).
- F. AUTERI, M. BELAN, G. GIBERTINI E D. GRASSI, Normal flat plates in tandem: an experimental investigation, *Journal of Wind Engineering and Industrial Aerodynamics*, **96**, 872–879 (2008).

- F. AUTERI E L. QUARTAPELLE, Spectral solvers for spherical elliptic problems, *Journal of Computational Physics*, **227**, 36–54 (2007).
- F. AUTERI, N. PAROLINI E L. QUARTAPELLE, Essential imposition of Neumann condition in Galerkin–Legendre spectral solver, *Journal of Computational Physics*, **185**, 427–444 (2003).
- F. AUTERI, N. PAROLINI E L. QUARTAPELLE, Numerical investigation on the stability of the singular driven cavity flow, *Journal of Computational Physics*, **183**, 1–25 (2002).
- F. AUTERI E N. PAROLINI, Numerical investigation of the first instabilities in the differentially heated 8:1 cavity, *International Journal for Numerical Methods in Fluids*, **40**, 1121–1132 (2002).
- F. AUTERI E N. PAROLINI, A mixed-basis spectral projection method, *Journal of Computational Physics*, **175**, 1–23 (2002).
- F. AUTERI, L. QUARTAPELLE E L. VIGEVANO, Accurate ω - ψ spectral solution of the singular driven cavity problem, *Journal of Computational Physics*, **180**, 597–615 (2002).
- F. AUTERI, J.-L. GUERMOND E N. PAROLINI, Role of the LBB condition in weak spectral projection methods, *Journal of Computational Physics*, **174**, 405–420 (2001).
- F. AUTERI, F. SALERI E L. VIGEVANO Incompressible Navier–Stokes solutions by a triangular spectral/p element projection method, *Comput. Methods Appl. Mech. Engrg.*, **190**, 6927–6945 (2001).
- F. AUTERI E L. QUARTAPELLE, Spectral influence matrix for vorticity without corner pathology, *Applied Numerical Mathematics*, **33**, 135–142 (2000)
- F. AUTERI E L. QUARTAPELLE, Galerkin–Legendre spectral method for the 3D Helmholtz equation, *Journal of Computational Physics*, **161**, 454–483 (2000).
- F. AUTERI E L. QUARTAPELLE, Galerkin spectral method for the vorticity and stream function equations, *Journal of Computational Physics*, **149**, 306–332 (1999).