

Prof. Dr. Ernst Peter Stephan

1. Positions:

- 1983-1988: Associate Professor, School of Mathematics, Georgia Institute of Technology, Atlanta, USA
- 1988-1989: Full Professor, School of Mathematics, Georgia Institute of Technology, Atlanta, USA
- 1989-2015: Professor (C4), Institut für Angewandte Mathematik, Leibniz Universität Hannover, Germany
- Since October 2015: retired

2. Research stays:

- University of New South Wales, Sydney, Australia (multiple visits)
- Universidad de Concepcion, Chile (multiple visits)
- Universidad del Valle, Cali; Universidad del Norte, Barranquilla, Colombia (multiple visits)
- Universidad Ponteficia de Chile, Santiago, Chile (multiple visits)

3. Research grants:

- Chief investigator: several NSF grants (1985-1989), several DFG and BMBF projects (1990-2014),
- Partner investigator in ARC grant (2016-2018)
- Partnerships with universities in developing countries (DAAD):
 - Universidad de Concepcion, Chile (1999-2002)
 - Universidad del Norte, Barranquilla, Colombia (2008-2011)

4. Publications:

- MathSciNet lists 206 publications in scientific journals for E.P.Stephan, 1738 citations.
- ResearcherID computes for E.P.Stephan an h-index of 23 (Thomson Reuters).
- Google Scholar computes an h-index of 38

Publications over the past five years:

1. Feischl, Michael; Führer, Thomas; Praetorius, Dirk; Stephan, Ernst P. Optimal preconditioning for the symmetric and nonsymmetric coupling of adaptive finite elements and boundary elements. *Numer. Methods Partial Differential Equations* 33 (2017), no. 3, 603–632.
2. Gimperlein, Heiko; Maischak, Matthias; Stephan, Ernst P. Adaptive time domain boundary element methods with engineering applications. *J. Integral Equations Appl.* 29 (2017), no. 1, 75–105.
3. Feischl, Michael; Führer, Thomas; Praetorius, Dirk; Stephan, Ernst P. Optimal additive Schwarz preconditioning for hypersingular integral equations on locally refined triangulations. *Calcolo* 54 (2017), no. 1, 367–399.
4. Gimperlein, Heiko; Nezhi, Zouhair; Stephan, Ernst P. A priori error estimates for a time-dependent boundary element method for the acoustic wave equation in a half-space. *Math. Methods Appl. Sci.* 40 (2017), no. 2, 448–462.
5. Banz, Lothar; Gimperlein, Heiko; Issaoui, Abderrahman; Stephan, Ernst P. Stabilized mixed hp -BEM for frictional contact problems in linear elasticity. *Numer. Math.* 135 (2017), no. 1, 217–263.
6. Banz, Lothar; Lamichhane, Bishnu P.; Stephan, Ernst P. A new three-field formulation of the biharmonic problem and its finite element discretization. *Numer. Methods Partial Differential Equations* 33 (2017), no. 1, 199–217.
7. Banz, Lothar; Gimperlein, Heiko; Nezhi, Zouhair; Stephan, Ernst P. Time domain BEM for

