Derek Groen

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Work history

Sep 2015–now: Lecturer in Simulation and Modelling, Computer Science Department, Brunel Univer- sity. My current work includes:

- Analyzing and simulate the movement of refugees, to aid humanitarian efforts (HiDALGO Project).
- Improve the efficiency of cerebrovascular blood flow models using parallel in time approaches (PiTFlow Project).
- Design and lead the development of FabSim3 and the VECMA toolkit, to enable verification, validation and uncertainty quantification for high performance multiscale simulations (VECMA project).
- Developing new software approaches to more effectively create, run and manage multiscale simulations (ComPat Project).
- Collaborate with UCL to develop better techniques for multiscale materials modelling.
- Teaching of the Digital Media and Games module (level 3).
- Supervise BSc/MSc students and one PhD student.

Dec 2014–Aug 2015: 2020 Science Research Fellow. During this time I primarily worked on multiscale modelling of cerebrovascular bloodflow, using petascale supercomputers.
Oct 2013–Dec 2014: Post-Doctoral Research Associate at the Centre for Computational Science, UCL.
I mainly worked on modelling clay-polymer nanocomposites using a three-level multiscale simulations, modelling cerebrovascular bloodflow, and optimizing the performance of the HemeLB simulation environment.
Oct 2010–Sep 2013: Post-Doctoral Research Associate at the Centre for Computational Science, UCL. I investigated and developed distributed multiscale simulations as part of the European MAPPER project.

Oct 2006–Oct 2010: PhD student at the University of Amsterdam and Leiden University.

May 2004–Sep 2006: Student assistant at the University of Amsterdam (16 hours/week).

Education history

- **Nov 2010**: Received a **PhD** in Computational Astrophysics, supervised by Prof Simon Portegies Zwart. Thesis title: "High-Performance N-body Simulation on Computational Grids".
- **Aug 2006**: Received an **MSc** in Grid Computing. Thesis title: "Reliability Analysis of Grid Resources: A User Perspective".
- **Aug 2004**: Receive a **BSc** in Computer Science. Led to the paper: "On-line application performance monitoring of blood flow simulation in computational grid architectures"

Scientific software contributions

- Lead developer of the FabSim toolkit for automating computational research tasks.
- Developer of the MPWide communication library for distributed message passing and code coupling.
- Co-developer of the HemeLB blood flow simulation environment (with focus on multiscale couplings).
- Contributor to the Binding Affinity Calculator and the coupled HemeLB-Chaste application for fluid-solid interactions.
- Contributor to the MUSCLE 2 multiscale model coupling environment, and the MUSE multi-model software environment.
- Contributor to the HYPO4D lattice-Boltzmann code, enabling efficient execution across 262,144 cores on a petaflop supercomputer.
- Lead developer of the SUSHI distributed cosmological simulation environment and contributor to the pKira parallel N-body solver.

Skills

- Programming experience with C, Python, C++ and Java, as well as basic experience with SSE, AVX and Perl.
- Experience with data science tools including SAS JMP, Tableau, and the Python Pandas library.
- Extensive expertise with MPI and distributed simulation techniques, basic expertise with GPU programming.
- Expertise with performance optimization for various Intel-based, IBM Power6 and BlueGene supercomputer architectures.
- Expertise with TCP-based socket programming (obtained while developing MPWide).
- Expertise with a wide range of middleware for distributed computing (e.g., Globus, UNICORE, QosCosGrid, cross-site MPI implementations) and coupling tools.
- Development experience with several astrophysical codes (GreeM/SUSHI, MUSE), lattice-Boltzmann flow solvers (Hypo4D, HemeLB), and an agent-based solver (FLEE).
- User experience with a wide range of other codes (e.g., CPMD, LAMMPS, NAMD, starlab, pyNS, RePast and ISR2D).

