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Nonlinear Problems in Mathematical Physics and Related Topics II: In Honour of Professor O.A. Ladyzhenskaya

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Springer. Hardcover. Book Condition: New. Hardcover. 380 pages. Dimensions: 8.6in. x 7.0in. x 1.2in. The main topics reflect the fields of mathematics in which Professor O. A. Ladyzhenskaya obtained her most influential results. One of the main topics considered in the volume is the Navier-Stokes equations. This subject is investigated in many different directions. In particular, the existence and uniqueness results are obtained for the Navier-Stokes equations in spaces of low regularity. A sufficient condition for the regularity of solutions to the evolution Navier-Stokes equations in the threedimensional case is derived and the stabilization of a solution to the Navier-Stokes equations to the steady-state solution and the realization of stabilization by a feedback boundary control are discussed in detail. Connections between the regularity problem for the Navier-Stokes equations and a backward uniqueness problem for the heat operator are also clarified. Generalizations and modified Navier-Stokes equations modeling various physical phenomena such as the mixture of fluids and isotropic turbulence are also considered. Numerical results for the Navier-Stokes equations, as well as for the porous medium equation and the heat equation, obtained by the diffusion velocity method are illustrated by computer graphs. Some other models describing various processes in continuum mechanics are studied...



Reviews

Absolutely essential go through publication. This can be for all who statte there was not a worthy of looking at. Its been printed in an remarkably basic way and it is just right after i finished reading this book through which in fact altered me, modify the way i think.

-- Dr. Haskell Osinski

The very best publication i possibly read. it was writtern very perfectly and useful. Once you begin to read the book, it is extremely difficult to leave it before concluding. -- Wilhelm Predovic