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Nota di contenuto	M.Yu. Kokurin and A. Bakushinsky, Iteratively regularized Gauss-Newton methods under random noise -- L. Beilina, N.T. Thanh, M.V. Klibanov, and J.B. Malmberg, Methods of quantitative reconstruction of shapes and refractive indices from experimental data -- J.B. Malmberg, A posteriori error estimate in the Lagrangian setting for an inverse problem based on a new formulation of Maxwell's system -- E. Karchevskii, A. Spiridonov, and L. Beilina, Determination of permittivity from propagation constant measurements in optical fibers -- L. Angermann, Yu.V. Shestopalov, and V.V. Yatsyk, Eigenmodes of linearised problems of scattering and generation of oscillations on cubically polarisable layers -- S. Soltani, R. Andersson, and B. Andersson, Time resolution in transient kinetics -- L. Beilina and A. Eriksson, Reconstruction of dielectric constants in a cylindrical waveguide -- L. Beilina and I. Gainova, Time-adaptive FEM for distributed parameter identification in mathematical model of HIV infection with drug therapy -- L. Beilina and E. Karchevskii, The layer-stripping algorithm for reconstruction of dielectrics in an optical fiber -- L. Beilina, M. Cristofol, and K. Niinimäki, Simultaneous

reconstruction of Maxwell's coefficients from backscattering data.

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## Sommario/riassunto

This proceeding volume is based on papers presented on the Third Annual Workshop on Inverse Problems which was organized by the Department of Mathematical Sciences, Chalmers University of Technology and University of Gothenburg, and took place in May 2013 in Stockholm. The purpose of this workshop was to present new analytical developments and numerical techniques for solution of inverse problems for a wide range of applications in acoustics, electromagnetics, optical fibers, medical imaging, geophysics, etc. The contributions in this volume reflect these themes and will be beneficial to researchers who are working in the area of applied inverse problems.

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