

PRESENTATIONS AT PROFESSIONAL MEETINGS

(Name of the presenter is underlined if two or more authors are listed)

1. A. Smirnova and R. Luo, “On Stable Estimation of Disease Parameters and Forecasting in Epidemiology”, *Collaborative Workshop for Women in Mathematical Biology (sponsored by the United Health Group)*. Minnetonka, MN (in-person). June 20 - 24, 2022 (**group leader, invited**).
2. A. Smirnova and B. Pidgeon, “On Parameter Cascade Approach to Solving Constrained Nonlinear Least Squares Problems with Applications to Epidemiology”, *CM2022: 17th Copper Mountain Conference on Iterative Methods*. Format: Virtual. April 4-8, 2022 (**invited**).
3. A. Smirnova, ‘Model predictions in epidemiology by using stable parameter estimation and real data’, *44th SIAM Southeastern Atlantic Sectional Conference, Special Session on Recent Progress of Classical and Deep Learning Methods in Inverse Problems and Imaging*. Auburn University, Alabama/Virtual, 2021, (**invited**).
4. B. Pidgeon and A. Smirnova, ‘Modeling and Forecasting of COVID-19 Pandemic Using Iteratively Regularized Predictor-Corrector Algorithm’, *12th International Scientific Conference and Young Scientists School “Theory and Computational Methods for Inverse and Ill-posed Problems”* organized by Institute of Computational Mathematics and Mathematical Geophysics, SB RAS, and Novosibirsk State University, Russia. Format: Virtual. October 15, 2020 (**invited**).
5. B. Pidgeon and A. Smirnova, ‘On Regularized Predictor-Corrector Algorithm for Modeling and Forecasting COVID-19’, *9th Workshop on Computational Advances in Molecular Epidemiology (CAME 2020) in conjunction with the 11th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM BCB)*. Format: Virtual. September 21, 2020 (**invited**).
6. A. Smirnova, ‘On stable parameter estimation for historic measles outbreaks in the United Kingdom by a regularized Levenberg-Marquardt algorithm with iterative rank-one updates for the derivative operator’, *Special Session on Applications of Differential Equations in Mathematical Biology, Southeastern AMS Meeting*, University of Florida, Gainesville, FL, November 2-3, 2019 (**invited**).
7. A. Smirnova, ‘On modified Gauss-Newton-type algorithms for nonlinear ill-posed problems with a normally solvable derivative at the solution’, *Special Session on Nonlinear Solvers and Acceleration Methods, Southeastern AMS Meeting*, University of Florida, Gainesville, FL, November 2-3, 2019 (**invited**).
8. A. Akossi and A. Smirnova, ‘On Discretization Algorithms for Stable Quantification and Forecasting of Infectious Disease Magnitudes’, *The Fifth International Conference on Computational and Mathematical Population Dynamics*, Fort Lauderdale, FL, May 19-24, 2019 (**invited**).

9. A. Smirnova, 'On New Developments in Iterative Regularization Motivated by Parameter Identification Problems in Epidemiology', *Special Session on Trends in Applications of Functional Analysis in Computational and Applied Mathematics, Southeastern AMS Meeting*, University of Central Florida, Orlando, FL, September 23-24, 2017 (**invited**).
10. A.B. Smirnova, 'On Stable Reconstruction of Disease Parameters by Reduced Iteratively Regularized Gauss-Newton Algorithm', *36th South-Eastern Atlantic Regional Conference on Differential Equations*, Florida Gulf Coast University, Fort Myers, FL, November 5-6, 2016 (**contributed**).
11. A.B. Smirnova, 'Iterative Regularization with Parameter Decomposition Motivated by Inverse Problems in Epidemiology', *The 40th SIAM Southeastern Atlantic Section Conference (SIAM-SEAS), Applied Mathematics*, University of Georgia, Athens, GA, March 12-13, 2016 (**invited**).
12. A.B.Smirnova 'On Stable Parameter Estimation for Inverse Problems in Epidemiology', *Georgia Scientific Computing Symposium*, Emory University, Atlanta, GA, February 20, 2016 (**plenary**).
13. A.B.Smirnova, 'On the Selection of a Regularization Parameter for Inverse Problems in Epidemiology', *IPTA 2014 Conference, Inverse Problems – from Theory to Application*, Bristol, UK, At-Bristol, August 26-28, 2014 (**invited**).
14. A.B.Smirnova, 'A Novel Stopping Criterion for Iterative Regularization with Undetermined Reverse Connection', *The European Numerical Mathematics and Advanced Applications (ENUMATH) Conference*, EPFL Lausanne, Switzerland, August 26-30, 2013 (**invited**).
15. A.B.Smirnova, 'On Stable Parameter Identification in Avian Influenza', *2013 Inverse Problems Symposium*, Huntsville, Alabama, June 9-11, 2013 (**invited**).
16. A.B.Smirnova, 'On Further Development of Generalized Gauss-Newton-type Regularization Procedures', *Canberra Symposium on Regularization*, Australian National University, Canberra, Australia, November 19-24, 2012 (**invited**).
17. A.B.Smirnova, A.B.Bakushinsky, 'On Convergence Rates for Preconditioned iteratively regularized Gauss-Newton Schemes with Application to Biomedical Imaging', *2012 Inverse Problems Symposium*, Michigan State University, East Lansing, MI, June 10-12, 2012 (**invited**).
18. A.B.Bakushinsky, A.B.Smirnova, 'A Posteriori Error Analysis for Nonlinear Inverse Problems', *The Second Workshop on Inverse Problems*, Sunne, Sweden, May 2-6, 2012 (**invited**).

