Curriculum vitae

Anders Logg

Full Professor of Computational Mathematics, Chalmers University of Technology

Bio

Date of birth:	January 7, 1976
Place of birth:	Mölndal, Sweden
Citizenship:	Swedish

Present Positions

(2013–) **Full Professor of Computational Mathematics**
Chalmers University of Technology, Sweden.

(2013–) **Scientific Advisor**, Fraunhofer-Chalmers Centre, Sweden.

Previous Positions

(2013–2017) **Scientific Advisor**, Simula Research Laboratory, Norway.
(2011–2013) **Senior Research Scientist**, Simula Research Laboratory, Norway.
(2006–2013) **Associate Professor**, University of Oslo, Norway.
(2006–2011) **Research Scientist**, Simula Research Laboratory, Norway.
(2004–2006) **Research Assistant Professor**, TTI Chicago, USA.

Higher Education Degrees

(2010) **Docent in Applied Mathematics**
Chalmers University of Technology, Sweden.

(2004) **PhD in Applied Mathematics**
Chalmers University of Technology. Advisors: Prof. C. Johnson, Prof. K. Eriksson.

(2001) **Lic.Eng. in Applied Mathematics**
Chalmers University of Technology. Advisor: Prof. Claes Johnson.

(1999) **MSc in Engineering Physics**
Chalmers University of Technology. Advisor: Prof. Claes Johnson.

Supervision (PhD Students and Postdocs)

(2016–2019) Robert Forslund (Lic, co-advisor).
(2015–) Carl Lundholm (PhD, main advisor).
(2014–) Niklas Ericsson (PhD, co-advisor).
(2011–) Benjamin Kehlet (PhD, main advisor).
(2014–2016) Matteo Molteni (PhD, co-advisor).
(2014–2017) Frida Svelander (Lic, main advisor).
(2009–2012) André Massing (PhD, main advisor).
(2008–2011) Kristian Valen-Sendstad (PhD, co-advisor).
(2008–2011) Kristoffer Selim (PhD, main advisor).

(2014-2017) August Johansson (Postdoc).
(2012-2013) André Massing (Postdoc).
(2009-2010) Marie E. Rognes (Postdoc).
(2008-2010) Harish Narayanan (Postdoc).

Research Grants

(2020–2025)	Digital Twin Cities Centre Vinnova (105 MSEK), PI.
(2018–2020)	Sensor Driven Cloud-Based Strategies for Infrastructure Management Trafikverket (3.2 MSEK), PI R. Rempling.
(2017–2019)	Computational Mathematical Modeling NordForsk / Nordic Council of Ministers (0.6 MSEK), PI.
(2016–2020)	Mathematics for Electron Beam Melting — 3D Printing in Metal Swedish Foundation for Strategic Research (2.5 MSEK), PI S. Larsson.
(2015–2018)	Automated Uncertainty Quantification for Numerical Solution of PDE NordForsk / Nordic Council of Ministers (4 MSEK), PI M. Rognes.
(2014–2018)	Multimesh Space-Time Finite Element Methods Swedish Research Council (3.4 MSEK), PI.
(2010–2013)	Computability and Stability of Dynamical Systems Norwegian Ministry of Education and Research, PI.
(2007–2012)	Automation of Error Control with Application to FSI in Biomedicine Research Council of Norway (10 MNOK), PI.

Awards and Prizes

- Chosen for the **Top-100 list** of research entrepreneurs by the Royal Swedish Academy of Engineering Sciences (2019).
- Awarded prize for **best poster session** (Software Productivity and Sustainability) at SIAM CSE (2017).
- Awarded **Gyllene pekpinnen** at Chalmers 2014, 2015, 2016 and 2020, finalist for Chalmers Pedagogical Prize (2014).
- Awarded the **John Ericsson Medal**, given to students with the best grade average (4.97/5.0 = 99.4%) at Chalmers University of Technology, Sweden (1999).
- Finalist for the ECCOMAS **PhD Thesis Award**, nominated by the NoACM (Nordic Association for Computational Mechanics), one of 18 European finalists (2005).

