Björn Tomas Johansson

Summary (2-page) of academic work, list of publications comes after.

Profile

Born: In Sweden, (EU-citizen).

Expertise: Inverse ill-posed boundary problems.

Education

- Master of Science in Mathematics, Linköping University, June 1998.
- Doctor of Philosophy in Mathematics, Linköping University, October 2003.

Academic positions

- Postdoctoral position at the University of Leeds, UK, 2005–2007, with personal fellowship from The Wenner-Gren Foundations.
- Lecturer, School of Mathematics, University of Birmingham, UK, 2007–2012.
- Affiliated with Aston University, Birmingham, UK, 2013–2019.
- Lecturer, University of Linköping, Sweden, from 2019.

Research

- Stable methods for inverse problems, involving functional analytic techniques for proof of convergence, in particular:
- Inverse heat transfer and wave motion (Cauchy problems and source reconstructions).
- Inverse acoustic scattering.
- Higher order equations and systems (biharmonic equations and Stokes system).
- Numerical methods via boundary integrals and the method of fundamental solutions.

Publications

- A total of 101 journal papers, 31 invited and refereed proceedings, 6 chapters in books, 10 refereed abstracts, and 10 other publications (including PhD thesis), see list below.
- Cited both nationally and internationally.

Selected fellowships, honours and awards

- "Young Scientist Award" of the Fifth International Conference "Inverse Problems: Modeling and Simulation", May 2010.
- Fellowship to the Isaac Newton Institute (Programme: Inverse Problems), UK, 2011.
- Fellow of the Higher Education Academy (HEA), January 2014.
- Selected by London Mathematical Society to lecture at the LMS Summer School 2019.

Teaching

- Lectured yearly since 2001 on a variety of undergraduate and postgraduate modules in mathematics, for example, Complex analysis, Linear analysis, Multivariable calculus, Vector analysis, Geometry for school teachers, and Probability and Statistics, obtaining excellent feedback from students.
- Experience of e-learning and programming. Given over 100 live digital lectures with accompanying tutorials during 2020–22.

Outreach

· Arranged several conferences and workshops: for example, Coordinator for the British Applied Mathematics Colloquium, 2011 (around 300 participants).
· Started UK version of Maths Coach in 2018 (https://www.mathscoach.org).

Principal research grants

· Fellowship from The Wenner-Gren Foundations for 24 months postdoctoral studies at the University of Leeds, UK, 2005–2007.
· 3-month Marie Curie fellowship during 2006.
· 4-years Research Fellowship, Swedish Research Council, 2008.
· Visiting Fellowship, the Isaac Newton Institute (Programme: Inverse Problems), 2011.
· Funding from PUG and Didacticum, Linköping University, 2020–2022 for e-learning.

Affiliation

· Fellow of the Higher Education Academy (HEA).

Editorial

· Associate editor for "Inverse Problems in Science and Engineering", 2009–2013.
· Associate editor for "IMA Journal of Applied Mathematics", 2014–2018.
· Refereed about 100 research manuscripts for a variety of mathematical journals.
· Reviewer for international funding bodies.

Students

· Supervised a PhD student (Thomas Reeve), a licentiate student (Rym Jaroudi), two postdoc students (Olha Ivanyshyn, Adriano de Cezaro) and several MSc students.
· Acted as external examiner.

Selected invited visits and lectures

· University of Göttingen, 5–21.04.2006, Dept. of Numer. and Appl. Math., Germany.
· Ivan Franko National University of Lviv, 08.11.2007, Lviv, Ukraine.
· Institute of Solid Mechanics, Romanian Academy, 20–24.11.2013, Bucharest, Romania.
· University of Ghent, 17.09.2018, 1st Workshop on Inverse Problems, Ghent, Belgium.
· University of Leeds, 18.01.2019, Inverse Problems Network Meeting 4, Leeds, UK.
· Reimagine Education Conference & Awards, 8–9.12.2019, K12 category, London, UK.

Academic citizenship

· Undertaken roles such as year Director, Deputy Head of group, MSc director, project coordinator, and actively working on various committees.

