

Giorgio Fotia is currently Senior Researcher and Group Leader of the Simulation and Modeling Group in the Bionformatics Laboratory led by Anna Tramontano at CRS4, a multidisciplinary research center specialized in high performance scientific computing, and information and communication technology based in Pula (Cagliari), Italy. After graduating in Structural Engineering at Politecnico of Milano he initiated his career at the Structural Engineering Department of Politecnico working on computational non linear structural mechanics and computational plasticity. Since 1987 he has been working in the industrial research at AERMACCHI Spa, an Italian aerospace company, where he was Head of the Computational Methods and Computer Aided Engineering and Design Team until 1992. He then joined CRS4 as Senior Researcher in applied mathematics and simulation and deputy head of the Applied Mathematics and Simulation group directed by Alfio Quarteroni. In 1995 he became the scientific responsible of the Waves and Structures Group and from 2000 to 2006 he served as the Research Director of the Computational Methods for Engineering Department of CRS4.

His main scientific interests have been concentrated on numerical approximation of partial differential equations by finite elements, finite volumes and spectral element methods for the solution of continuum mechanics problems, including structural mechanics, elastic wave propagation, fluid-structure interaction, free surface flows, flow in porous media, thermo-elasticity, and non linear mechanics of soft biological tissues. Considerable attention has been paid on large scale problems of industrial interest, and on applications to biomedicine and surgical simulation, multiphysics and multiscale problems, geosciences. The recent move to the Bioinformatics Laboratory at CRS4 led to an increase in the breadth of his research interests, and his present research work is concentrated in the field of Systems Biology with a special focus on the structural and dynamic characterization of large scale complex biological networks using advanced numerical methods.

Assistant Professor of Structural Mechanics (Politecnico di Milano, 1986-1992), Visiting Professor of Numerical Methods for Engineering (Università di Trento, 1998), and Guest Lecturer of Computational Methods in Engineering (Politecnico di Milano, 2004-2006), he is the author of many papers in the development and application of computational methods to a wide range of problems in science and engineering. During his career, he managed many national and international research projects both with public institutions, including EU, CNR (Italian Research Agency), ASI (Italian Space Agency, MIUR (Italian Ministry of Research), and with private companies. Since 2000, he has (co)organized 8 international conferences, and 12 international workshops in the field of applied mathematics, scientific computing and computational mechanics, including the 2008 IACM/ECCOMAS World Congress on Computational Mechanics (Venice, Italy). He is currently Vice President and Scientific Board Member of SIMAI (Italian Society of Industrial and Applied Mathematics) and member of the International Council for Industrial and Applied Mathematics (ICIAM) and serves as a Member of the Board of the TCN Consortium, a high-tech company for post-graduate education on computational methods in applied sciences.

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