Professional Activities

- **Director** of **Digital Twin Cities Centre** (2020–).
- **Director** of **Chalmers Area of Advance Building Futures** (2017–2018).
- **Director** of **Swedish Network for Mathematics in Industry** (2014–).
- **Council member** of **EMS Applied Mathematics Committee** (2015–2018).
- **Council member** of **Swedish National Committee for Mathematics** (2015–2017).
- **Head of unit** for Computational Mathematics and Numerical Analysis (2014–2016).
- Leader of Chalmers Excellence Profile Virtual Cities (2014–2018).
- **Co-founder and core developer of FEniCS**, a free/open-source scientific software project, including the packages DOLFIN, FFC, UFC, UFL, and CBC.Solve (`http://fenicsproject.org/`).
- **Group leader** for the *Automated and Distributed Computing* research group at Simula Research Laboratory, Norway (2010–2012).
- **Project leader** for three research projects at Simula Research Laboratory (2007-2013): *Computational Middleware*, *Robust Solvers*, and *Automation of Error Control with Application to Fluid-Structure Interaction in Biomedicine*.
- **International advisory board member** for the Special Research Program (SFB) Taming Complexity in Partial Differential Systems funded by the Austrian Science Fund (2018-2021).

- **Organizer of workshops and conferences**: *FEniCS'05: Automated Computational Mathematical Modeling* (2005), *Finite Element Methods for Fluids and Fluid-Structure Interaction* (2008), *FEniCS'09: Scientific Computing in the New Millennium* (2009), *Finite Element Software Development* at ENUMATH (2009), *Automated Computing* at ICNAAM (2010), *Automated Solution of Differential Equations* at SIAM CSE (2011), *Automation of Computational Modeling by Advanced Software Tools and Techniques* at ECCOMAS (2012), *FEniCS'12: High-Performance PDE Frameworks for Modern Architectures* (2012), *Software in CSE* at SIAM CSE (2013), *Fixed-Grid Methods and Applications to Multi-Physics and Domain Bridging Problems* at SIAM CSE (2013), *26:th Nordic Seminar on Computational Mechanics* (**conference chair**, 2013), *Automation of Computational Modeling by Advanced Software Tools and Techniques* at the 11th. World Congress on Computational Mechanics (2014), *Methods for Cut and Composite Meshes: Theory, Algorithms and Applications* at the 11th. World Congress on Computational Mechanics (2014), ***SIAM CSE*** (member of organizing committee, 2015), *PDESoft* (member of scientific committee, 2016), *29:th Nordic Seminar on Computational Mechanics* (member of organizing committee, 2016).
- **Invited talks** (selection): *Workshop on Data Structures for Finite Element and Finite Volume Computations* (Freie Universität Berlin, 2008), *Opportunities and Challenges in Computational Geodynamics* (Caltech, 2009), *The 23rd Chemnitz FEM Symposium* (Chemnitz, 2010, keynote speaker), *EuroSciPy 2011 / Python in Physics* (Ecole normale supérieure, 2011), *PDESoft 2012* (Münster 2012, invited speaker), *FEniCS 2015* (London 2015, keynote speaker), *ESCO 2016* (Pilsen 2016, keynote speaker), *FEniCS 2016* (Oslo 2016, keynote speaker), *SmartGeometry 2016* (Gothenburg 2016, keynote speaker), *International Conference on Computational Science and Engineering* (Oslo 2017, keynote speaker).
- **Editor** of Archive of Numerical Software, **guest editor** of SISC special issue on CSE Software and Big Data (2015).
- **Referee** for *SIAM Review*, *SIAM Journal on Scientific Computing*, *SIAM Journal on Numerical Analysis*, *ACM Transactions on Mathematical Software*, *BIT Numerical Mathematics*, *Journal of Computational and Applied Mathematics*, *Journal of Computational Physics*, *IMA Journal of Numerical Analysis*, *Simulation Modelling Practice and Theory*, *Scientific Programming*, *Bulletin of the Iranian Mathematical Society*.
- **Opponent** and chairman of PhD defense committees in Norway and Sweden.
- Member of the **Programme Council** for the Applied Physics program at Chalmers (2013–).
- Creator of an exhibition of computational mathematics/physics at the Universeum science center.
- Author of several articles on computational mathematics at the Swedish science portal forskning.se, author of several book chapters and articles on popular science.
- Lecturer in several courses at Chalmers University of Technology (2002–2004, 2013–), lecturer in several courses at the University of Oslo (2006-2013), lecturer at the Jyväskylä Summer School (2013), lecturer at the Winter School in Computational Mathematics, Geilo, Norway (2006, 2012).

