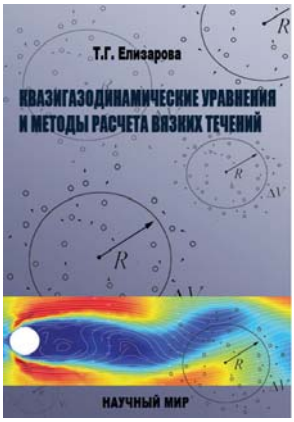
Dear friends!

The publishing house “Nauchny Mir” (“Scientific World”) has published a book :



T.G.Elizarova.

Quasi-gasdynamic equations and numerical methods for viscous flow simulation.

This monograph is devoted to contemporary mathematical models of gas and liquid dynamics and to the related numerical methods for compressible and incompressible flow simulations.

We consider two related mathematical models that generalize the Navier-Stokes system of equations. Both models are different from the Navier-Stokes system in additional dissipative terms with a small parameter. The new models are named quasi-gasdynamic and quasi-hydrodynamic systems of equations.

Basing on these models we construct new robust algorithms for non-stationary viscous flow and demonstrate numerical examples of flow simulation. Universality, efficiency and accuracy of these algorithms are provided by validity of conservation laws and entropy balance for the described models.

The book is intended for scientific researchers and engineers engaged in construction of numerical algorithms and practical computations of gas flows. It will be also useful for graduate and postgraduate students that specialize in numerical gas and liquid dynamics.

About the author:

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