Selected awards and grants

- PI for Brunel on the EU Horizon 2020-funded grant HiDALGO (8M total, 647,000 for Brunel), 2018.
- PI for Brunel on the EU Horizon 2020-funded grant Verified Exascale Computing for Multiscale Applications (4M total, 430,000 for Brunel), 2018.
- PI on an EPSRC ARCHER e-CSE grant on parallel-in-time bloodflow simulations (PiTFLOW) ($\sim 100,000$), 2017.
- PI for Brunel on the EU Cost Action Multiscale Systems Medicine (108k/year), 2016.
- PI on the EU-funded Horizon 2020 proposal "ComPat" (joined as unfunded partner due to affiliation switch between proposal writeup and acceptance: 4M total, 0 for Brunel).
- Winner of the ARCHER Early Career Impact Award, 2015.
- First prize in the 2015 Journal of Polymer Science award for best presentation in the Theory and Modeling of Nanoparticles: Interactions with Biomolecules and Polymers Session at the American Chemical Society Fall 2015 meeting in Boston, August 2015.
- Co-I on an EPSRC ARCHER e-CSE grant GridsInGrids ($\sim 90,000$), 2014.
- Recipient of a 15-month Software Sustainability Institute Fellowship (3,000 GBP), 2013.

- PI on a compute grant for molecular dynamics simulations on the BlueJoule Petaflop super-computer (5 million core hours), 2013.
- Co-I PRACE Tier-0 proposal PRA044, with Peter Coveney as PI (40.5 million core hours), 2011.
- Co-I DEISA proposal GBBP, with Simon Portegies Zwart as PI, which was awarded 3 million core hours, 2009.
- IISF Travel Grant for a visit to 11-day visit to Tokyo (300,000 JPY), 2008.

Selected Invited talks

- Invited presenter at the Lorentz Center workshop on Multiscale Computing, Leiden, April, 2018.
- Invited speaker at the University of Amsterdam, January 2018.
- Invited speaker at Tsinghua University, August 2017.
- Invited speaker at the University of Geneva, November 2016.
- Keynote speaker at the Science Hackathon at Univercite in Renens, Switzerland, November 2016.
- Invited speaker at the Brunel Institute for Bioengineering, December 2015.
- Keynote speaker at the User Day of the Flemish Supercomputer Centre, November 2015.
- Invited speaker at the OASPA conference on open access publishing, Amsterdam, September 2015.
- Keynote speaker at the MEMICS conference, Brno, Czech Republic, October 2014.
- Invited speaker at the Speedup Conference, Geneva, Switzerland, September 2014.
- Invited speaker at the International Supercomputing Conference, Leipzig, Germany, June 2014.
- Invited seminar speaker at the University of Manchester, May 2014.
- Invited seminar speaker at STFC in Daresbury, April 2014.
- Invited seminar speaker at the Centre for Scientific Computing at the University of Warwick, Coventry, October, 2013.
- Invited presenter at the Lorentz Center workshop on Multiscale Modelling and Computing, Leiden, April, 2013.

Outreach/Media activities

- Appeared on the BBC Radio 4 academic trivia show "The Third Degree", July 2018.
- Featured in HPCWire in regards to combining work and parental duties, June 2018.
- Interviewed by Business News Radio in the Netherlands, October 2017. (https://www.bnr.nl/nieuws/innovatie moet-helpen-bij-betere-hulpverlening-vluchtelingen)
- Appeared in the Homeland Security News Wire, October 2017. (http://www.homelandsecuritynewswire.com/c simulation-technology-to-predict-refugee-destinations-improving-aid-efforts)
- Featured in a Case Study report for the national ARCHER supercomputer, January 2017.
- Appeared in Le Temps, a Swiss Newspaper, November 2016.
- Appeared in the PRACE Newsletter, September 2015. (http://ccs.chem.ucl.ac.uk/sites/ccs.chem.ucl.ac.uk/file
- Appeared in the Daily Telegraph with James Suter and Peter Coveney, January 2015.
- Appeared on the BBC news website with Peter Coveney, December 2014. (www.bbc.co.uk/news)
- Appeared on 4 other online news outlets (phys.org, theregister, sciencedaily, azom), and one blog (nanowerk), December 2014.
- Interviewed by the Independent with Peter Coveney, June 2014. (www.independent.co.uk)
- Appeared in Scientific Computing World with our HemeLB optimization work, June 2014. (www.scientific-computing.com)
- Interviewed by International Science Grid This Week, April 2014. (www.isgtw.org)
- Published an article on HPCWire, December 2013. (www.hpcwire.com)

- I have an active Twitter account with about 500 followers (@whydoitweet).