Selected Publications

[1] K. Eriksson, C. Johnson and A. Logg. Explicit Time-Stepping for Stiff ODEs. *SIAM J. Sci. Comput.*, vol. 25(4), pp. 1142–1157, 2003.

[2] R. C. Kirby and A. Logg. A Compiler for Variational Forms. *ACM Transactions on Mathematical Software*, vol. 32(3), pp. 417–444, 2006.

[3] A. Logg. Automating the Finite Element Method. *Archives of Computational Methods in Engineering*, vol. 14(2), pp. 93–138, 2007.

[4] A. Logg. Efficient Representation of Computational Meshes. *International Journal of Computational Science and Engineering*, vol. 4(4), pp. 283–295, 2009.

[5] A. Logg and G. N. Wells. DOLFIN: Automated Finite Element Computing. *ACM Transactions on Mathematical Software*, vol. 37(2), 2010.

[6] A. Logg, K.-A. Mardal, G. N. Wells et al.. Automated Solution of Differential Equations by the Finite Element Method, *Springer*, 2012.

[7] M. E. Rognes and A. Logg. Automated Goal-Oriented Error Control I: Stationary Variational Problems. *SIAM Journal on Scientific Computing*, vol. 35(3), pp. C173–C193, 2013.

[8] D. N. Arnold and A. Logg. Periodic Table of the Finite Elements. *SIAM News*, 2014.

[9] A. Massing, M. G. Larson, A. Logg and M. E. Rognes. A Nitsche-Based Cut Finite Element Method for a Fluid–Structure Interaction Problem. *Communications in Applied Mathematics and Computational Science*, vol. 10(2), pp. 97-120, 2015.

[10] A. Johansson, M. G. Larson and A. Logg. High Order Cut Finite Element Methods for the Stokes Problem. *Advanced Modeling and Simulation in Engineering Sciences*, vol. 2(24), 2015.

Articles in International Journals

[1] A. Logg. Multi-Adaptive Galerkin Methods for ODEs I. *SIAM J. Sci. Comput.*, vol. 24(6), pp. 1879–1902, 2003.

[2] A. Logg. Multi-Adaptive Galerkin Methods for ODEs II: Implementation and Applications. *SIAM J. Sci. Comput.*, vol. 25(4), pp. 1119–1141, 2003.

[3] K. Eriksson, C. Johnson and A. Logg. Explicit Time-Stepping for Stiff ODEs. *SIAM J. Sci. Comput.*, vol. 25(4), pp. 1142–1157, 2003.

[4] A. Logg. Multi-Adaptive Time-Integration. *Applied Numerical Mathematics*, vol. 48(3–4), pp. 339–354, 2004.

[5] J. Jansson, C. Johnson and A. Logg. Computational Modeling of Dynamical Systems. *Mathematical Models and Methods in Applied Sciences*, vol. 15(3), pp. 471–481, 2005.

[6] R. C. Kirby, M. G. Knepley, A. Logg and L. R. Scott. Optimizing the Evaluation of Finite Element Matrices. *SIAM J. Sci. Comput.*, vol. 27(3), pp. 741–758, 2005.

[7] A. Logg. Multi-Adaptive Galerkin Methods for ODEs III: A Priori Error Estimates. *SIAM Journal on Numerical Analysis*, vol. 43(6), pp. 2624–2646, 2006.

[8] R. C. Kirby and A. Logg. A Compiler for Variational Forms. *ACM Transactions on Mathematical Software*, vol. 32(3), pp. 417–444, 2006.

[9] R. C. Kirby, A. Logg, L. R. Scott and A. R. Terrel. Topological Optimization of the Evaluation of Finite Element Matrices. *SIAM J. Sci. Comput.*, vol. 28(1), pp. 224–240, 2006.

[10] A. Logg. Automating the Finite Element Method. *Archives of Computational Methods in Engineering*, vol. 14(2), pp. 93–138, 2007.

[11] R. C. Kirby and A. Logg. Efficient Compilation of a Class of Variational Forms. *ACM Transactions on Mathematical Software*, vol. 33(3), 2007.

[12] J. Jansson and A. Logg. Algorithms and Data Structures for Multi-Adaptive Time-Stepping. *ACM Trans. Math. Software*, vol. 35(3), pp. 1–24, 2008.

