

2015

- [1] F. Schlegel, J. Stiller, A. Bienert, H.-G. Maas, R. Queck, and Ch. Bernhofer. Large-eddy simulation study of the effects on flow of a heterogeneous forest at sub-tree resolution. *Boundary-Layer Meteorology*, 154:27–56, 2015. doi: 10.1007/s10546-014-9962-y.

2014

- [2] R. Queck, Ch. Bernhofer, A. Bienert, Th. Eipper, V. Goldberg, S. Harmansa, V. Hildebrand, H.-G. Maas, F. Schlegel, and J. Stiller. Turbefa: an interdisciplinary effort to investigate the turbulent flow across a forest clearing. *Meteorologische Zeitschrift*, pages 1–23, 2014. URL <http://dx.doi.org/10.1127/metz/2014/0567>.
- [3] K. Bock and J. Stiller. Energy-minimizing curve fitting for high-order surface mesh generation. *Applied Mathematics*, 5:3318–3327, 2014. URL <http://dx.doi.org/10.4236/am.2014.521309>.
- [4] J. Barák, K. Fraňa, and J. Stiller. Condensation of moist air in heat exchanger using CFD. *Int. J. Physical, Natural Science and Engineering*, 8(1):22–27, 2014.
- [5] K. Bock and J. Stiller. Generation of high-order polynomial patches from scattered data. In M. Azaïez, H. El Fekih, and J.S. Hesthaven, editors, *Spectral and High Order Methods for Partial Differential Equations – ICOSAHOM 2012*, volume 95 of *Lecture Notes in Computational Science and Engineering*, pages 157–167. Springer, 2014.

2013

- [6] L. Haupt, J. Stiller, and W.E. Nagel. A fast spectral element solver combining static condensation and multigrid techniques. *J. Computational Physics*, 255:384–395, 2013.
- [7] A. Richter, E. Brußies, and J. Stiller. Influence of penalization and boundary treatment on the stability and accuracy of high-order discontinuous Galerkin schemes for the compressible Navier-Stokes equations. *J. Comp. Acoustics*, 21(1):1250019 (22p), 2013.
- [8] J. Stiller, K. Koal, W.E. Nagel, J. Pal, and A. Cramer. Liquid metal flows driven by rotating and traveling magnetic fields. *Eur. Phys. J. Special Topics*, 220:111–122, 2013.
- [9] T. Albrecht, J. Stiller, H. Metzkes, T. Weier, and G. Gerbeth. Electromagnetic flow control in poor conductors. *Eur. Phys. J. Special Topics*, 220:275–285, 2013.
- [10] T. Albrecht, V. del Campo, T. Weier, H. Metzkes, and J. Stiller. Deriving forces from 2d velocity field measurements. *Eur. Phys. J. Special Topics*, 220:91–100, 2013.

2012

- [11] K. Koal, J. Stiller, and H.M. Blackburn. Adapting the spectral vanishing viscosity method for large-eddy simulations in cylindrical configurations. *J. Computational Physics*, 231: 3389–3405, 2012.
- [12] F. Schlegel, J. Stiller, A. Bienert, H.-G. Maas, R. Queck, and Ch. Bernhofer. Large-eddy simulation of inhomogeneous canopy flows using high resolution terrestrial laser scanning data. *Boundary-Layer Meteorology*, 142(2):223–243, 2012.

2011

- [13] T. Albrecht, T. Weier, G. Gerbeth, H. Metzkes, and J. Stiller. A method to estimate the planar, instantaneous body force distribution from velocity field measurements. *Phys. Fluids*, 23(2):021702, 2011.
- [14] A. Cramer, J. Pal, K. Koal, S. Tschisgale, J. Stiller, and G. Gerbeth. The sensitivity of a travelling magnetic field driven flow to axial alignment. *J. Crystal Growth*, 321(1): 142–150, 2011.
- [15] F. Schlegel and J. Stiller. LES of inhomogeneous canopy flows using terrestrial laser scanning data. In *7th International Symposium on Turbulence and Shear Flow Phenomena (TSFP-7), Ottawa, Canada*, page P20, 2011.
- [16] T. Weier, T. Albrecht, G. Gerbeth, S. Wittwer, H. Metzkes, and J. Stiller. The electromagnetically forced flow over a backward-facing step. In *7th International Symposium on Turbulence and Shear Flow Phenomena (TSFP-7), Ottawa, Canada*, page P31, 2011.
- [17] K. Koal, S. Tschisgale, and J. Stiller. Influence of axial missalignment to a tmf driven flow. In *7th International Symposium on Turbulence and Shear Flow Phenomena (TSFP-7), Ottawa, Canada*, page P36, 2011.