List of publications, overview

· See the following pages (and orcid), sorted according to:

A: Articles (p.1–7) B: Proceedings (p. 8–10) C: Book chapters (p. 11)
D: Abstracts (p.12) E: Others (p.13)

http://orcid.org/0000-0001-9066-7922

A: List of Journal Publications

1. Johansson, T., An iterative procedure for solving a Cauchy problem for second order elliptic equations, *Math. Nachr.* **272** (2004), 46–54.

2. Johansson, T., An iterative method for a Cauchy problem for the heat equation, *IMA J. Appl. Math.* **71** (2006), 262–286.

3. Bastay, G., Johansson, T., Kozlov, V. A., and Lesnic, D., An alternating method for the stationary Stokes system, *ZAMM*: *Z. Angew. Math. Mech.* **86** (2006), 268–280.

4. Johansson, T., An iterative method for reconstruction of temperature, *J. Inverse Ill-Posed Probl.* **14** (2006), 267–278.

5. Johansson, T. and Lesnic, D., A variational conjugate gradient method for determining the fluid velocity of a slow viscous flow, *Appl. Anal.* **85** (2006), 1327–1341.

6. Johansson, T. and Lesnic, D., Reconstruction of a stationary flow from incomplete boundary data using iterative methods, *European J. Appl. Math.* **17** (2006), 651–663.

7. Johansson, T. and Marin, L., A procedure for the temperature reconstruction in corner domains from Cauchy data, *Inverse Problems* **23** (2007), 357–372.

8. Johansson, T. and Sleeman, B. D., Reconstruction of an acoustically sound-soft obstacle from one incident field and the far-field pattern, *IMA J. Appl. Math.* **72** (2007), 96–112.

9. Johansson, T. and Lesnic, D., An iterative method for the reconstruction of a stationary flow, *Numer. Methods Partial Differential Equations* **23** (2007), 998–1017.

10. Ivanyshyn, O. and Johansson, T., Nonlinear integral equation methods for the reconstruction of an acoustically sound-soft obstacle, *J. Integral Equations Appl.* **19** (2007), 289–308.

11. Johansson, B. T., Determining the temperature from incomplete boundary data, *Math. Nachr.* **280** (2007), 1765–1779.

12. Johansson, T. and Lesnic, D., Determination of a spacewise dependent heat source, *J. Comput. Appl. Math.* **209** (2007), 66–80.

13. Johansson, B. T. and Lesnic, D., A variational method for identifying a spacewise-dependent heat source, *IMA J. Appl. Math.* **72** (2007), 748–760.

14. Ivanyshyn, O. and Johansson, B. T., Boundary integral equations for acoustical inverse sound-soft scattering, *J. Inverse Ill-Posed Probl.* **16** (2008), 65–78.

15. Johansson, B. T. and Lesnic, D., A procedure for determining a spacewise dependent heat source and the initial temperature, *Appl. Anal.* **87** (2008), 265–276.

16. Chapko, R. and Johansson, B. T., An alternating boundary integral based method for a Cauchy problem for the Laplace equation in semi-infinite regions, *Inverse Probl. Imaging* **2** (2008), 317–333.

17. Johansson, B. T., A procedure for the reconstruction of a stochastic stationary temperature field, *IMA J. Appl. Math.* **73** (2008), 641–650.

18. Johansson, B. T. and Lesnic, D., A method of fundamental solutions for transient heat conduction, *Eng. Anal. Bound. Elem.* **32** (2008), 697–703.

19. Chapko, R. and Johansson, B. T., An alternating potential-based approach to the Cauchy problem for the Laplace equation in a planar domain with a cut, *Comput. Methods Appl. Math.* **8** (2008), 315–335.

20. Johansson, B. T., Reconstruction of an unsteady flow from incomplete boundary data, *Internat. J. Numer. Methods Heat Fluid Flow* **19** (2009), 53–63.

21. Chapko, R. and Johansson, B. T., An iterative method based on boundary integrals for elliptic Cauchy problems in semi-infinite domains, *Electron. J. Bound. Elem.* **7** (2009), 1–12.

22. Johansson, B. T. and Kozlov, V. A., An alternating method for Cauchy problems for Helmholtz-type operators in non-homogeneous medium, *IMA J. Appl. Math.* **74** (2009), 62–73.