19. H.Liu and A.B.Smirnova, ‘A Posteriori Error Analysis for Nonlinear Magnetometry Equation’, *Georgia Scientific Computing Symposium*, UGA, Athens, GA, February 25, 2012 (**poster**).
20. A.B.Smirnova, ‘On Implementation of Locally Regularized Iterative Schemes for Nonlinear Unstable Operator Equations’ *Session on Inverse problems, the 8th International ISAAC Congress*, Moscow, Russia, August 22-27, 2011 (**invited**).
21. A.B.Smirnova, ‘On Stable Numerical Algorithms for Irregular Operator Equations’, *International Workshop on Operator Theory and its Applications (IWOTA)*, Seville, Spain, July 3-9, 2011 (**invited**).
22. Olesya Sitnikova (Sarajlic), A.B.Smirnova, ‘Inverse Problem Involving an Integral Equation in Irrigation Theory’, *Meeting of the American Physical Society*, Anaheim, California, April 30–May 3, 2011 (**contributed**).
23. A.B.Smirnova and N.Tuncer, ‘On Application of Preconditioned Gauss-Newton Algorithm to Inverse Groundwater Filtration Problem’, *Mini-symposium "Optimization for Nonlinear Inverse Problems"*, *SIAM Annual Meeting*, Pittsburg, Pennsylvania, July 12-16, 2010 (**invited**).
24. A.B.Bakushinsky and A.B.Smirnova, ‘The reverse connection control for unstable operator equations’, *Mini-symposium" Recent Advances in Analytical and Numerical Methods in Inverse Problems for PDEs"*, *the Fifth International Conference ‘Inverse Problems: Modeling and Simulation’*, Antalya, Turkey, May 24-29, 2010 (**invited**).
25. A.B.Smirnova ‘The Gravitational Sounding Problem by Iteratively Regularized BFGS-Type Algorithm’, *Georgia Scientific Computing Symposium*, GaTech, Atlanta, GA, February 20, 2010 (**invited**).
26. A.B.Smirnova and R.A.Renaut ‘Iteratively Regularized Gauss-Newton Method with Parameter Decomposition for 2D Inverse Problem in Optical Tomography’, *the Fourth International Conference ‘Inverse Problems: Modeling and Simulation’*, Oludeniz – Fethiye, Turkey, May 26-30, 2008 (**invited**).
27. A.B.Smirnova and R.A.Renaut ‘Iteratively Regularized Gauss Newton with Parameter Decomposition’, *International Conference on Applied Inverse Problems*, Vancouver, BC, Canada, June 25-29, 2007 (**contributed**).
28. A.B.Bakushinsky and A.B.Smirnova ‘On application of generalized Gauss-Newton’s schemes to inverse problem in Optical Tomography’, *International Conference ‘Tikhonov and Contemporary Mathematics’*, Moscow, Russia, June 19-25, 2006 (**invited**).