2010

- [18] A. Richter and J. Stiller. A two-dimensional DG-SEM approach to investigate resonance frequencies and sound radiation of musical woodwind instruments. In *ICOSAHOM 2009, Trondheim*, Lecture Notes in computational Science and Engineering. Springer, 2010.
- [19] A. Richter, E. Brußies, J. Stiller, and R. Grundmann. Stabilized high-order discontinuous Galerkin methods for aeroacoustic investigations. In M.M. Hafez, K. Oshima, and D. Kwak, editors, *Computational Fluid Dynamics Review 2010*. World Scientific, 2010.
- [20] K. Koal and J. Stiller. Analysis of scalar transport in electromagnetic driven flows using a multi-scale mixing measure. In *8th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements – ETMM8*, pages 890–893. Marseille, France, 2010.
- [21] J. Stiller, K. Koal, H.M. Blackburn, and E. Serre. Svv kernels for les in cylindrical coordinates. In *8th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements – ETMM8*, number 738–743. Marseille, France, 2010.

- [22] T. Albrecht, T. Weier, G. Gerbeth, H. Metzkes, and J. Stiller. Numerical and experimental investigation of electromagnetic separation control using different wave forms. In *Proc. 5th Flow Conference, 28 June - 1 July 2010, Chicago, Illinois, AIAA 2010-4709*, pages 1–8, 2010.
- [23] A. Richter and J. Stiller. On the boundary treatment for the compressible navier-stokes equations using high-order discontinuous Galerkin methods. In *Proc. 6th Int. Conf. Comput. Fluid Dynamics, July 12-16, 2010, St. Petersburg, Russia, 2010*.
- [24] F. Schlegel and J. Stiller. Large-eddy simulations of inhomogeneous canopy flows. *PAMM Proc. Appl. Math.*, 10:453–454, 2010.
- [25] H. Metzkes, T. Albrecht, and J. Stiller. Numerical simulation of separation control using oscillating lorentz forces. In *PAMM 2010, Special Issue: 81th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Karlsruhe 2010, 2010*.

2009

- [26] J. Stiller and K. Koal. Direct simulation of turbulence in the flow driven by rotating and traveling magnetic fields. *Journal of Turbulence*, 10(44):1–16, 2009.
- [27] J. Stiller, K. Koal, and H. M. Blackburn. Turbulence in electrically conducting fluids driven by rotating and travelling magnetic fields. In *Progress in Turbulence III*. Springer Proceedings in Physics, Vol. 131, 2009.
- [28] K. Fraña and J. Stiller. A hybrid URANS/LES approach used for simulations of turbulent flows. In *Progress in Turbulence III*. Springer Proceedings in Physics, Vol. 131, 2009.
- [29] T. Albrecht and J. Stiller. Control of separated flows using an oscillating Lorentz force: Comparison of DNS, LES, and experiments. In *Progress in Turbulence III*. Springer Proceedings in Physics, Vol. 131, 2009.
- [30] K. Koal and J. Stiller. A numerical study of swirl accumulation in a flow driven by rotating and traveling magnetic fields. In K. Hanjalić, Y. Nagano, and S. Jakirlić, editors, *Turbulence, Heat and Mass Transfer 6*, pages 973–976. Begell House Inc., 2009.
- [31] K. Koal, T. Grünberg, and J. Stiller. Scalar transport in liquid metal flows driven by rotating and travelling magnetic fields. In *6th International Conference on Electromagnetic Processing of Materials (EPM 2009)*, pages 57–60. Forschungszentrum Dresden-Rossendorf, Oct. 19-23, 2009, Dresden, 2009.
- [32] T. Albrecht, F. Marlow, H. Metzkes, and J. Stiller. DNS and LES of separation control using oscillating Lorentz forces. In *6th International Conference on Electromagnetic Processing of Materials (EPM 2009)*. Forschungszentrum Dresden-Rossendorf, Oct. 19-23, 2009, Dresden, 2009.