23. Chapko, R. and Johansson, B. T., An alternating boundary integral based method for inverse potential flow around immersed bodies, *J. Numer. Appl. Math.* **97** (2009), 10–25.

24. Chantasiriwan, S., Johansson, B. T. and Lesnic, D., The method of fundamental solutions for free surface Stefan problems, *Eng. Anal. Bound. Elem.* **33** (2009), 529–538.

25. Borman, D., Ingham, D. B., Johansson, B. T. and Lesnic, D., The method of fundamental solutions for detection of cavities in EIT, *J. Integral Equations Appl.* **21** (2009), 381–404.

26. Chapko, R. and Johansson, B. T., An alternating boundary integral based method for a Cauchy problem for the Laplace equation in a quadrant, *Inverse Probl. Sci. Eng.* **17** (2009), 871–883.

27. Everitt, W. N., Johansson, B. T., Littlejohn, L. L., and Markett, C., Quasi-separation of the biharmonic partial differential equation, *IMA J. Appl. Math.* **74** (2009), 685–709.

28. Johansson, B. T. and Lesnic, D., A method of fundamental solutions for transient heat conduction in layered materials, *Eng. Anal. Bound. Elem.* **33** (2009), 1362–1367.

29. Johansson, B. T., Determining the temperature from Cauchy data in corner domains, *IJCSM*: *Int. J. Comput. Sci. Math.* **3** (2010), 122–131.

30. Chapko, R., Johansson, B. T. and Kantor, I., An integral equation method for a mixed initial boundary value problem for unsteady Stokes system in a doubly-connected domain, *J. Numer. Appl. Math.* **100** (2010), 29–39.

31. Johansson, B. T. and Pricop, M., A method for identifying a spacewise dependent heat source under stochastic noise interference, *Inverse Probl. Sci. Eng.* **18** (2010), 51–63.

32. Carpio, A., Johansson, B. T. and Rapun, M.-L., Determining planar multiple sound-soft obstacles from scattered acoustic fields, *J. Math. Imaging Vision* **36** (2010), 185–199.

33. Helsing, J. and Johansson, B. T., Fast reconstruction of harmonic functions from Cauchy data using integral equation techniques, *Inverse Probl. Sci. Eng.* **18** (2010), 381–399.

34. Dinh Nho Hào, Johansson, B. T., Lesnic, D. and Pham Minh Hien, A variational method and approximations of a Cauchy problem for elliptic equations, *J. Algorithms Comput. Technol.* **4** (2010), 89–119.

35. Chapko, R., Johansson, B. T. and Sobeyko, O., On the numerical solution of a Cauchy problem in an elastostatic half-plane with a bounded inclusion, *CMES*: *Comput. Model. Eng. Sci.* **62** (2010), 57–76.

36. Johansson, B. T. and Marin, L., Relaxation of alternating iterative algorithms for the Cauchy problem associated with the modified Helmholtz equation, *CMC*: *Comput. Mater. Continua* **13** (2010), 153–190.

37. Marin, L. and Johansson, B. T., Relaxation procedures for an iterative MFS algorithm for the stable reconstruction of elastic fields from Cauchy data in two-dimensional isotropic linear elasticity, *IJSS*: *Int. J. Solids Struct.* **47** (2010), 3462–3479.

38. Marin, L. and Johansson, B. T., A relaxation method of an alternating iterative algorithm for the Cauchy problem in linear isotropic elasticity, *CMAME*: *Comput. Methods Appl. Mech. Engrg.* **199** (2010), 3179–3196.

39. Chapko, R., Johansson, B. T. and Vavrychuk, V., Recovering boundary data in planar heat conduction using a boundary integral equation method, *Electron. J. Bound. Elem.* **9** (2011), 1–15.

40. Johansson, B. T., Reeve, T. and Lesnic, D., A method of fundamental solutions for two-dimensional heat conduction, *Int. J. Comput. Math.* **88** (2011), 1697–1713.

41. Chapko, R., Johansson, B. T. and Protsyuk, O., On an indirect integral equation approach for stationary heat transfer in semi-infinite layered domains in $\mathbf{R}^3$ with cavities, *J. Numer. Appl. Math.* **105** (2011), 4–18.

