

SELECTED PUBLICATIONS

I. Scholarly Book Chapters:

- T. Tran. Ian Sloan's legacy in integral equation methods. In *Contemporary Computational Mathematics - a celebration of the 80th birthday of Ian Sloan*, J. Dick, F. Y. Kuo, and H. Woźniakowski, editors, pages 1035–1051. Springer–Verlag, Berlin Heidelberg, 2018.
- E. P. Stephan, **T. Tran**, and A. Costea. A boundary integral equation on the sphere for high-precision geodesy. In *Computer Methods in Mechanics*, M. Kuczma and K. Wilmanski, editors, chapter 6, pages 99–110. Springer-Verlag, Berlin Heidelberg, 2010.
- M. Maischak, E. P. Stephan, and **T. Tran**. Domain decomposition algorithms for an indefinite hypersingular integral equation in three dimensions. In *Domain decomposition methods in science and engineering XVII*, volume 60 of *Lect. Notes Comput. Sci. Eng.*, pages 647–655. Springer, Berlin, 2008.

II. Refereed Journal Articles:

- N. H. Tuan, L. D. Long, V. T. Nguyen, and **T. Tran**. On a final value problem for the time-fractional diffusion equation with inhomogeneous source. *Inverse Probl. Sci. Eng.*, (2017). (accepted November 5, 2016).
- N. H. Tuan, V. A. Khoa, M. N. Minh, and **T. Tran**. Reconstruction of the electric field of the Helmholtz equation in three dimensions. *J. Comput. Appl. Math.*, **309** (2017), 56–78.
- B. Goldys, K.-N. Le, and **T. Tran**. A finite element approximation for the stochastic Landau-Lifshitz-Gilbert equation. *J. Differential Equations*, **260** (2016), 937–970.
- D. T. Pham and **T. Tran**. Solving non-strongly elliptic pseudodifferential equations on a sphere using radial basis functions. *Comput. Math. Appl.*, **70** (2015), 1970–1983.
- A. Chernov, D. Pham, and **T. Tran**. A shape calculus based method for a transmission problem with a random interface. *Comput. Math. Appl.*, **70** (2015), 1401–1424.
- N. H. Tuan, L. D. Thang, V. A. Khoa, and **T. Tran**. On an inverse boundary value problem of a nonlinear elliptic equation in three dimensions. *J. Math. Anal. Appl.*, **426** (2015), 1232–1261.
- K.-N. Le, M. Page, D. Praetorius, and **T. Tran**. On a decoupled linear FEM integrator for eddy-current-LLG. *Appl. Anal.*, **94** (2015), 1051–1067.
- I. Tregubov and **T. Tran**. A Galerkin method with spherical splines for the shallow water equations on a sphere: error analysis. *Numer. Math.*, **129** (2015), 783–814.
- A. Márquez, S. Meddahi, and **T. Tran**. Analyses of mixed continuous and discontinuous Galerkin methods for the time harmonic elasticity problem with reduced symmetry. *SIAM J. Sci. Comput.*, **37** (2015), A1909–A1933.
- T. D. Pham and **T. Tran**. Strongly elliptic pseudodifferential equations on the sphere with radial basis functions. *Numer. Math.*, **128** (2014), 589–614.
- Q. T. Le Gia, H. T. Nguyen, and **T. Tran**. Solving the backward heat equation on the unit sphere. *ANZIAM J. Electron. Suppl.*, **56** (2014), C262–C278.
- S. Shafie and **T. Tran**. Estimating the error of a \mathbf{H}^1 -mixed finite element solution for the Burgers equation. *ANZIAM J. Electron. Suppl.*, **56** (2014), C383–C398.