2008

- [33] J. Stiller. *Beiträge zur Numerischen Strömungsmechanik: Methoden höherer Ordnung, Magnetofluidodynamik und Kavitation*. Habilitationsschrift, TU Dresden, Fakultät Maschinenwesen, Dezember 2008.
- [34] J. Stiller and U. Fladrich. Factorising nodal spectral elements in curved domains. *SIAM J. Sci. Comput.*, 30(5):2286–2301, 2008.
- [35] U. Fladrich, J. Stiller, and W. E. Nagel. Improved performance for nodal spectral element operators. *Int. J. High Performance Comput. Appl.*, 22(4):450–459, 2008.
- [36] K. Fraňa and J. Stiller. A numerical study of flows driven by a rotating magnetic field in a square container. *Europ. J. Mech. B/Fluids*, 27:491–500, 2008.
- [37] J. Riehme, A. Walther, J. Stiller, and U. Naumann. Adjoint for time-dependent optimal control. In Ch. H. Bischof, H. M. Bücker, P. D. Hovland, U. Naumann, and J. Utke, editors, *Advances in Automatic Differentiation*, pages 175–185. Springer, 2008.
- [38] E. Brußies, J. Stiller, and R. Grundmann. Numerical simulation of an electromagnetically controlled plasma jet during atmospheric plasma spaying. In E. Lugscheider, editor, *Conference Proceedings of International Thermal Spray Conference (ITSC 2008)*, page 4 pages, Maastricht, June 02–04 2008.
- [39] A. Richter, J. Stiller, and R. Grundmann. Discontinuous Galerkin methods for aeroacoustical investigations. In *PAMM - Proc. Appl. Math. Mech.*, volume 8, pages 10697–10698. Wiley-VCH, 2008.
- [40] K. Fraňa, J. Stiller, and K. Horáková. A numerical study of flows driven by a rotating magnetic field in a square container. In *PAMM - Proc. Appl. Math. Mech.*, volume 8, pages 10953–10954. Wiley-VCH, 2008.
- [41] E. Brußies, J. Stiller, and R. Grundmann. Numerical simulation of electromagnetically influenced plasma flows using discontinuous Galerkin methods. In *PAMM - Proc. Appl. Math. Mech.*, number 8, pages 10947–10948. Wiley-VCH, 2008.

2007

- [42] K. Koal, J. Stiller, and R. Grundmann. Linear and non-linear instability in a cylindrical enclosure caused by a rotating magnetic field. *Phys. Fluids*, 19:088107, 2007.
- [43] A. Richter, J. Stiller, and R. Grundmann. Stabilized discontinuous Galerkin methods for flow-sound interaction. *J. Comp. Acoustics*, 15(1):123–143, 2007.
- [44] J. Stiller. Point-normal interpolation schemes reproducing, cylinders and cones. *Computer Aided Geometric Design*, 24:286–301, 2007.
- [45] K. Fraňa and J. Stiller. The finite element method for simulations of magnetically driven flows. *Int. J. Mathematics and Computers in Simulation*, 1(3):300–306, 2007.

- [46] K. Frana and J. Stiller. Finite element method in applications of magnetohydrodynamics. In *Proceedings 6th WSEAS Int. Conf. System Science and Simulation in Engineering 2007, Nov 21–23, 2007, Venice, 2007*.
- [47] J. Stiller and K. Koal. Direct simulation of turbulence in the flow driven by rotating and traveling magnetic fields. In *5th International Symposium on Turbulence and Shear Flow Phenomena, TU München, Garching, 27–29 Aug. 2007*, pages 353–358. 2007.
- [48] K. Koal, J. Stiller, and R. Grundmann. Direct numerical simulation of turbulent flow in travelling magnetic fields. In J. M. L. M. Palma and A. Silva Lopes, editors, *Advances in Turbulence XI, Proceedings of 11th EUROMECH European Turbulence Conference*, page 746. Springer, June 25–28, 2007, Porto 2007.
- [49] A. Richter, J. Stiller, and R. Grundmann. Stabilized discontinuous Galerkin methods for aeroacoustical applications. In *Proceedings ICTCA 2007, July 2–6, 2007, Heraklion, 2007*.
- [50] A. Richter, J. Stiller, and R. Grundmann. Stabilisierte DG-Methoden für aeroakustische Applikationen. In *Fortschritte der Akustik – DAGA 2007*, pages 191–192, Stuttgart, 19.–22. März 2007. (ISBN 978-3-9808659-3-7).