Administrative and organisational experience

- Technical Manager of the EU H2020 VECMA project, and leader of Work Package 3 (Software Implementation).
- Leader of Work Package 4 (Pilots) in the EU H2020 HiDALGO Centre of Excellence.
- Represents Brunel as an associate partner in the UKCOMES High End Computing Consortium (2016–), and the CompBioMed Centre of Excellence (2016–).
- Member of the Tier-1 Allocation Board for the Flemish National Supercomputer (2014–).
- Member of the PRACE User Forum Steering Committee (2011–).
- Organiser of two Science Hackathons (2014 and 2015), co-Organiser of a Science Hackathon at CERN (2017).
- Chair of the Multiscale Modelling and Simulation workshops at ICCS 2016–2019 (co-Chair in 2013–2015).
- Manager of work package 4 in the MAPPER EC-FP7 project, and member of the Project Steering Group (2010–2013).
- Main organiser of EU project consortium meetings, at UCL (2012) and Brunel (2017).
- Reviewer for numerous journals, including PRL, PRE, PLOS, FGCS, JoCS, J R Soc Interface and Computer Physics Communications.
- Reviewer for numerous conferences, including Supercomputing, ICCS, HPDC and IEEE e-Science.

Teaching and supervision experience

- Supervisor of 1 PhD student (2016–), second supervisor of 1 PhD student (2015–2017), internal examiner for two PhD viva (2016), external examiner for one PhD viva (2018).
- Supervised 10 MSc project students (2016–2018), co-supervised 1 MSc project (2013).
- Supervisor of 13 BSc projects since 2015 (about 4 per year).
- Supervisor for 5 summer students (2-3 months, 2013–2018).
- Mentor for 26 second year students since 2015 (average 13 per year).
- Taught Digital Media and Games (Co-teacher in 2016/2017, Lead in 2017–now, BSc Computer Science, class size: 45). Rating 4.8/5 (2016/2017) and 4.3/5 (2017/2018).
- Co-teacher of the module Logic and Computation (BSc Computer Science, class size: 250, 2018).
- Co-teacher of the module Data Visualization (MSc Data Science, class size: 32, 2016 and 2017).
- Co-teacher of the module Service Oriented Architecture (MSc Business Systems Integration, class size: 9, 2016 and 2017).
- Tutor at a range of EU Project Summer Schools, London (2012), Barcelona (2013), Ljubljana (2018).
- Teaching Assistant for the Distributed Stochastic Simulations MSc course (2008) at the University of Amsterdam (UvA).
- Teaching Assistant for the Introduction to Grid Computing Lab MSc course (2004–2007) at the UvA.

A   Full list of publications

I published 29 journal papers (11 as first author), 25 peer-reviewed conference papers, and I have 1 journal paper currently under review. Additionally, I co-authored 2 book chapters, 2 magazine articles, 1 strategy document and 6 press announcements.