42. Johansson, B. T., Lesnic, D. and Reeve, T., Numerical approximation of the one-dimensional inverse Cauchy-Stefan problem using a method of fundamental solutions, *Inverse Probl. Sci. Eng.* **19** (2011), 659–677.

43. Helsing, J. and Johansson, B. T., Fast reconstruction of harmonic functions from Cauchy data using the Dirichlet-to-Neumann map and integral equations, *Inverse Probl. Sci. Eng.* **19** (2011), 717–727.

44. Johansson, B. T., Lesnic, D. and Reeve, T., A comparative study on applying the method of fundamental solutions to the backward heat conduction problem, *Math. Comput. Modelling* **54** (2011), 403–416.

45. Johansson, B. T., Lesnic, D. and Reeve, T., A method of fundamental solutions for the one-dimensional inverse Stefan problem, *AMM*: *Appl. Math. Model.* **35** (2011), 4367–4378.

46. Evans, D., Johansson, T. and Littlejohn, L., Norrie Everitt (1924–2011), *Notices Amer. Math. Soc.* **58** (2011), 1465–1466.

47. Chapko, R. and Johansson, B. T., On the numerical solution of a Cauchy problem for the Laplace equation via a direct integral equation approach, *Inverse Probl. Imaging* **6** (2012), 25–38.

48. Chapko, R. and Johansson, B. T., A direct integral equation method for a Cauchy problem for the Laplace equation in 3-dimensional semi-infinite domains, *CMES*: *Comput. Model. Eng. Sci.* **85** (2012), 105–128.

49. Johansson, B. T., Lesnic, D. and Reeve, T., A method of fundamental solutions for the radially symmetric inverse heat conduction problem, *Int. Commun. Heat Mass Transf.* **39** (2012), 887–895.

50. Chapko, R., Johansson, B. T. and Protsyuk, O., A direct boundary integral equation method for the numerical construction of harmonic functions in three-dimensional layered domains containing a cavity, *Int. J. Comput. Math.* **89** (2012), 1448–1462.

51. Dinh Nho Hào, Phan Xuan Thanh, Lesnic, D., and Johansson, B. T., A boundary element method for a multi-dimensional inverse heat conduction problem, *Int. J. Comput. Math.* **89** (2012), 1540–1554.

52. Johansson, B. T., Lesnic, D. and Reeve, T., A method of fundamental solutions for radially symmetric and axisymmetric backward heat conduction problems, *Int. J. Comput. Math.* **89** (2012), 1555–1568.

53. Karageorghis, A., Johansson, B. T. and Lesnic, D., The method of fundamental solutions for the identification of a sound-soft obstacle in inverse acoustic scattering, *Appl. Num. Math.* **62** (2012), 1767–1780.

54. Johansson, B. T., Lesnic, D. and Reeve, T., A meshless method for an inverse two-phase one-dimensional linear Stefan problem, *Inverse Probl. Sci. Eng.* **21** (2013), 17–33.

55. Reeve, T. and Johansson, B. T., The method of fundamental solutions for a time-dependent two-dimensional Cauchy heat conduction problem, *Eng. Anal. Bound. Elem.* **37** (2013), 569–578.

56. Chapko, R., Johansson, B. T. and Vavrychuk, V., A projected iterative method based on integral equations for inverse heat conduction in domains with a cut, *Inverse Problems* **29** (2013), 065003.

57. Johansson, B. T., Lesnic, D. and Reeve, T., A meshless regularization method for a two-dimensional two-phase linear inverse Stefan problem, *Adv. Appl. Math. Mechanics* **5** (2013), 825–845.

58. Johansson, B. T., Lesnic, D. and Reeve, T., The method of fundamental solutions for the two-dimensional inverse Stefan problem, *Inverse Probl. Sci. Eng.* **22** (2014), 112–129.

59. Chapko, R., Johansson, B. T. and Savka, Y., On the use of an integral equation approach for the numerical solution of a Cauchy problem for Laplace equation in a doubly connected planar domain, *Inverse Probl. Sci. Eng.* **22** (2014), 130–149.

60. D'haeyer, S., Johansson, B. T. and Slodička, M., Reconstruction of a spacewise-dependent heat source in a time-dependent heat diffusion process, *IMA J. Appl. Math.* **79** (2014), 33–53.