2006

- [51] J. Stiller, K. Fraňa, and A. Cramer. Transitional and weakly turbulent flow in a rotating magnetic field. *Phys. Fluids*, 18:074105, 2006.
- [52] K. Fraňa, J. Stiller, and R. Grundmann. Transitional and turbulent flows driven by a rotating magnetic field. *Magnetohydrodynamics*, 42(2–3):187–197, 2006.
- [53] W. Wienken, J. Stiller, and A. Keller. A method to predict cavitation inception using large-eddy simulation. *J. Fluids Engineering*, 128:316–325, 2006.
- [54] J. Stiller, K. Koal, K. Fraňa, and R. Grundmann. Stirring of melts using rotating and traveling magnetic fields. In P.J. Witt and M.P. Schwarz, editors, *Fifth International Conference on CFD in the Process Industries*. CSIRO Australia, Dec. 13–15, 2006. (ISBN 0-643-09423-7 CD-ROM).
- [55] A. Richter, J. Stiller, and R. Grundmann. Numerische Simulation der Wellenausbreitung am Tonloch. In *Fortschritte der Akustik – DAGA 2006*, pages 605–606, Braunschweig, 20.–23. März 2006. (ISBN 3-9808659-2-4).
- [56] K. Frana, J. Stiller, J. Unger, and R. Grundmann. Numerical study of turbulence models in the flow driven by a rotating magnetic field. In *Topical problems of fluid mechanics 2006*, pages 51–54. Institute of Thermomechanics AS CR, Prague, February 22–24 2006. (ISBN 80-85918-98-6).

2005

- [57] K. Fraňa, J. Stiller, and R. Grundmann. Taylor-Görtler vortices in the flow driven by rotating magnetic field in a cylindrical container. *J. Visualization*, 8(4):323–330, 2005.

- [58] U. Fladrich, H. Brunst, and J. Stiller. Analyzing the memory access pattern of a spectral element method implementation. In T.E. Simos, G. Psihoyios, and Ch. Tsitouras, editors, *ICNAAM 2005. International Conference on Numerical Analysis and Applied Mathematics 2005*, pages 194–197. Wiley-VCH, 2005. FBSti2005ICNAAM.
- [59] K. Frana, J. Stiller, and R. Grundmann. Transitional and turbulent flows driven by a rotating magnetic field. In A. Alemany, A. Gailitis, and G. Gerbeth, editors, *Fundamental and Applied MHD. Proceedings of the Joint 15th Riga and 6th pamir International Conference*, pages 141–144, Riga, Jurmala, Latvia, 2005. (<http://www.ipul.lv/pamir>).
- [60] K. Frana, J. Stiller, and J. Unger. Transitional and turbulent flow driven by rotating and traveling magnetic field in a cylindrical container. In *Colloquium Fluid Dynamics 2005*, pages 37–40. Institute of Thermomechanics AS CR, Prague, October 19 -21 2005. (ISBN 80-85918-94-3).

2004

- [61] J. Stiller, K. Frana, R. Grundmann, U. Fladrich, and W. E. Nagel. A parallel PSPG finite element method for direct simulation of incompressible flow. In M. Danuletto, D. Laforzenza, and M. Vanneschi, editors, *Euro-Par 2004. Parallel Processing (LNCS 3149)*, pages 726–733. Springer, 2004.
- [62] J. Stiller, W. Wienken, U. Fladrich, R. Grundmann, and W. E. Nagel. Parallel and adaptive finite element techniques for flow simulation. In C. Breitsamter et al., editor, *New Results in Numerical and Experimental Fluid Mechanics IV (Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 87)*, pages 366–373. Springer, 2004.
- [63] K. Frana and J. Stiller. Numerical study of the flow in a finite cylinder driven by a rotating magnetic field. In *Proceedings of ICTAM04*. IPPT PAN, Warszawa, 2004. (ISBN 83-89687-01-1).
- [64] U. Fladrich and J. Stiller. A study on h -adaptivity for the spectral element method. Center for High-Performance Computing, Report ZHR-IR-0412, TU Dresden, 2004.

2003

- [65] K. Fraña, J. Stiller, and R. Grundmann. DNS of transitional and turbulent flow driven by a rotating magnetic field. *Astronomische Nachrichten*, 324:77–78, 2003.
- [66] W. Wienken, J. Stiller, and U. Fladrich. A finite-element based Navier-Stokes solver for LES. In K. Matsuno, A. Ecer, J. Periaux, N. Satofuka, and P. Fox, editors, *Parallel Computational Fluid Dynamics—New Frontiers and Multi-Disciplinary Applications*, pages 361–368. Elsevier, 2003.
- [67] K. Frana, J. Stiller, and R. Grundmann. Direct numerical simulation of the transient and turbulent flow driven by a rotating magnetic field. In *Colloquium Fluid Dynamics 2003*, pages 21–24. Institute of Thermomechanics AS CR, Prague, October 22–24 2003. (ISBN 80-85918-83-8).