Journal papers

- L. Kaufmann, R. Razakanirina, D. Groen, B. Chopard: Impact of Immigrants on a multi-agent economical system, PloS one 13 (5), e0197509, 2018.
- D. Groen, R. A. Richardson, R. Coy, U. D. Schiller, H. Chandrashekar, F. Robertson, P. V. Coveney: Validation of patient-specific cerebral blood flow simulation using transcranial Doppler measurements, Frontiers in Physiology, 2018.
- M. Zanin, I. Chorbev, B. Stres et al.: Community effort endorsing multiscale modelling, multiscale data science and multiscale computing for systems medicine, Briefings in Bioinformatics bbx160, 2017.
- S. Alowayyed, D. Groen, P. V. Coveney, A. G. Hoekstra: Multiscale Computing in the Exascale Era, Journal of Computational Science 22, 15-25, 2017.
- D. Suleimenova, D. Bell, D. Groen: A generalized simulation development approach for predicting refugee destinations, Nature Scientific Reports 7, 13377, 2017.
- D. Groen, A. Bhati, J. Suter, J. Hetherington, S. Zasada, P. Coveney: FabSim: facilitating computational research through automation on large-scale and distributed e-infrastructures, Computer Physics Communications 207, 375–385, 2016.
- J. L. Suter, D. Groen, P. V. Coveney: Mechanism of exfoliation and prediction of materials properties of clay-polymer nanocomposites from multiscale modellng, Nano Letters 15 (12), 8108–8113, 2015.
- D. Groen and B. Calderhead: "Cutting edge: Science hackathons for developing interdisciplinary research and collaborations", eLife 4 e09944, 2015.
- H. B. Carver, D. Groen, J. Hetherington, R. W. Nash, M. O. Bernabeu, P. V. Coveney: Coalesced communication: a design pattern for complex parallel scientific software, accepted by Advances in Engineering Software, 2015.
- B. Knapp, R. Bardenet, M. O. Bernabeu, R. Bordas, M. Bruna, B. Calderhead, J. Cooper, A. G. Fletcher, D. Groen, B. Kuijper et al.: Ten simple rules for a successful cross-disciplinary collaboration,PLOS Comp. Bio., 11 (4), 2015.
- M. A. Itani, U. D. Schiller, S. Schmieschek, J. Hetherington, M. O. Bernabeu, H. Chandrashekar, F. Robertson, P. V. Coveney, D. Groen: An automated multiscale ensemble simulation approach for vascular blood flow, Journal of Computational Science, 9 150-155, 2015.
- J. Suter, D. Groen, P. V. Coveney: Chemically specific multiscale modelling reveals dynamics of clay-polymer intercalation, tactoid self-assembly and emergent materials properties, Feature Article in Advanced Materials (in press), 2015.
- J. Borgdorff , M. Ben Belgacem , C. Bona-Casas , L. Fazendeiro , D. Groen, O. Hoenen et al.: Performance of Distributed Multiscale Simulations , Phil. Trans. R. Soc. A., 372 (2021), 2014.
- M. O. Bernabeu, C. A. Franco, M. Jones, J. H. Nielsen, T. Krueger, R. W. Nash, D. Groen et al.: Computer simulations reveal complex distribution of haemodynamic forces in a mouse retina model of angiogenesis Journal of the Royal Society Interface (in press), 2014.
- J. Borgdorff, M. Mamonski, B. Bosak, K. Kurowski, M. Ben Belgacem, B. Chopard, D. Groen, P. V. Coveney, A. G. Hoekstra: Distributed multiscale computing with the multiscale modeling library and runtime environment, the Journal of Computational Science (in press), 2014.
- D. Groen, S. Zasada, P.V. Coveney: Survey of Multiscale and Multiphysics Applications and Communities, IEEE Computing in Science and Engineering 16 (2), 34-43, 2014.