- N. Heuer and **T. Tran**. A mixed method for Dirichlet problems with radial basis functions. *Comput. Math. Appl.*, **66** (2013), 2045–2055.
- K.-N. Le and **T. Tran**. A convergent finite element approximation for the quasi-static Maxwell-Landau-Lifshitz-Gilbert equations. *Comput. Math. Appl.*, **66** (2013), 1389–1402.
- N. Heuer and **T. Tran**. Radial basis functions for the solution of hypersingular operators on open surfaces. *Comput. Math. Appl.*, **63** (2012), 1504–1518.
- D. Pham, **T. Tran**, and S. Crothers. An overlapping additive Schwarz preconditioner for the Laplace-Beltrami equation using spherical splines. *Adv. Comput. Math.*, **37** (2012), 93–121.
- K.-N. Le and **T. Tran**. A finite element approximation for the quasi-static Maxwell-Landau-Lifshitz-Gilbert equations. *ANZIAM J. Electron. Suppl.*, **54** (2012), C681–C698.
- Q. T. Le Gia and **T. Tran**. Fast iterative solvers for boundary value problems on a local spherical region. *ANZIAM J. Electron. Suppl.*, **54** (2012), C492–C507.
- I. Tregubov and **T. Tran**. Efficient solvers for the shallow water equations on a sphere. *ANZIAM J. Electron. Suppl.*, **54** (2012), C412–C428.
- D. Pham and **T. Tran**. A domain decomposition method for solving the hypersingular integral equation on the sphere with spherical splines. *Numer. Math.*, **120** (2012), 117–151.
- Q. T. Le Gia, E. P. Stephan, and **T. Tran**. Solution to the Neumann problem exterior to a prolate spheroid by radial basis functions. *Adv. Comput. Math.*, **34** (2011), 83–103.
- T. D. Pham, **T. Tran**, and A. Chernov. Pseudodifferential equations on the sphere with spherical splines. *Math. Models Methods Appl. Sci.*, **21** (2011), 1933–1959.
- A. R. Shaik, S. S. Rahman, M. H. Tran, and **T. Tran**. Numerical simulation of fluid-rock coupling heat transfer in naturally fractured geothermal system. *Applied Thermal Engineering*, **31** (2011), 1600–1606.
- A. Costea, Q. T. Le Gia, E. P. Stephan, and **T. Tran**. Meshless BEM and overlapping Schwarz preconditioners for exterior problems on spheroids. *Studia Geophysica et Geodaetica*, **55** (2011), 465–477.
- A. R. Shaik, N. H. Tran, S. S. Rahman, , and **T. Tran**. Estimating pressure losses in interconnected fracture systems: An integrated tensor approach. *International Journal of Geomechanics*, **11** (2011), 353–363.
- **T. Tran**, Q. T. Le Gia, I. H. Sloan, and E. P. Stephan. Preconditioners for pseudodifferential equations on the sphere with radial basis functions. *Numer. Math.*, **115** (2010), 141–163.
- Q. T. Le Gia and **T. Tran**. An overlapping additive Schwarz preconditioner for interpolation on the unit sphere with spherical radial basis functions. *J. Complexity*, **26** (2010), 552–573.
- Q. T. Le Gia and **T. Tran**. Additive Schwarz preconditioners for interpolation of divergence-free vector fields on spheres. *ANZIAM J. Electron. Suppl.*, **52** (2010), C742–C758.
- T. D. Pham and **T. Tran**. Solutions to pseudodifferential equations using spherical radial basis functions. *Bull. Aust. Math. Soc.*, **79** (2009), 473–485.

