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	Nota di contenuto	Preface -- Career papers -- The career of Prof. W. Fitzgibbon, by Jeff Morgan, Jacques Periaux -- The career of Prof. Yuri Kuznetsov, by Boris Chetverushkin, William Fitzgibbon, Jacques Periaux, and Olivier Pironneau -- The career of Prof. Olivier Pironneau, by William Fitzgibbon and Jacques Periaux -- Scientific contributions -- Mean eld games for modeling crowd motion, by Yves Achdou and Jean-Michel Lasry -- Remarks about spatially structured SI model systems with cross diffusion, by Vanaya Anaya, Mostafa Bendahmane, Michel Langlais, and Mauricio Sepúlveda -- Automatic clustering in large sets of time series, by Robert Azencott, Viktoria Muravina, Rasoul Hekmati, Wei Zhang, and Michael Paldino -- Zero viscosity boundary effect limit

and turbulence, by Claude Bardos -- Parabolic equations with quadratic growth in Rn, by Alain Bensoussan, Jens Frehse, Shige Peng, and Sheung Chi Phillip Yam -- On the sensitivity to the ltering radius in Leray models of incompressible ow, by Luca Bertagna, Annalisa Quaini, Leo G. Rebholz, and Alessandro Veneziani -- Model order reduction for problems with large convection effects, by Nicolas Cagniart, Yvon Maday, and Benjamin Stamm -- Parametric optimization of pulsating jets in unsteady ow by Multiple-Gradient Descent Algorithm (MGDA), by Jean-Antoine Désidéri and Regis Duvigneau -- Mixed formulation of a linearized lubrication fracture model in a poro-elastic medium, by Vivette Girault, Mary Wheeler, Kundan Kumar, and Gurpreet Singh -- Two decades of wave-like equation for the numerical simulation of incompressible viscous ow: A review, by Roland Glowinski and Tsorng–Whay Pan -- An arbitrary Lagrangian-Eulerian Finite Element method preserving convex invariants of hyperbolic systems, by Jean-Luc Guermond, Bojan Popov, Laura Saavedra, and Yong Yang -- Dual-primal isogeometric tearing and interconnecting methods, by Christoph Hofer and Ulrich Langer -- C0 Interior Penalty Discontinuous Galerkin approximation of a sixth order Cahn-Hilliard equation modeling microemulsication processes, by Ronald Hoppe and Christopher Linsenmann -- On existence "in the large" of a solution to modied Navier–Stokes equations, by George Kobelkov -- An algebraic solver for the Oseen problem with application to hemodynamics, by Igor Konshin, Maxim Olshanskii, and Yuri Vassilevski -- Martin's problem for volume-surface reaction-diffusion systems, by Jeff Morgan and Vandana Sharma -- A posteriori error estimates for the electric field integral equation on polyhedral, by Ricardo Nochetto and Benjamin Stamm -- On some weighted Stokes problems: applications on Smagorinsky models, by Jacques Rappaz and Jonathan Rochat -- Poincaré type inequalities for vector functions with zero mean normal traces on the boundary and applications to interpolation methods, by Sergey Repin -- The ensemble interpretation of quantum mechanics and the two-slit experiment, by Glenn Webb. .

| Sommario/riassunto | This book treats Modelling of CFD problems, Numerical tools for PDE, and Scientific Computing and Systems of ODE for Epidemiology, topics that are closely related to the scientific activities and interests of Prof. William Fitzgibbon, Prof. Yuri Kuznetsov, and Prof. O. Pironneau, whose outstanding achievements are recognised in this volume. It contains 20 contributions from leading scientists in applied mathematics dealing with partial differential equations and their applications to engineering, ab-initio chemistry and life sciences. It includes the mathematical and numerical contributions to PDE for applications presented at the ECCOMAS thematic conference "Contributions to PDE for Applications" held at Laboratoire Jacques Louis Lions in Paris, France, August 31-September 1, 2015, and at the Department of Mathematics, University of Houston, Texas, USA, February 26-27, 2016. This event brought together specialists from universities and research institutions who are developing or applying numerical PDE or ODE methods with an emphasis on industrial and societal applications. This volume is of interest to researchers and practitioners as well as advanced students or engineers in applied and computational mathematics. All contributions are written at an advanced scientific level with no effort made by the editors to make this volume self-contained. It is assumed that the reader is a specialist already who knows the basis of this field of research and has the capability of understanding and appreciating the latest developments in this field. . |