- R. W. Nash, H. B. Carver, M. O. Bernabeu, J. Hetherington, D. Groen, T. Krger, P. V. Coveney: Choice of boundary condition for lattice-Boltzmann simulation of moderate Reynolds number flow in complex domains, Physics Review E, 89, 023033, 2014.
- J. M. Osborne, M. O. Bernabeu, M. Bruna, B. Calderhead, J. Cooper, N. Dalchau, S.-J. Dunn, A. G. Fletcher, R. Freeman, D. Groen et al.: Ten Simple Rules for Effective Computational Research, PLOS Comp. Bio., 10 (3), 2014.
- D. Groen, S. Rieder, S. Portegies Zwart: MPWide: a light-weight library for efficient message passing over wide area networks, Journal of Open Research Software, 1 (1) e9, 2013.
- D. Groen, J. Hetherington, H. B. Carver, R. W. Nash, M. O. Bernabeu, P. V. Coveney, Analyzing and Modeling the Performance of the HemeLB Lattice-Boltzmann Simulation Environment, the Journal of Computational Science, 4 (5), pp. 412–422, 2013.
- D. Groen, J. Borgdorff, C. Bona-Casas, J. Hetherington, R. W. Nash, S. J. Zasada et al.: Flexible composition and execution of high performance, high fidelity multiscale biomedical simulations, Interface Focus 3 (2), 20120087, 2013.
- M. O. Bernabeu, R. W. Nash, D. Groen, H. B. Carver, J. Hetherington, T. Krger, P. V. Coveney: Choice of blood rheology model has minor impact on computational assessment of shear stress mediated vascular risk, Interface Focus 3 (2), 20120094, 2013.
- T. Ishiyama, J. Makino, S. Portegies Zwart, D. Groen, K. Nitadori, S. Rieder et al.: The Cosmogrid Simulation: Statistical Properties of Small Dark Matter Halos, the Astrophysical Journal, 767 (2), 2013.
- D. Groen, S. Portegies Zwart, T. Ishiyama, J. Makino: High Performance Gravitational N-body simulations on a Planet-wide Distributed Supercomputer. Computational Science and Discovery, vol. 4, art. no. 015001, 2011.
- D. Groen, S. Rieder, P. Grosso, C. de Laat, S. Portegies Zwart: A Light-Weight Communication Library for Distributed Computing, Computational Science and Discovery, vol. 3, art. no. 015002, 2010.
- D. Groen; S. Harfst and S. Portegies Zwart: The Living Application: A Self-Organising System for Complex Grid Tasks, International Journal of High Performance Computing Applications, vol. 24, pp. 185-193, 2010.
- S. Portegies Zwart, T. Ishiyama, D. Groen, K. Nitadori, J. Makino, C. de Laat et al.: Simulating the Universe on an intercontinental grid of supercomputers, IEEE Computer, 43 (8), pp. 63-70, 2010.
- S. Portegies Zwart, S. McMillan, S. Harfst, D. Groen, M. Fujii, B. O Nuallain et al.: A multiphysics and multiscale software environment for modeling astrophysical systems, New Astronomy, vol. 14, pp. 369-378, 2009.
- D. Groen, S. Portegies Zwart, S. McMillan and J. Makino: Distributed Nbody Simulation on the Grid Using Dedicated Hardware, New Astronomy, vol. 13, pp. 348-358, 2008.
- S. Portegies Zwart, S. McMillan, D. Groen, A. Gualandris, M. Sipior, W. Vermin: A parallel gravitational Nbody kernel, New Astronomy, vol. 13, pp. 285-295, 2008.

Peer-reviewed conference papers

- D. Groen, Development of a multiscale simulation approach for forced migration, International Conference on Computational Science, 869-875, 2018.
- N. T. Chan, D. Suleimenova, D. Bell, D. Groen, Modelling Refugees Escaping Violent Events: A Feasibility Study From an Input Data Perspective, Proceedings of the OR Society, SW18, 156–163, 2018.
- D. Suleimenova, D. Bell, D. Groen, Towards an automated framework for agent-based simulation of refugee movements, 2017 Winter Simulation Conference (WSC), 1240-1251, 2017.
- L. E. P. Estrada, D. Groen, J. E. Ramirez-Marquez: A Serious Video Game To Support Deci-

sion Making On Refugee Aid Deployment Policy, International Conference on Computational Science, 108, 205–214, 2017.