[13] R. C. Kirby and A. Logg. Benchmarking Domain-Specific Compiler Optimizations for Variational Forms. *ACM Transactions on Mathematical Software*, vol. 35(2), pp. 1–18, 2008.

[14] K. B. Oelgaard, A. Logg and G. N. Wells. Automated Code Generation for Discontinuous Galerkin Methods. *SIAM J. Sci. Comput.*, vol. 31(2), pp. 849–864, 2008.

[15] M. S. Alnæs, A. Logg, K.-A. Mardal, O. Skavhaug and H. P. Langtangen. Unified Framework for Finite Element Assembly. *International Journal of Computational Science and Engineering*, vol. 4(4), pp. 231–244, 2009.

[16] A. Logg. Efficient Representation of Computational Meshes. *International Journal of Computational Science and Engineering*, vol. 4(4), pp. 283–295, 2009.

[17] M. E. Rognes, R. C. Kirby and A. Logg. Efficient Assembly of $H(\mathrm{div})$ and $H(\mathrm{curl})$ Conforming Finite Elements. *SIAM Journal on Scientific Computing*, vol. 31(6), pp. 4130–4151, 2009.

[18] A. Logg and G. N. Wells. DOLFIN: Automated Finite Element Computing. *ACM Transactions on Mathematical Software*, vol. 37(2), 2010.

[19] K. Selim, A. Logg and M. G. Larson. An Adaptive Finite Element Splitting Method for the Incompressible Navier–Stokes Equations. *Computer Methods in Applied Mechanics and Engineering*, vol. 209–212, pp. 54–65, 2011.

[20] A. Massing, M. G. Larson and A. Logg. Efficient Implementation of Finite Element Methods on Non-Matching and Overlapping Meshes in 3D. *SIAM Journal on Scientific Computing*, vol. 35(1), pp. C23–C47, 2013.

[21] M. E. Rognes and A. Logg. Automated Goal-Oriented Error Control I: Stationary Variational Problems. *SIAM Journal on Scientific Computing*, vol. 35(3), pp. C173–C193, 2013.

[22] A. Massing, M. G. Larson, A. Logg and M. E. Rognes. A Stabilized Nitsche Overlapping Mesh Method for the Stokes Problem. *Numerische Mathematik*, pp. 1–29, 2014.

[23] A. Massing, M. G. Larson, A. Logg and M. E. Rognes. A Stabilized Nitsche Fictitious Domain Method for the Stokes Problem. *Journal of Scientific Computing*, vol. 61(3), pp. 1–25, 2014.

[24] M. S. Alnæs, A. Logg, K. B. Oelgaard, M. E. Rognes and G. N. Wells. Unified Form Language: A Domain-Specific Language for Weak Formulations of Partial Differential Equations. *ACM Transactions on Mathematical Software*, vol. 40, 2014.

[25] D. N. Arnold and A. Logg. Periodic Table of the Finite Elements. *SIAM News*, 2014.

[26] A. Massing, M. G. Larson, A. Logg and M. E. Rognes. A Nitsche-Based Cut Finite Element Method for a Fluid–Structure Interaction Problem. *Communications in Applied Mathematics and Computational Science*, vol. 10(2), pp. 97-120, 2015.

[27] A. Johansson, M. G. Larson and A. Logg. High Order Cut Finite Element Methods for the Stokes Problem. *Advanced Modeling and Simulation in Engineering Sciences*, vol. 2(24), 2015.

[28] B. Kehlet and A. Logg. A Posteriori Error Analysis of Round-Off Errors in the Numerical Solution of Ordinary Differential Equations. *Numerical Algorithms*, vol. 76, pp. 191–210, 2017.

[29] M. S. Alnæs, J. Blechta, J. Hake, A. Johansson, B. Kehlet, A. Logg, C. Richardson, J. Ring, M. E. Rognes and G. N. Wells. The FEniCS Project Version 1.5. *Archive of Numerical Software*, vol. 3(100), 2015.

[30] E. Ames, H. Andreasson and A. Logg. On Axisymmetric and Stationary Solutions of the Self-Gravitating Vlasov System. *Classical and Quantum Gravity*, vol. 33(15), 2016.

[31] F. Svelander, G. Kettil, T. Johnson, A. Mark, A. Logg and F. Edelvik. Robust Intersection of Structured Hexahedral Meshes and Degenerate Triangle Meshes with Volume Fraction Applications. *Numerical Algorithms*, vol. 77, 2017.