- Q. T. Le Gia, I. H. Sloan, and **T. Tran**. Overlapping additive Schwarz preconditioners for elliptic PDEs on the unit sphere. *Math. Comp.*, **78** (2009), 79–101.
- **T. Tran**, Q. T. Le Gia, I. H. Sloan, and E. P. Stephan. Boundary integral equations on the sphere with radial basis functions: error analysis. *Appl. Numer. Math.*, **59** (2009), 2857–2871.
- T. D. Pham, **T. Tran**, and Q. T. Le Gia. Numerical solutions to a boundary integral equation with spherical radial basis functions. *ANZIAM J.*, **50** (2008), C266–C281.
- **T. Tran** and Q. T. Le Gia. Interpolation on the sphere: a fast solution technique. *ANZIAM J.*, **50** (2008), C354–C370.
- **T. Tran**. Additive Schwarz preconditioners for the h - p version boundary-element approximation to the hypersingular operator in three dimensions. *Int. J. Comput. Math.*, **84** (2007), 1417–1437.
- **T. Tran** and T.-B. Duong. A posteriori error estimates with the finite element method of lines for a Sobolev equation. *Numer. Methods Partial Differential Equations*, **21** (2005), 521–535.
- A. Teimoori, C. Z., S. S. Rahman, and **T. Tran**. Effective permeability calculation using boundary element method in naturally fractured reservoirs. *Petroleum Science and Technology*, **23** (2005), 693–709.
- **T. Tran** and E. P. Stephan. An overlapping additive Schwarz preconditioner for boundary element approximations to the Laplace screen and Lamé crack problems. *J. Numer. Math.*, **12** (2004), 311–330.
- M. Maischak, E. P. Stephan, and **T. Tran**. A multiplicative Schwarz algorithm for the Galerkin boundary element approximation of the weakly singular integral operator in three dimensions. *Int. J. Pure Appl. Math.*, **12** (2004), 1–21.
- **T. Tran** and T.-B. Duong. A complete analysis for some a posteriori error estimates with the finite element method of lines for a nonlinear parabolic equation. *Numer. Funct. Anal. Optim.*, **23** (2002), 891–909.
- **T. Tran** and E. P. Stephan. Two-level additive Schwarz preconditioners for the h - p version of the Galerkin boundary element method for 2-d problems. *Computing*, **67** (2001), 57–82.
- I. H. Sloan and **T. Tran**. The tolerant quallocation method for variable-coefficient elliptic equations on curves. *J. Integral Equations Appl.*, **13** (2001), 73–98.
- **T. Tran**. Overlapping additive Schwarz preconditioners for boundary element methods. *J. Integral Equations Appl.*, **12** (2000), 177–207.
- M. Maischak, E. P. Stephan, and **T. Tran**. Multiplicative Schwarz algorithms for the Galerkin boundary element method. *SIAM J. Numer. Anal.*, **38** (2000), 1243–1268.
- R. Kress and **T. Tran**. Inverse scattering for a locally perturbed half-plane. *Inverse Problems*, **16** (2000), 1541–1559.
- E. P. Stephan and **T. Tran**. Domain decomposition algorithms for indefinite weakly singular integral equations: the h and p versions. *IMA J. Numer. Anal.*, **20** (2000), 1–24.
- M. Ainsworth, B. McLean, and **T. Tran**. Diagonal scaling of stiffness matrices in the Galerkin boundary element method. *ANZIAM J.*, **42** (2000), 141–150.

