

Federico Toschi



Talk title: State of the art numerical investigations of Lagrangian turbulence

Resume

Federico Toschi studied at Scuola Normale Superiore in Pisa and obtained a Ph.D. in Physics from the University of Pisa in 1999. After two years of post-docs, almost completely spent at University of Twente, since 2001 he has been holding a researcher position at Istituto per le Applicazioni del Calcolo an institute of the National Research Council, IAC-CNR, in Roma (Italy). Currently he is full professor at Eindhoven Technical University. His research interests include fluid dynamics turbulence, statistical physics, micro and nano-fluids, numerical methods for fluid dynamics, high-performance computing, he authored about 100 scientific publications and attended 50 international conferences. He has extensive expertise in the field of state-of-the-art numerical simulations for turbulence, both on custom-made and commercial super-computers. Recently he has been awarded a DEISA DECI (DEISA Extreme Computing Initiative) grant to study the dynamics of heavy particles in turbulence. He is the founder and administrator of the International CFD Database hosted at CINECA (Bologna, Italy), <http://cfd.cineca.it>. Currently he serves as chairman of the International Collaboration for Turbulence Research (ICTR, <http://www.ictr.eu>).

Positions and contracts

01/09/2008 Full professor, chair of Computational Multiscale Transport Phenomena (Eindhoven, The Netherlands).

01/01/2008 - today Chairman of ICTR - International Collaboration on Turbulence Research

04/12/2006 Elected Vice-Chairman of the ICTR - International Collaboration on Turbulence Research, <http://ictr.cineca.it> (chair-elect)

01/04/2005 - today Associated to INFN (National Institute for Nuclear Physics), section of Ferrara.

01/01/2004 - today Member of INDAM (National Institute for Higher Mathematics) - G.N.F.M. (National Group for Mathematical Physics).

08/10/2001 – 31/08/2008 Researcher at Istituto per le Applicazioni del Calcolo (Institute for Applied Mathematics) of CNR (National Research Council), Roma (Italy).

04/2001 - 09/2001 Research contract with Physics Department and INFN, Pisa (Italy).

01/2001 - 04/2001 Research contract with CNRS, Ecole Normale Supérieure, Lyon (France).

05/1999 - 12/2000 Post-Doc contract at University of Twente (The Netherlands) as employee of Stichting voor Fundamenteel Onderzoek der Materie (FOM).

11/1995 - 10/2004 Affiliated to INFN (National Institute for the Physics of Matter), Tor Vergata unit, Roma (Italy).

11/1995 - 11/1999 Affiliated to INFN (National Institute for Nuclear Physics), section of Pisa (Italy).

11/1995 - 11/1998 Grant as Ph.D. studentship from MURST (Italian Research and Education Ministry), Pisa (Italy).

11/1990 - 11/1994 Student of the Science Class at Scuola Normale Superiore, Pisa (Italy).

Education

26/02/1999 Ph.D. thesis defense: Anomalous scaling in turbulence and in turbulence models.

11/1995 - 02/1999 Ph.D. student in Physics (XI cycle) at University of Pisa, Pisa (Italy).

21/12/1995 Final diploma in Physics at Scuola Normale Superiore of Pisa (Italy).

11/1990 - 07/1995 Student of the class of science at Scuola Normale Superiore, Pisa (Italy).

06/07/1995 Master diploma in Physics (110/110 summa cum laude) at University of Pisa (Italy).

11/1990 - 07/1995 Student in Physics at University of Pisa, (Italy).