

Curriculum Vitae

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DEGREES

Master of Science in Applied Mathematics, Brown University, USA 2007.

Master of Science in Aerospace Engineering, Minor in High Performance Computing, Pennsylvania State University, USA 2004.

Bachelor of Science in Mathematics, Minor in Computer Science, Novosibirsk State University, Russia 2002.

POSITIONS HELD

January 2008 - present, Reviewer in the Journal of Computational Physics.

September 2004 - present, Research Assistant, Division of Applied Mathematics, Brown University, Advisor: G. E. Karniadakis and B. Caswell.

January 2007 - May 2007, Teaching Assistant, Division of Applied Mathematics, Brown University.

September 2005 - May 2006, Mathematics Resource Center Tutor, Department of Mathematics, Brown University.

September 2002 - August 2004, Research Assistant, Department of Aerospace Engineering, Pennsylvania State University, Advisor: D. A. Levin.

PUBLICATION LIST

i. Articles in Journals

1. D. A. Fedosov and G. E. Karniadakis, "Triple-Decker: Interfacing atomistic-mesosopic-continuum flow regimes", Journal of Computational Physics, submitted, 2008.
2. D. A. Fedosov, B. Caswell and G. E. Karniadakis, DPD simulation of depletion layer and polymer migration in micro- and nano-channels for dilute polymer solutions, Journal of Chemical Physics, submitted, 2008.
3. D. A. Fedosov, I. V. Pivkin and G. E. Karniadakis, Velocity limit in DPD simulations of wall-bounded flows, Journal of Computational Physics, vol. 227(4), pp. 2540-2559, 2008.

4. A. A. Alexeenko, D. A. Fedosov, D. A. Levin, S. F. Gimelshein, and R. J. Collins, Transient Heat Transfer and Gas Flow in a MEMS-based Thruster, *Journal of Microelectromechanical Systems*, vol. 15(1), pp. 181-194, 2006.
5. A. A. Alexeenko, D. A. Fedosov, D. A. Levin, S. F. Gimelshein, and R. J. Collins, Performance Analysis of Microthrusters Based on Coupled Thermal-Fluid Modeling and Simulation, *Journal of Propulsion and Power*, vol. 21(1), pp.95-101, 2005.
6. T. Ozawa, D. A. Fedosov, D. A. Levin, S. F. Gimelshein, Quasi-Classical Trajectory Modeling of OH Production in Direct Simulation Monte Carlo, *Journal of Thermophysics and Heat Transfer*, vol. 19(2), pp. 235-244, 2005.

ii. Articles in Conference Proceedings

1. D. A. Fedosov, S. V. Rogazinsky, M. I. Zeifman, M. S. Ivanov, A. A. Alexeenko, and D. A. Levin, Analysis of Numerical Errors in the DSMC Method, In "Rarefied Gas Dynamics", Proceedings of 24th International Symposium on RGD, AIP Conference Proceedings, Vol. 762(1), pp. 589-594, 2005.
2. T. Ozawa, D. A. Fedosov, and D. A. Levin, Modeling of OH Product Distributions Using QCT-MD and BL Models in a Bow Shock, In "Rarefied Gas Dynamics", Proceedings of 24th International Symposium on RGD, AIP Conference Proceedings, Vol. 762(1), pp. 902-907, 2005.
3. T. Ozawa, D. A. Fedosov, D. A. Levin, and S. F. Gimelshein, "Use of Quasi-Classical Trajectory Methods in the Modeling of OH Production Mechanisms in DSMC," AIAA Paper 2004-0336, January, 2004.
4. A. A. Alexeenko, D. A. Levin, D. A. Fedosov, S., F. Gimelshein, R. J. Collins, Coupled thermalfluid analyses of microthruster flows, AIAA Paper No. 20030673, 41st Aerospace Sciences Meeting and Exhibit, January 912, 2003.
5. A. A. Alexeenko, D. A. Levin, D. A. Fedosov, S. F. Gimelshein, and R. J. Collins, Coupled ThermalFluid Modeling of Micronozzles for Performance Analysis, AIAA Paper No. 20034717, 39th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Huntsville, Alabama, July 2003, 2003.

MEMBERSHIPS and HONORS

Member of American Mathematical Society, 2004 - present.

Member of Society of Rheology, 2006 - present.

Member of AIAA, 2002 - 2004.

CONFERENCES

1. Meeting of Society of Rheology, Salt Lake City UT, October 2007, presentation DPD simulation of depletion layer and polymer migration in micro- and nano-channels for dilute polymer solutions.
2. 5th Annual Workshop on Charm++ and its Applications, Parallel Programming Lab, University of Illinois at Urbana-Champaign, April 2007.
3. Meeting of Society of Rheology, Portland ME, October 2006.
4. 3rd International Conference for Mesoscopic Methods in Engineering and Science, Hampton VA, July 2006, presentation Reynolds number limit in DPD simulations of wall-bounded flows.