- sound radiation of tires. *Comput. Mech.* 58 (2016), no. 1, 45–57.
8. Andres, Michael; Maischak, Matthias; Stephan, Ernst P. Dual-dual formulation for a contact problem with friction. *Comput. Methods Appl. Math.* 16 (2016), no. 1, 1–16.
 9. Banz, Lothar; Stephan, Ernst P. Comparison of mixed hp -BEM (stabilized and non-stabilized) for frictional contact problems. *J. Comput. Appl. Math.* 295 (2016), 92–102.
 10. Banz, Lothar; Stephan, Ernst P. On hp -adaptive BEM for frictional contact problems in linear elasticity. *Comput. Math. Appl.* 69 (2015), no. 7, 559–581.
 11. Feischl, Michael; Führer, Thomas; Mitscha-Eibl, Gregor; Praetorius, Dirk; Stephan, Ernst P. Convergence of adaptive BEM and adaptive FEM-BEM coupling for estimators without h -weighting factor. *Comput. Methods Appl. Math.* 14 (2014), no. 4, 485–508.
 12. von Petersdorff, T.; Stephan, E. P. Decomposition in regular and singular parts (in domains with corners) and stability under perturbation of the geometry. *Appl. Anal.* 93 (2014), no. 10, 2158–2173.
 13. Costea, Adrian; Gimperlein, Heiko; Stephan, Ernst P. A Nash-Hörmander iteration and boundary elements for the Molodensky problem. *Numer. Math.* 127 (2014), no. 1, 1–34.
 14. Banz, Lothar; Stephan, Ernst P. hp -adaptive IPDG/TDG-FEM for parabolic obstacle problems. *Comput. Math. Appl.* 67 (2014), no. 4, 712–731.
 15. Maischak, Matthias; Krebs, Andreas; Stephan, Ernst P. Quasi-optimal degree distribution for a quadratic programming problem arising from the p -version finite element method for a one-dimensional obstacle problem. *Discrete Appl. Math.* 164 (2014), part 1, 200–209.
 16. Banz, Lothar; Stephan, Ernst P. A posteriori error estimates of hp -adaptive IPDG-FEM for elliptic obstacle problems. *Appl. Numer. Math.* 76 (2014), 76–92.
 17. Leydecker, Florian; Maischak, Matthias; Stephan, Ernst P.; Teltscher, Matthias A p -hierarchical error estimator for a FEM-BEM coupling of an eddy current problem in \mathbb{R}^3 . *J. Korean Soc. Ind. Appl. Math.* 17 (2013), no. 3, 139–170.
 18. Stephan, E. P.; Andres, M.; Banz, L.; Costea, A.; Neumann, L.; Lämmerzahl, C.; Hackmann, E.; Herrmann, S.; Rievers, B. High precision modeling towards the 10–20 level. *ZAMM Z. Angew. Math. Mech.* 93 (2013), no. 6-7, 492–498.
 19. Bürger, Raimund; Steinbach, Olaf; Stephan, Ernst Editorial [Special issue: Partial differential equations: theory, applications, simulations]. *ZAMM Z. Angew. Math. Mech.* 93 (2013), no. 6-7, 372.
 20. Leydecker, Florian; Stephan, Ernst P. Additive Schwarz methods for the hp -version of the boundary element method in \mathbb{R}^3 . *Fast boundary element methods in engineering and industrial applications*, 93–109, Lect. Notes Appl. Comput. Mech., 63, Springer, Heidelberg, 2012.
 21. Domínguez, Catalina; Stephan, Ernst P.; Maischak, Matthias A FE-BE coupling for a fluid-structure interaction problem: hierarchical a posteriori error estimates. *Numer. Methods Partial Differential Equations* 28 (2012), no. 5, 1417–1439.
 22. Lamichhane, Bishnu P.; Stephan, Ernst P. A symmetric mixed finite element method for nearly incompressible elasticity based on biorthogonal systems. *Numer. Methods Partial Differential Equations* 28 (2012), no. 4, 1336–1353.
 23. Gläfke, Matthias; Maischak, Matthias; Stephan, Ernst P. Coupling of FEM and BEM for a transmission problem with nonlinear interface conditions. Hierarchical and residual error indicators. *Appl. Numer. Math.* 62 (2012), no. 6, 736–753.
 24. Neumann, Leo; Stephan, Ernst P. Numerical solution of an adhesion problem with FEM and BEM. *Appl. Numer. Math.* 62 (2012), no. 5, 606–619.
 25. Maischak, M.; Oestmann, S.; Stephan, E. P. A least-squares FEM-BEM coupling method for linear elasticity. *Appl. Numer. Math.* 62 (2012), no. 4, 457–472.

26. Leydecker, F.; Maischak, M.; Stephan, E. P.; Teltscher, M. A p -hierarchical error estimator for a fe-be coupling formulation applied to electromagnetic scattering problems in \mathbb{R}^3 . *Appl. Anal.* 91 (2012), no. 2, 277–293.
27. Domínguez, Catalina; Stephan, Ernst P.; Maischak, Matthias FE/BE coupling for an acoustic fluid-structure interaction problem. Residual a posteriori error estimates. *Internat. J. Numer. Methods Engrg.* 89 (2012), no. 3, 299–322.