- D. Groen: Simulating Refugee Movements: where would you go?, International Conference on Computational Science, 80, 2251–2255, 2016.
- D. Groen, D. Abou Chacra, R. W. Nash, J. Jaros, M. O. Bernabeu, P. V. Coveney: Weighted decomposition in high-performance lattice-Boltzmann simulations: are some lattice sites more equal than others?, Exascale Applications and Systemware Conference, 2014.
- S. P. Dakua, N. V. Navkar, J. Abi-Nahed, D. Groen, M. O. Bernabeu, M. A. R. Saghir, et al: Towards a computational system to support clinical treatment decisions for diagnosed cerebral aneurysms, Biomedical Engineering (MECBME), 2014 Middle East Conference on, 281-284, 2014.
- K. Rycerz, E. Ciepiela, G. Dyk, D. Groen, T. Gubala, D. Harezlak, et al.: Support for Multiscale Simulations with Molecular Dynamics, International Conference on Computational Science 2013, Procedia Computer Science 18, 1116–1125, 2013.
- J. Borgdorff, M. Mamonski, B. Bosak, D. Groen, M. Ben Belgacem, K. Kurowski, A. G. Hoekstra: Multiscale computing with the multiscale modeling library and runtime environment, International Conference on Computational Science 2013, Procedia Computer Science 18, 1097–1105, 2013.
- S. Zasada, M. Mamonski, D. Groen, J. Borgdorff, I. Saverchenko, T. Piontek, et al.: Distributed Infrastructure for Multiscale Computing, Proceedings of the 2012 IEEE/ACM 16th International Symposium on Distributed Simulation and Real Time Applications, pp. 65–74, 2012.
- J. Suter, D. Groen, L. Kabalan, P. V. Coveney: Distributed Multiscale Simulations of Clay-Polymer Nanocomposites, MRS Online Proceedings Library, 1470 , mrss12-1470-xx02-07, 2012.
- D. Groen, J. Borgdorff, S. Zasada, C. Bona-Casas, J. Hetherington, R. Nash et al.:, A Distributed Infrastructure for Multiscale Biomedical Simulations, Virtual Physiological Human Conference 2012.
- D. Groen, S. Zasada, P. V. Coveney: Taxonomy of Multiscale Communities, IEEE Computer Society, proceedings of the IEEE e-Science 2011 conference, pp. 120–127, 2011.
- D. Groen, J. Suter, P. V. Coveney: Modelling distributed multiscale performance: an application to nanocomposites, IEEE Computer Society, proceedings of the IEEE e-Science 2011 conference, pp. 105–111, 2011.
- D. Groen, S. Rieder, S. Portegies Zwart: High performance cosmological simulations on a grid of supercomputers, XPS/thinkmind.org, proceedings of the INFOCOMP 2011 conference, 2011.
- S. Zasada, D. Groen, P.V. Coveney: Developing an Infrastructure to Support Multiscale Modelling and Simulation, proceedings of the TeraGrid Conference, number 30, 2011.
- D. Groen, S. Rieder, P. Grosso, C. de Laat and S. Portegies Zwart: A platform independent communication library for distributed computing, In: Procedia Computer Science, Volume 1, Issue 1, May 2010, pp. 2693–2700, Proceedings of the International Conference on Computational Science ICCS 2010.
- P. Bar, C. Coti, D. Groen, T. Herault, V. Kravtsov, M. Swain and A. Schuster: Running Parallel Applications with Topology-Aware Grid Middleware, in Proceedings of the 2009 Fifth IEEE International Conference on e-Science, pp. 292–299, Oxford, United Kingdom, December 2009.
- D. Groen; S. Harfst and S. Portegies Zwart: On the Origin of Grid Species: The Living Application, Computational Science - ICCS 2009: 9th International Conference, Baton Rouge, LA, USA, Proceedings, Part I, in series Lecture Notes in Computer Science, vol. 5544, pp. 205–212. Springer, Berlin, Heidelberg, May 2009.
- D. Groen; S. Portegies Zwart; S. McMillan and J. Makino: Simulating N-Body Systems on the Grid Using Dedicated Hardware, Proceedings of the International Conference on Computational

Science ICCS 2008, in series Lecture Notes in Computer Science, vol. 5101, pp. 86–95. June 2008.

