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Renato Tognaccini is Full Professor of Fluid Dynamics at the Department of Industrial Engineering of the University of Naples Federico II. He took the master degree in Aeronautical Engineering in 1985, then, for seven years worked at Alenia (currently Leonardo Company), the main Italian aerospace company. During this period, for one year and half, he worked at NLR (the Dutch Aerospace Laboratory) as visiting researcher. In 1992 he became staff research scientist at the University of Naples where he is still working as full professor.

He is lecturer of three courses at his University: Aerodynamics, Rotary Wing Aerodynamics and Aerodynamics for the cadet pilots of the Italian Air Force Academy. In the past he also taught Aircraft Aerodynamics.

He currently leads the team TAARG (Theoretical and Applied Aerodynamic Research Group). His research activities are documented by more than 100 papers, most of them published on international journals as AIAA J., J. of Aircraft, J. of Fluid Mech., Physics of Fluids, etc.. His research interests are in Theoretical Fluid Dynamics, Computational and Applied Aerodynamics. He led different international research teams within relevant EU funded programs as AIRDATA, DESIREH, Clean Sky JTI-GRA (Low Noise Domain and Clean Sky 2 REG Program Airgreen2 funded by EU. He also led projects funded by the Italian Ministry of Research.

Concerning his main research activities, during 80s at NLR he participated to the development of a multi block structured software environment for subsonic and transonic CFD analyses of complex configurations including the simulation of propeller and open rotors.

During 90s at University of Naples he wrote a DNS code for the simulation of the airfoil start-up and proposed new exact analytical solutions of the Navier-Stokes equations coupled with thermal field.

During 2000s within EC funded AIRDATA project he developed a method for drag analysis and breakdown from CFD data. An alternative method was developed in cooperation with JAXA (Japanese Aerospace Agency). He is currently cooperating on this topic with ONERA (the French Aerospace Labs), CIRA (Italian Aerospace Research) and Cranfield University within a GARTEUR project.

In cooperation with CIRA (still ongoing) he also proposed a turbulence model for the analysis of low-Reynolds number airfoils and wings.

During 2010s, within EC funded Clean Sky GRA program, he developed a model for CFD simulations of aerodynamic configurations with riblets installed.

He is currently cooperating with Prof. Gianluca Iaccarino of Stanford University to the development of Aerodynamic prediction methods by Machine Learning algorithms.

With Prof. Luciano Demasi of San Diego State University he is studying advanced unconventional wing geometries.
He is cooperating with IIT (Italian Institute of Technology) for the development and built of a flying humanoid robot.

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