Luigi Vigevano

Curriculum Vitae

Born in Milano, January 16, 1953.

Degree in Aeronautical Engineering at Politecnico di Milano, July 24, 1978.

From October 1978 to June 1979 attended the "One Year Post-Graduate Diploma Course" at Von Karman Institute for Fluid Dynamics (VKI), Rhode-Saint-Génèse (Belgium), achieving the diploma with honours. From October 1979 to October 1982 carried out research activity at VKI, supported by a VKI grant.

From January 1983 to August 1985 worked as Senior Aerodynamicist at Costruzioni Aeronautiche G.Agusta S.p.A., Cascina Costa di Samarate (Varese), and from September 1985 to May 1990 worked as Senior Fluid-dynamicist at Ansaldo Componenti S.p.A., Milano.

From June 1990 to December 2003 Assistant Professor at the Department of Aerospace Engineering, Politecnico di Milano. From January 2004 Associate Professor at the Department of Aerospace Engineering, presently Department of Aerospace Science and Technology, Politecnico di Milano.

Present academic duties: member of the Board of the Department of Aerospace Science and Technology, head of the Scientific Committee of the Department of Aerospace Science and Technology, Aerospace Engineering PhD program coordinator.

Present teaching: - at master level: Aerothermodynamics, Aerodynamic design; - at PhD level: Aerodynamics and aeroacoustics of rotors.

The scientific activity carried out in the period 2001-2015 has concerned the following topics: development of Chimera methods for unsteady aerodynamic predictions of rotor and complete helicopter flows; development of numerical methods for inviscid and viscous flows; numerical simulations of flows of real gases with complex equation of state; sonic boom propagation.

Recent publications:

Chirico G., **Vigevano L.**, Barakos G. N., Numerical Modelling of the Aerodynamic Interference between Helicopter and Ground Obstacles, 41st European Rotorcraft Forum, Münich, Germany, 1-4 Sept. 2015, pp. 1-18.

Biava M., **Vigevano L.**, Computational Assessment of Wind Tunnel Flow in Closed and Open Section Model Rotor Tests, *J. of the AHS*, **59**, 012006, 2014.

Vigevano L., Beaumier P., Decours J., Khier W., Kneisch T., Vitagliano P., Tilt-Rotor Aerodynamics Activities During the Nicetrip Project, 40th European Rotorcraft Forum, Southampton, UK, 2-5 Sept. 2014, pp. 1-14.

Boffadossi M., Valentini M., **Vigevano L.**, Shaft Angle Corrections for Rotor Tests in a Closed Section Wind Tunnel, 40th European Rotorcraft Forum, Southampton, UK, 2-5 Sept. 2014, pp. 1-12.

Decours J., Beaumier P., Khier W., Kneisch T., Valentini M., **Vigevano L.**, Experimental Validation of Tilt-Rotor Aerodynamic Predictions, 40th European Rotorcraft Forum, Southampton, UK, 2-5 Sept. 2014, pp. 1-12.

Fossati M., Guardone A., **Vigevano L.**, Xu K., Kinetic Node-Pair Formulation for Two-Dimensional Flows from Continuum to Transitional Regime. *AIAA Journal*, **51**, pp. 784-796, 2013.

Biava M., Valentini M., **Vigevano L.**, Wind Tunnel Corrections for Isolated Rotor Tests, 39th European Rotorcraft Forum, paper N. 69, Moscow, Russia, Sept. 2013, pp. 1-10.

Biava M., Valentini M., **Vigevano L.**, Trimmed Actuator Disk Modeling for Helicopter Rotor, 39th European Rotorcraft Forum, paper N. 94, Moscow, Russia, Sept. 2013, pp. 1-12.

Berci M., **Vigevano L.**, A Nonlinear Model for Sonic Boom Propagation in a Windy Stratified Atmosphere, 20th International Congress on Sound and Vibration, Bangkok, Thailand, 7-11 July 2013, pp. 1-9.

Berci M., **Vigevano L.**, Sonic Boom Propagation Revisited: a Nonlinear Geometrical Acoustic Model, *Aer. Sci. Tech.*, **23**, pp. 280-295, 2012.

Fossati M., Guardone A., **Vigevano L.**, A Node-Pair Finite Element/Volume Mesh Adaptation Technique for Compressible Flows Based on a Hierarchical Approach, *Int. J. Num. Meth. Fluids*, **70**, pp. 1004–1026, 2012.

Antoniadis A.F., Drikakis D., Zhong B., Barakos G., Steijl R., Biava M., **Vigevano L.**, Brocklehurst A., Boelens O., Dietz M., Embacher M., Khier W., Assessment of CFD methods against experimental flow measurements for helicopter flows, *Aer. Sci. Tech.*, **19**, pp. 86-100, 2012.

Biava M., Khier W., **Vigevano L.**, CFD Prediction of Air Flow Past a Full Helicopter Configuration, *Aer. Sci. Tech.*, **19**, pp. 3-18, 2012.

Biava M., **Vigevano L.**, Simulation of a complete helicopter: A CFD approach to the study of interference effects, *Aer. Sci. Tech.*, **19**, pp. 37-49, 2012.

Vigevano L., Biava M., Beaumier P., Decours J., Khier W., Kneisch T., Code to Code Comparison of Aircraft-Mode Tilt-Rotor Aerodynamics, 38th European Rotorcraft Forum, paper N. 63, Amsterdam, The Netherlands, Sept. 2012, pp. 1-13.

Biava M., Campanardi G., Gibertini G., Grassi D., **Vigevano L.**, Zanotti A., Wind Tunnel Open Section Characterization for Rotorcraft Tests, 38th European Rotorcraft Forum, paper N. 67, Amsterdam, The Netherlands, Sept. 2012, pp. 1-13.

Fossati M., Habashi W. G., Biava M., **Vigevano L.**, A Reduced Order Methodology for the Parametric Analysis of Rotor Aerodynamics, 38th European Rotorcraft Forum, paper N. 129, Amsterdam, The Netherlands, Sept. 2012, pp. 1-14.