29. R.A.Renaut, T.Khan and A.B.Smirnova 'Parameter Decomposition for Iteratively Regularized Gauss Newton Solutions in Optical Tomography', *9th Copper Mountain Conference on Iterative Methods*, Copper Mountain, Colorado, April 2-7, 2006 (**contributed**).
30. A.B.Bakushinsky and A.B.Smirnova 'On application of generalized discrepancy principle to iterative methods for 2D inverse gravimetry problem', *International Conference on Applied Inverse Problems*, Royal Agricultural College, Cirencester, UK, June 26-30, 2005 (**contributed**).
31. A.B.Smirnova 'Investigation of the dynamical system method for solving nonlinear ill-posed problems', *International Conference on Difference Equations and Applications*, USC in Los Angeles, CA, August 2-6, 2004 (**contributed**).
32. A.B.Smirnova 'Iteratively regularized Gauss-Newton-type algorithm with simultaneous updates of inverse derivative', *Special Session on Fixed Points: Theory and Application*, Phoenix, Arizona, January 7-10, 2004 (**contributed**).
33. A.B.Smirnova, 'One Dimensional Inverse Problem In Diffusion Based Optical Tomography Using Gauss-Newton-Type Algorithm For Nonlinear Ill-Posed Problems', *Workshop on Inverse Problems and Medical Imaging*, Vancouver, Canada, August 4-8, 2003 (**contributed**).
34. A.B.Smirnova, 'Iterative Gauss-Newton-type algorithm for nonlinear unstable operator equations with simultaneous updates of the regularized Frechet derivative', *VIII Conference on Inverse and Ill-Posed Problems*, Moscow, Russia, June 9-11, 2003 (**invited**).
35. A.B.Smirnova, 'Iterative inversion of the Frechet derivative in the regularized Quasi-Newton methods', *6th IMACS International Symposium on Iterative Methods in Scientific Computing*, University of Colorado at Denver, March 27-30, 2003 (**contributed**).
36. A.B.Smirnova, 'Numerical Techniques for Solving Irregular Operator Equations', *Joint Meeting MAA and SIAM (Southeastern Section)*, Clemson, SC, March 21-22, 2003 (**contributed**).
37. A.B.Smirnova, 'Continuous regularized Gauss-Newton-type algorithm for nonlinear ill-posed equations with simultaneous updates of inverse derivative', *Annual Southeastern-Atlantic Regional Conference on Differential Equations*, October 11-12, 2002, Knoxville, TN (**contributed**).
38. A.B.Smirnova, 'Regularization of nonlinear ill-posed problems by dynamical system method', *NSF/CBMS Regional Research Conference "Mathematical Methods in Nonlinear Wave Propagation"*, May 15-19, 2002, Greensboro, NC (**invited**).
39. A.B.Smirnova, 'Theoretical and Numerical Investigation of the Dynamical System Method for Solving Nonlinear Ill-Posed Problems', *The 2002 International Conference on Differential Equations and Mathematical Physics*, March 26-30, 2002, Birmingham, AL (**contributed**).

40. A.B. Smirnova, 'RGN Method with Simultaneous Updates of Inverse Derivative', *The First SIAM Conference on Imaging Science*, March 4-6, 2002, Boston, MA (**session chair**).
41. A.B.Smirnova, 'Regularization of nonlinear unstable operator equations by secant-type method', *AWM-NSF Workshop for women recent Ph.D.'s*, January 9, 2002, San Diego, CA (**invited**).
42. A.B.Smirnova, 'Continuous algorithm for solving nonlinear ill-posed problems with simultaneous regularized inversion of the Frechet derivative operator', *AMS Special Session on Interaction of Inverse Problems and Image Analysis*, AMS Joint Mathematics Meetings, January 12-13, 2001, New Orleans, LA (**contributed**).
43. A.B.Smirnova, 'Nonlinear ill-posed problems and dynamical systems', *21st Annual Southeastern-Atlantic Regional Conference on Differential Equations*, November 2-3, 2001, Winston-Salem, NC (**contributed**).
44. A.B.Smirnova, 'Continuous Methods for Solving Nonlinear Ill-Posed Operator Equations with Application to Gravitational Sounding Problem', *AWM Workshop for women graduate students and recent Ph.D's at Joint AMS Meetings 2000*, January 21, Washington, DC (**invited**).
45. A.G.Ramm and A.B. Smirnova, 'A Regularized Method for Solving Nonlinear Ill-Posed Problems', *International conference on operator theory and its applications to scientific and industrial problems*, October 7-11, 1998, Winnipeg, Canada (**invited**).