61. Needham, D. J., Johansson, B. T. and Reeve, T., The development of a wax layer on the interior wall of a circular pipe transporting heated oil, *Q. J. Mechanics Appl. Math.* **67** (2014), 93–125.

62. Johansson, B. T. and Kozlov, V. A., Solvability and asymptotics of the heat equation with mixed variable lateral conditions and applications in the opening of the exocytotic fusion pore in cells, *IMA J. Appl. Math.* **79** (2014), 377–392.

63. Baravdish, G. and Johansson, B. T., The alternating method applied to two-point boundary value problems, *J. Numer. Appl. Math.* **116** (2014), 11–29.

64. Chapko, R., Johansson, B. T. and Vavrychuk, V., Numerical solution of parabolic Cauchy problems in planar corner domains, *Math. Comput. Simulat.* **101** (2014), 1–12.

65. Johansson, B. T., Lesnic, D. and Reeve, T., A meshless method for an inverse two-phase one-dimensional nonlinear Stefan problem, *Math. Comput. Simulat.* **101** (2014), 61–67.

66. Babenko, C., Chapko, R. and Johansson, B. T., On the numerical solution of the Laplace equation with complete and incomplete Cauchy data using integral equations, *CMES*: *Comput. Model. Eng. Sci.* **101** (2014), 299–317.

67. Johansson, B. T., Calculating the derivative of piecewise functions, *Internat. J. Math. Ed. Sci. Tech.* **47** (2016), 144–148.

68. Grabski, J. K., Lesnic, D. and Johansson, B. T., Identification of a time-dependent bio-heat blood perfusion coefficient, *J. Heat Mass Transf.* **75** (2016), 218–222.

69. Slodička, M. and Johansson, B. T., Uniqueness and counterexamples in some inverse source problems, *Appl. Math. Lett.* **58** (2016), 56–61.

70. Borachok, I., Chapko, R. and Johansson, B. T., Numerical solution of a Cauchy problem for Laplace equation in 3-dimensional domains by integral equations, *Inverse Probl. Sci. Eng.* **24** (2016), 1550–1568.

71. Lesnic, D., Hussein, S. O. and Johansson, B. T., Inverse space-dependent force problems for the wave equation, *Comp. Appl. Math.* **306** (2016), 10–39.

72. Borachok, I., Chapko, R. and Johansson, B. T., Numerical solution of an elliptic 3-dimensional Cauchy problem by the alternating method and boundary integral equations, *J. Inverse Ill-Posed Probl.* **24** (2016), 711–725.

73. Chapko, R. and Johansson, B. T., Boundary-integral approach for the numerical solution of the Cauchy problem for the Laplace equation, Special Issue in Honour of Prof. V. L. Makarov, *Ukraïn. Mat. Zh.* **68** (2016), 1665–1682.
Reprinted in *Ukrainian Math. J.* **68** (2017), 1929–1948,
https://doi.org/10.1007/s11253-017-1339-1

74. Ben Abda, A., Johansson, B. T. and Khalfallah, S., Leak identification in a saturated unsteady flow via a Cauchy problem, *Appl. Math. Model.* **41** (2017), 25–36.

75. Johansson, B. T., Properties of a method of fundamental solutions for the parabolic heat equation, *Appl. Math. Lett.* **65** (2017), 83–89.

76. Chapko, R. and Johansson, B. T., Numerical solution of the Dirichlet initial boundary value problem for the heat equation in exterior 3-dimensional domains using integral equations, *J. Eng. Math.* **103** (2017), 23–37.

77. Marin, L., Karageorghis, A., Lesnic, D. and Johansson, B. T., The method of fundamental solutions for problems in static thermo-elasticity with incomplete boundary data, *Inverse Probl. Sci. Eng.* **25** (2017), 652–673.

78. Chapko, R., Johansson, B. T. and Shkolyk, M., On a boundary integral equation method for elastostatic Cauchy problems in annular planar domains, *J. Numer. Appl. Math.* **126** (2017), 16–32.

79. Johansson, B. T., An elementary algorithm to evaluate trigonometric functions to high precision, *Internat. J. Math. Ed. Sci. Tech.* **49** (2018), 131–137.