- **T. Tran.** Additive Schwarz preconditioners for a fully-discrete and symmetric boundary element method. *ANZIAM J.*, **42** (2000), C1420–C1442.
- **T. Tran** and E. P. Stephan. Additive Schwarz algorithms for the p version of the Galerkin boundary element method. *Numer. Math.*, **85** (2000), 433–468.
- M. Ainsworth, W. McLean, and **T. Tran.** The conditioning of boundary element equations on locally refined meshes and preconditioning by diagonal scaling. *SIAM J. Numer. Anal.*, **36** (1999), 1901–1932.
- **T. Tran**, E. P. Stephan, and S. Zaprianov. Wavelet-based preconditioners for boundary integral equations. *Adv. Comput. Math.*, **9** (1998), 233–249. Numerical treatment of boundary integral equations.
- **T. Tran** and I. H. Sloan. Tolerant qualocation—a qualocation method for boundary integral equations with reduced regularity requirement. *J. Integral Equations Appl.*, **10** (1998), 85–115.
- N. Heuer, E. P. Stephan, and **T. Tran.** Multilevel additive Schwarz method for the h - p version of the Galerkin boundary element method. *Math. Comp.*, **67** (1998), 501–518.
- E. P. Stephan and **T. Tran.** Domain decomposition algorithms for indefinite hypersingular integral equations: the h and p versions. *SIAM J. Sci. Comput.*, **19** (1998), 1139–1153.
- W. McLean and **T. Tran.** A preconditioning strategy for boundary element Galerkin methods. *Numer. Methods Partial Differential Equations*, **13** (1997), 283–301.
- **T. Tran**, E. P. Stephan, and P. Mund. Hierarchical basis preconditioners for first kind integral equations. *Appl. Anal.*, **65** (1997), 353–372.
- E. P. Stephan and **T. Tran.** Localization and post processing for the Galerkin boundary element method applied to three-dimensional screen problems. *J. Integral Equations Appl.*, **8** (1996), 457–481.
- **T. Tran.** Local error estimates for the Galerkin method applied to strongly elliptic integral equations on open curves. *SIAM J. Numer. Anal.*, **33** (1996), 1484–1493.
- M. Maischak, E. P. Stephan, and **T. Tran.** Domain decomposition methods for boundary integral equations of the first kind: numerical results. *Appl. Anal.*, **63** (1996), 111–132.
- **T. Tran** and E. P. Stephan. Additive Schwarz methods for the h -version boundary element method. *Appl. Anal.*, **60** (1996), 63–84.
- **T. Tran.** The K -operator and the Galerkin method for strongly elliptic equations on smooth curves: local estimates. *Math. Comp.*, **64** (1995), 501–513.
- **T. Tran.** The K -operator and the qualocation method for strongly elliptic equations on smooth curves. *J. Integral Equations Appl.*, **5** (1993), 405–428.
- D. D. Ang and **T. Tran.** A nonlinear pseudoparabolic equation. *Proc. Roy. Soc. Edinburgh Sect. A*, **114** (1990), 119–133.

III. Refereed Conference Papers:

- **T. Tran.** Meshless methods for pseudodifferential equations on the sphere. Research Report 19, Oberwolfach Report, 2008.
- **T. Tran.** A preconditioner for the boundary-element approximation of the Helmholtz equations in \mathbb{R}^3 . In *Proc. of the International Conference on Nonlinear Analysis & Engineering Mechanics Today*, to appear, 2007.

- M. Maischak and **T. Tran**. A block preconditioner for an electromagnetic FEM-BEM coupling problem is \mathbb{R}^3 . In *Recent Progress in Scientific Computing*, Z.-C. S. Wenbin Liu, Michael Ng, editor, pages 302–318, Beijing, 2007. Science Press. Proceeding of the 2nd International Conference on Scientific Computing and Partial Differential Equations, 2 December, 2005.
- A. Teimoori, C. Z., S. S. Rahman, and **T. Tran**. Calculation of permeability tensor using boundary element method provides a unique tool to simulate naturally fractured reservoirs. In *Proceedings of the SPE Annual Technical Conference and Exhibition, Colorado, USA. 5–8 October, 2003*, 2003.
- M. Maischak, E. P. Stephan, and **T. Tran**. Two level Schwarz methods for indefinite integral equations. In *Proc. of the Ninth International Symposium on Domain Decomposition Methods for Partial Differential Equations, 1996*, P. Bjørstad, M. Espedal, and D. Keyes, editors, pages 504–508. Electronic Proceedings <http://www.DDM.org/DD9>, ©1998 DDMorg, 1998.
- **T. Tran**. Additive Schwarz algorithms and the Galerkin boundary element method. In *Computational techniques and applications: CTAC97 (Adelaide)*, pages 703–710. World Sci. Publ., River Edge, NJ, 1998.
- **T. Tran**. Domain decomposition methods for the Galerkin boundary element approximation applied to screen and crack problems. In *Analysis and mechanics of continuous media (Ho Chi Minh City, 1995)*, volume 3 of *Publ. HoChiMinh City Math. Soc.*, pages 355–368. HoChiMinh City Math. Soc., Ho Chi Minh City, 1995.