[32] A. Johansson, B. Kehlet, M. G. Larson and A. Logg. MultiMesh Finite Element Methods: Solving PDEs on Multiple Intersecting Meshes. *Computer Methods in Applied Mechanics and Engineering*, vol. 343, pp. 672–689, 2019.

[33] E. Ames, H. Andreasson and A. Logg. Cosmic String and Black Hole Limits of Toroidal Vlasov Bodies in General Relativity. *Physical Review D*, vol. 99, pp. 024012, 2018.

Books

[1] J. Hoffman, C. Johnson and A. Logg. Dreams of Calculus: Perspectives on Mathematics Education, *Springer*, 2004.

[2] A. Logg, K.-A. Mardal, G. N. Wells et al.. Automated Solution of Differential Equations by the Finite Element Method, *Springer*, 2012.

[3] H. P. Langtangen and A. Logg. Solving PDEs in Python, *Springer*, 2017.

Chapters in Books

[1] K. Eriksson, C. Johnson and A. Logg. Adaptive Computational Methods for Parabolic Problems. In *Encyclopedia of Computational Mechanics*, edited by E. Stein, R. d. Borst and T. J. R. Hughes, Wiley Press, 2004.

[2] A. Logg, K.-A. Mardal, M. S. Alnæs, H. P. Langtangen and O. Skavhaug. A Hybrid Approach to Efficient Finite Element Code Development. In *Petascale Computing: Algorithms and Applications*, edited by D. A. Bader, Chapman and Hall, 2007.

[3] A. Logg. Att Lösa En Differentialekvation. In *Människor och matematik*, edited by O. Helenius and K. Wallby, Nationellt centrum för matematikutbildning, NCM, 2008.

[4] A. Logg, H. P. Langtangen and X. Cai. Past and Future Perspectives on Scientific Software. In *Simula Research Laboratory - by thinking constantly about it*, edited by A. Tveito, A. M. Bruaset and O. Lysne, Springer, 2009.

[5] R. C. Kirby and A. Logg. The Finite Element Method. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[6] R. C. Kirby, A. Logg, M. E. Rognes and A. R. Terrel. Common and Unusual Finite Elements. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[7] R. C. Kirby and A. Logg. Finite Element Variational Forms. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[8] A. Logg, K.-A. Mardal and G. N. Wells. Finite Element Assembly. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[9] R. C. Kirby and A. Logg. Tensor Representation of Finite Element Variational Forms. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[10] R. C. Kirby, M. G. Knepley, A. Logg, L. R. Scott and A. R. Terrel. Discrete Optimization of Finite Element Matrix Evaluation. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[11] A. Logg, G. N. Wells and J. Hake. DOLFIN: a C++/Python Finite Element Library. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[12] A. Logg, K. B. Oelgaard, M. E. Rognes and G. N. Wells. FFC: the FEniCS Form Compiler. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[13] R. C. Kirby and A. Logg. FErari: an Optimizing Compiler for Variational Forms. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[14] M. S. Alnæs, A. Logg and K.-A. Mardal. UFC: a Finite Element Code Generation Interface. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[15] K. Valen-Sendstad, A. Logg, K.-A. Mardal, H. Narayanan and M. Mortensen. A Comparison of Finite Element Schemes for the Incompressible Navier–Stokes Equations. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

[16] K. Valen-Sendstad, K.-A. Mardal and A. Logg. Computational Hemodynamics. In *Automated Solution of Differential Equations by the Finite Element Method*, edited by A. Logg, K.-A. Mardal and G. N. Wells, Springer, 2012.

Refereed Proceedings

[1] A. Logg. Efficient Representation of Computational Meshes. In *MekIT'07*, 2007

[2] M. Siklosi, O. E. Jensen, R. H. Tew and A. Logg. Multiscale Modeling of the Acoustic Properties of Lung Parenchyma. In *Mathematical and numerical modelling of the human lung*, 2008

[3] K. Selim and A. Logg. Simulating Heart Valve Dynamics in FEniCS. In *MekIT'09*, 2009

[4] B. Kehlet and A. Logg. A Reference Solution for the Lorenz System on [0, 1000]. In *AIP Conference Proceedings (ICNAAM 2010)*, 2010