2002 – 1988

- [68] W. Wienken and J. Stiller. Ein Ansatz zur Bestimmung des Kavitationsbeginns in abgelösten turbulenten strömungen unter Verwendung der Large-Eddy-Simulation (LES). In W. Heller and J. Klingenberg, editors, *Beträge zur Strömungsmechanik*, pages 321–328. TU Dresden, Institut für Strömungsmechanik, 2001.
- [69] J. Stiller and W. E. Nagel. MG – A toolbox for parallel grid adaption and implementing unstructured multigrid solvers. In E.H. D’Hollander et al., editor, *Parallel Computing. Fundamentals & Applications*, pages 391–399. Imperial College Press, 2000.
- [70] J. Stiller, W. E. Nagel, and U. Fladrich. Scalability of parallel multigrid adaption. In E. Dick et al., editor, *Multigrid Methods VI*, pages 228–234. Springer, 2000.
- [71] J. Stiller, K. Boryczko, and W. E. Nagel. A new approach for parallel multigrid adaption. In B. Hendrickson et al., editor, *Proceedings of the Ninth SIAM Conference on Parallel Processing for Scientific Computing*. SIAM, 1999. (ISBN 8-89871-435-4).
- [72] J. Stiller. The Galerkin/least-squares finite element method for compressible Navier-Stokes problems. Report I 1542, TU Dresden, Institut für Strömungsmechanik, März 1999.
- [73] J. Stiller. PML – eine parallele Multilevel-Plattform für die Strömungssimulation. *Wissenschaftliche Zeitschrift der Technischen Universität Dresden*, 47:74–76, 1998.
- [74] J. Stiller. Komplexität der Adaption verteilter Mehrgitter. Report I 1546, TU Dresden, Institut für Strömungsmechanik, November 1998.
- [75] J. Stiller. An advanced Fortran interface to MPI. Report I 1541, TU Dresden, Institut für Strömungsmechanik, Mai 1998.
- [76] J. Stiller. A finite element method for the compressible Navier-Stokes equations and its application to transonic nozzle flows. In Y. Bai S. Yu, N. Chen, editor, *Aerothermodynamics of Internal Flows*, pages 437–444. World Pub. Corp., Beijing, 1996.
- [77] J. Stiller. Untersuchung analytischer Grenzschichtansätze für die Berechnung des heißgasseitigen Wärmeübergangs in Raketentriebwerken. Report I 1510, TU Dresden, Institut für Strömungsmechanik, Februar 1996.
- [78] J. Stiller. Zum Randwertproblem für die kompressiblen Navier-Stokes-Gleichungen. Report I 1505, TU Dresden, Institut für Strömungsmechanik, März 1995.
- [79] J. Stiller. *Ein numerisches Modell für die Grobstruktursimulation turbulenter Strömungen unter Verwendung lokal eingebetteter Gitter*. Dissertation, TU Dresden, Fakultät Maschinenwesen, März 1994.
- [80] J. Stiller. Direkte Simulation turbulenter Strömungen. In *Schriftenreihe des Universitätsrechenzentrums, Heft 4: Höchstleistungsrechnen an der TU Dresden*, pages 22–33. TU Dresden, 1993.
- [81] J. Stiller. Numerische Lösung der Poisson-Gleichung auf lokal verfeinerten kartesischen Gittern. In M. Hoffmeister and D. Petrak, editors, *Proceedings Tagung Turbulente Ein- und Mehrphasenströmungen*, pages 149–155, Holzau/Erzgeb., 15.–17. April 1991.

- [82] J. Stiller. Ein Programmsystem für die numerische Lösung der Poisson-Gleichung auf lokal verfeinerten kartesischen Gittern. SFB210 T/76, Universität Karlsruhe (TH), Sonderforschungsbereich 210, 1991.
- [83] J. Stiller. Zu den theoretischen Grundlagen der Strömungsakustik. Report I 1423, TU Dresden, Institut für Strömungsmechanik, 1989.
- [84] J. Stiller. *Messung und Berechnung des Schallfelds einer Strömung mit überlagertem Wirbelfeld*. Diplomarbeit, TU Dresden, Fakultät Maschinenwesen, Institut für Strömungsmechanik, I 1371, 1988.
- [85] A.I. Shvets, W.P. Karyagin, O.N. Ivanov, S.I. Saburov, and J. Stiller. Issledovanie pulsatsii davleniya v otryvnykh techeniyakh gaza (russ., Untersuchung der Druckpulsationen in abgelösten Gasströmungen). Otchët NII mekhaniki MGU 3621, Staatliche Universität Moskau, Institut für Mechanik, 1988.