80. Hussein, M. S., Lesnic, D., Johansson, B. T. and Hazanee, A., Identification of a multi-dimensional space-dependent heat source from boundary data, *Appl. Math. Model.* **54** (2018), 202–220.

81. Chapko, R. and Johansson, B. T., A boundary integral equation method for numerical solution of parabolic and hyperbolic Cauchy problems, *Appl. Numer. Math.* **129** (2018), 104–119.

82. Baravdish, G., Borachok, I., Chapko, R., Johansson, B. T. and Slodička, M., An iterative method for the Cauchy problem for second-order elliptic equations, *Int. J. Mech. Sci.* **142–143** (2018), 216–223.

83. Huntul, M. J., Lesnic, D. and Johansson, B. T., Determination of an additive time- and space-dependent coefficient in the heat equation, *Int. J. Numer. Meth. Heat and Fluid Flows* **28** (2018), 1352–1373.

84. Beshley, A., Chapko, R. and Johansson, B. T., An integral equation method for the numerical solution of a Dirichlet problem for second-order elliptic equations with variable coefficients, *J. Eng. Math.* **112** (2018), 63–73.

85. Chapko, R. and Johansson, B. T., An iterative regularizing method for an incomplete boundary data problem for the biharmonic equation, *ZAMM*: *Z. Angew. Math. Mech.* **98** (2018), 2010–2021.

86. Johansson, B. T., Managing the paper trail of student projects: datatool and more, *TUGboat* (Communications of the TeX Users Group) **39** (2018), 182–184.

87. Jaroudi, R., Baravdish, G., Johansson, B. T., and Åström, F., Numerical reconstruction of brain tumours, *Inverse Probl. Sci. Eng.* **27** (2019), 278–298.

88. Johansson, B. T., Construction of sundials via vectors, *Internat. J. Math. Ed. Sci. Tech.* **50** (2019), 617–628.

89. Chapko, R. and Johansson, B. T., Integral equations for biharmonic data completion, *Inverse Probl. Imaging* **13** (2019), 1095–1111.

90. Chapko, R., Johansson, B. T., Muzychuk, Y., and Hlova, A., Wave propagation from lateral Cauchy data using a boundary element method, *Wave Motion* **91** (2019), 102385.

91. Beshley, A., Chapko, R. and Johansson, B. T., On the alternating method and boundary-domain integrals for elliptic Cauchy problems, *Comput. Math. Appl.* **78** (2019), 3514–3526.

92. Chapko, R., Johansson, B. T. and Mindrinos, L., On a boundary integral solution of a lateral planar Cauchy problem in elastodynamics, *J. Comput. Appl. Math.* **367** (2020), 112463.

93. Jaroudi, R., Åström, F., Baravdish, G. and Johansson, B. T., Numerical simulations in 3-dimensions of reaction-diffusion models for brain tumour growth, *Int. J. Comput. Math.* **97** (2020), 1151–1169.

94. Chapko, R., Johansson, B. T. and Shtoyko, M., A double layer potential approach for planar Cauchy problems for the Laplace equation, *Visnyk Lviv Univ. Ser. Appl. Math. Comp. Sci.* **28** (2020), 15–28.

95. Johansson, B. T., None-denseness for a method of fundamental solutions with source points fixed in time for parabolic equations, *C. R. Math. Acad. Sci. Paris* **359** (2021), 733–738.

96. Alosaimi, M., Lesnic, D. and Johansson, B. T., Solution of the Cauchy problem for the wave equation using iterative regularization, *Inverse Probl. Sci. Eng.* **29** (2021), 2757–2771.

97. Borachok, I., Chapko, R. and Johansson, B. T., A method of fundamental solutions for heat and wave propagation from lateral Cauchy data, *Numer. Algorithms* **89** (2022), 431–449.

98. Chapko, R., Johansson, B. T. and Vlasiuk, M., Boundary integrals for data reconstruction on an elastostatic crack, *Int. J. Appl. Comput. Math.* **8** (2022), 40.