[5] A. Logg and G. Wells. Building Flexible User Interfaces for Solving PDEs. In *AIP Conference Proceedings (ICNAAM 2010)*, 2010

[6] A. Massing, M. G. Larson and A. Logg. Towards an Implementation of Nitsche's Method on Overlapping Meshes in 3D. In *AIP Conference Proceedings (ICNAAM 2010)*, 2010

[7] G. Balaban, A. Logg and M. E. Rognes. A Newton Method for Fluid–Structure Interaction Using Full Jacobians Based on Automatic Form Differentiation. In *Proceedings of ECCOMAS 2012*, 2012

[8] B. Kehlet and A. Logg. Quantifying the Computability of the Lorenz System. In *Adaptive Modeling and Simulation*, 2013

[9] S. Ingelsten, A. Mark, F. Edelvik, A. Logg and M. sterbring. Urban CFD-Simulation Using Point Cloud Data. In *Proceedings of 29th Nordic Seminar on Computational Mechanics NSCM29*, 2016

[10] J. Larsson, A. Logg, K. Modin and A. Sehlstrm. Moving Mesh and Image Registration in FEniCS. In *Proceedings of 30th Nordic Seminar on Computational Mechanics NSCM30*, 2017

[11] A. Logg, C. Lundholm and M. Nordaas. Solving Poissons Equation on the Microsoft HoloLens. In *Proceedings of the 23rd ACM Symposium on Virtual Reality Software and Technology, VRST 2017, Gothenburg, Sweden, November 8-10, 2017*, 2017

[12] F. Latino, V. Naserentin, E. hrn, S. Zhau, M. Fjeld, L. Thuvander and A. Logg. VirtualCity@Chalmers: Creating a Prototype for a Collaborative Early Stage Urban Planning AR Application. In *Proceedings of the 7th eCAADe Regional International Symposium*, 2019

Conference Proceedings

[1] C. Johnson, J. Hoffman and A. Logg. Topics in Adaptive Computational Methods for Differential Equations. In *CEDYA 2001: Congreso de Ecuaciones Diferenciales y Aplicaciones*, 2001

[2] J. Hoffman, C. Johnson and A. Logg. Mathematics and Computation. In *Stockholm Intelligencer: Fourth European Congress of Mathematics*, 2004

[3] A. Logg. Automated Solution of Differential Equations. In *Sixth International Congress on Industrial Applied Mathematics (ICIAM07) and GAMM Annual Meeting, Zürich*, 2007

[4] K. B. Oelgaard, G. N. Wells and A. Logg. Automated Computational Modelling for Solid Mechanics. In *IUTAM Symposium on Theoretical, Modelling and Computational Aspects of Inelastic Media*, 2008

[5] H. P. Langtangen and A. Logg. Trends in Computational Mechanics Software. In *21st Nordic Seminar on Computational Mechanics*, 2008

[6] H. Narayanan, K. Garikipati and A. Logg. Collaborative Computational Frameworks and the Growth Problem. In *The Mathematics of Growth and Remodelling of Soft Biological Tissues, Mathematisches Forschungsinstitut Oberwolfach Reports*, 2008

[7] A. Logg. An Overview of the FEniCS Project. In *21st Nordic Seminar on Computational Mechanics*, 2008

Theses

[1] A. Logg. A Multi-Adaptive ODE-Solver, M.Sc. Thesis, Chalmers University of Technology, 1998.

[2] A. Logg. Multi-Adaptive Galerkin Methods for ODEs, Lic. Thesis, Chalmers University of Technology, 2001.

[3] A. Logg. Automation of Computational Mathematical Modeling, Ph.D. Thesis, Chalmers University of Technology, 2004.

Other Publications

[1] G. Christiansson and A. Logg, *Vätskekristaller: En Kort Introduktion*, Scientium, 1996.

[2] G. Christiansson and A. Logg, *Vätskekristaller Del 2: LCD (vätskekristall-Displayer)*, Scientium, 1996.

[3] A. Logg, J. Jansson et al., *Body and Soul Computer Sessions*, URL: `http://www.bodysoulmath.org/sessions/`, 2006.

[4] A. Logg, *Automating the Finite Element Method*, Lecture notes for the Sixth Winter School in Computational Mathematics, 2006.

[5] A. Logg, *Beräkningsmatematik*, URL: `http://www.forskning.se`, 2008.