Aldo Bonfiglioli graduated on July 16th 1992 summa cum laude in Mechanical Engineering from the Technical University of Bari (TUBari); on July 30th 1993 he obtained the Diploma Course with honours in Fluid Dynamics from the von Kàrmàn Institute for Fluid Dynamics (VKI), Rhode-St-Gènèse (Belgio); on October 4th 1996 he obtained the Doctoral Degree from TUBari.
Research fellow at VKI since March 1995 until May 1996, on May 16th 1996 he became Assistant Professor in Fluid Machinery at the University of Basilicata. Since October 1st 2007 he is Associate Professor in the same University.

Since 1996 until present he has been visiting several research institutions abroad.
During September-October 1999 he took part in the TRACS (Training and Research on Advanced Computing Systems) programme at EPCC, the Edinburgh Parallel Computing Centre, fundud by a Training and Mobility of Researchers (TMR) fellowship. Since January 2000 until February 2001 he has been visiting the Department of Mechanical Engineering, Queen Mary and Westfield College, the University of London, working on the simulation of incompressible un-steady flows using unstructured grids in collaboration with Prof. M.A. Leschziner.
Awarded with a Fulbright fellowship, since 1.10.2003 until 31.3.2004 he has been visiting the Department of Aerospace Engineering, University of Michigan, Ann Arbor, where he collaborated with Prof. P.L. Roe on the simulation of hypersonic flows by means of unstructured-grid methods. Since 06.10.2004 until 4.12.2004 he has been visiting the SINUMEF laboratory (Laboratoire de Simulation Numérique en Méchanique de Fluides) at ENSAM (Ecole Nationale Supérieure d'Arts et Metieres. Paris, collaborating with Prof. A.Lerat and C.Corre on the development of RBC (Residual Based Centred) schemes on unstructured meshes.
Since the Academic year 1999-2000 he has been teaching courses in Fluid Machinery and Fluid Mechanics to the undergraduate and graduate engineering students of the Università degli Studi della Basilicata.

He took part in a number of international research programmes:
1) Brite EuRam programme AERO-92-004-CT: "Advanced Algorithms in Computational Fluid Dynamics: Multidimensional Upwinding and Semi-Coarsening Multi-Grid Methods", 2) MSTP Technology Conservation Program: "Control of the Quality of the Approximation and the Grid in Euler or Navier-Stokes Computations", 3) Progetto GALILEO 2006: "Ottimizzazione aerodinamica mediante algoritmi genetici e modelli di ordine ridotto" as well as national research programmes:
1) PRIN 1999: "Simulazione numerica diretta e mediata alla Reynolds delle equazioni di Navier-Stokes per flussi nelle turbomacchine.", 2) PRIN 2001: "Simulazione numerica diretta e mediata alla Reynolds delle equazioni di Navier-Stokes per flussi nelle turbomacchine.", 3) Agenzia 2000, (CNRC000C3F): "Griglie Computazionali e Applicazioni", 4) "Analisi e Sviluppo di Nuclei Computazionali", progetto finanziato dal Gruppo Nazionale per il Calcolo Scientifico (G.N.C.S.), 5) PRIN 2002 "Proprieta' reologiche ed effetti convettivi nei fluidi complessi e nelle miscele" 6) PRIN 2003: "Simulazione numerica diretta e mediata alla Reynolds delle equazioni di Navier-Stokes per flussi nelle turbomacchine.", 7) PRIN2004 "Sviluppo e sperimentazione di turbine per la conversione dell'energia ondosa" 8) PRIN2007: "Sviluppo di un tecnica di shock-fitting per codici di calcolo non-strutturati applicata a flussi ipersonici tridimensionali".

His research activity deals with the development of numerical methods in Computational Fluid Dynamics (CFD) and their applications to the simulation of flows of aeronatuical and turbomachinery interest.
Topics of current interest are: 1) development of fluctuation splitting schemes on unstructured meshes 2) shock-fitting methods on unstructured grids 3) parallel preconditioners for CFD applications
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