99. Chapko, R. and Johansson, B. T., Calculating heat and wave propagation from lateral Cauchy data, Special Issue in Honour of Prof. V. L. Makarov, *Ukraïn. Mat. Zh.* **74** (2022), 274–285.
Reprinted in *Ukrainian Math. J.* **74** (2022), 314–326,
https://doi.org/10.1007/s11253-022-02062-w

100. Borachok, I., Chapko, R. and Johansson, B. T., A method of fundamental solutions with time-discretisation for wave motion from lateral Cauchy data, *Partial Differ. Equ. Appl.* **3** (2022), Paper No. 37.

101. Borachok, I., Chapko, R. and Johansson, B. T., An inverse elastodynamic data reconstruction problem, *J. Eng. Math.* **134** (2022), Paper No. 3.

Links to these can be found under the user B. Tomas Johansson on ORCID:
http://orcid.org/0000-0001-9066-7922

B: List of Proceedings

Pr1. Johansson, T., An iterative method for reconstruction of a temperature field, *The Fifth International Conference on Inverse Problems in Engineering*, (Ed. D. Lesnic), Leeds University Press, Leeds, UK, (2005), Chapter J04 1–8.

Pr2. Johansson, T. and Lesnic, D., A recursive boundary element based method for the Cauchy problem in linear hydrodynamics, *Advances in Boundary Integral Methods - Proceedings of the 5th UK Conference on Boundary Integral Methods*, (Ed. K. Chen), The University of Liverpool, (2005), 42–51.

Pr3. Johansson, T. and Lesnic, D., Numerical solution of the Cauchy problem of Stokes flow, *Inverse Problems: Modeling and Simulation*, (Eds. H. T. Banks, A. Hasanov, S. I. Kabanikhin and K. Kunisch), Literatur, Turkey, (2006), 89–92.

Pr4. Johansson, T. and Lesnic, D., An iterative boundary element method for the determination of a spacewise dependent heat source, *Advances in Boundary Element Techniques* VII, (Eds. B. Gatmiri, A. Sellier and M. H. Aliabadi), EC Ltd., UK, (2006), 85–89.

Pr5. Ivanyshyn, O. and Johansson, B. T., A coupled boundary integral equation method for inverse sound-soft scattering, *The 8th International Conference on Mathematical and Numerical Aspects of Waves*, (Eds. N. Biggs, A.S. Bonnet-Bendhia, P. Chamberlain, S. Chandler-Wilde, G. Cohen, H. Haddar, P. Joly, S. Langdon, E. Lunéville, B. Pelloni, D. Potherat, R. Potthast), University of Reading, UK, (2007), 153–155.

Pr6. Baravdish, G. and Johansson, B. T., Image reconstruction using an iterative method for the backward heat equation, *Advances in Boundary Integral Methods - Proceedings of the Sixth UK Conference on Boundary Integral Methods*, (Ed. J. Trevelyan), Durham University, (2007), 165–171.

Pr7. Johansson, B. T. and Lesnic, D., The method of fundamental solutions for an exterior problem in potential theory, *Advances in Boundary Integral Methods - Proceedings of the Sixth UK Conference on Boundary Integral Methods*, (Ed. J. Trevelyan), Durham University, (2007), 185–191.

Pr8. Borman, D., Ingham, D. B., Johansson, B. T. and Lesnic, D., The method of fundamental solutions for the detection of cavities in EIT, *Advances in Boundary Integral Methods - Proceedings of the Sixth UK Conference on Boundary Integral Methods*, (Ed. J. Trevelyan), Durham University, (2007), 193–202.

Pr9. Johansson, B. T., Reconstruction of a stochastic spacewise dependent heat source, *The Fourth International Conference "Inverse Problems: Modelling and Simulation"* (Eds. H. T. Banks, A. Hasanov and S. I. Kabanikhin), Fethiye, Turkey, (2008), 88–89.

Pr10. Baravdish, G., Gooran, S. and Johansson, B. T., A variational method for image reconstruction, *The Sixth International Conference on Inverse Problems in Engineering*, (Ed. M. Bonnet), Paris, France, 2008, 58.

Pr11. Chapko, R., Johansson, B. T. and Sobeyko, O., On the numerical solution of mixed boundary value problems in an elastostatic half-plane with a bounded inclusion, *Advances in Boundary Integral Methods - Proceedings of the Seventh UK Conference on Boundary Integral Methods*, (Eds. H. Power, A. La Rocca and S. J. Baxter), University of Nottingham, UK, (2009), 57–65.

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