- S. Portegies Zwart; H. Belkus; E. Glebbeek; S. Justham; P. Hut; M. Fujii et al. (DG is 11th author): A multiphysics and multiscale software environment for modeling astrophysical systems, Proceedings of the International Conference on Computational Science ICCS 2008, in series Lecture Notes in Computer Science, vol. 5101, pp. 207–216. June 2008.
- M. Charlot; G. De Fabritis; A. Garcia de Lomana; A. Gmez-Garrido; D. Groen; L. Guylas et al.: The QosCosGrid project: Quasi-Opportunic Supercomputing for Complex Systems Simulations. Description of a general framework from different types of applications, in Ibergrid 2007 conference, Centro de Supercomputacion de Galicia (GESGA), 2007.
- V. Krzhizhanovskaya, V. Korkhov, A. Tirado Ramos, D. Groen, I. Shoshmina, I. Valuev et al: Computational Engineering on the Grid: Crafting a Distributed Virtual Reactor, in 2nd IEEE International Conference on eScience and Grid Computing, 2006.
- J. Gomes; M. David; J. Martins; L. Bernardo; A. Garca; M. Hardt et al. (DG is last author): Experience with the International Testbed in the CrossGrid Project, Advances in Grid Computing EGC 2005, in series Lecture Notes in Computer Science, vol. 3470, pp. 98-110. Springer, Berlin,Heidelberg, February 14-16, 2005.
- A. Tirado Ramos; D. Groen and P. Sloot: Online Application Performance Monitoring of Blood Flow Simulation in Computational Grid Architectures, 18th IEEE Symposium on Computer Based Medical Systems, special track Grids for Biomedicine and Bioinformatics, pp. 511–516. Trinity College Dublin, Ireland, June 23-24, 2005.

Book chapters

- A. Mizeranschi, D. Groen, J. Borgdorff, A. G. Hoekstra, B. Chopard, W. Dubitzky: Anatomy and Physiology of Multiscale Modeling and Simulation in Systems Medicine, in Systems Medicine, Springer Verlag, 2016.
- A. Tirado Ramos; D. Shamonin; R. Shulakov; D. Groen; A. Hoekstra; D. van Albada; E. Zudilova and P. Sloot: Interactive Problem Solving Environments on the Grid for Imagebased Computational Haemodynamics, in The CrossGrid Book, The European CrossGrid Consortium, 2005.

Other publications

- J. Borgdorff, D. Groen and M. Mamonski: Adding MUSCLE to Multiscale Simulations, HPCWire, 2013, URL: http://www.hpcwire.com/2013/12/11/adding-muscle-multiscale-simulations/.
- J. Borgdorff, D. Groen, S. Ferlin, I. Saverchenko, J. Suter, A. Hoekstra, P. V. Coveney: Multiscale Simulations on Distributed European e-Infrastructures, Innovatives Supercomputing in Deutschland (InSiDe), vol. 10, no. 1, pp. 72-77, 2012.
- P. V. Coveney, R. Kenway, R. Perott, D. de Roure, A. Trefethen, D. Groen et al.: Strategy for the UK Research Computing Ecosystem, 2011.
  URL: http://wiki.esi.ac.uk/w/files/f/f5/ResearchComputing-glossy.pdf
- D. Groen, O. Henrich, F. Janoschek, P. V. Coveney, J. Harting, Lattice-Boltzmann methods in fluid dynamics: Turbulence and complex colloidal fluids, Jlich Blue Gene/P Extreme Scaling Workshop, 2011 (technical report).
- Intercontinentale supercomputer ontrafelt de structuur van het heelal, Press announcement, 2009.
  URL: http://science.leidenuniv.nl/index.php/faculteit/full_item_v2/1925/
- I contributed to two press announcements and one case study on our forthcoming Advanced Materials paper in 2014.

- I also wrote two other press announcements based on my PhD work, one of which appeared in a Dutch national newspaper (De Pers) in 2008.