Boris Boutkov

Personal Data

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Objective

To obtain a full time position in a modern, fast paced, computationally driven organization.

Work Experience

Sep 2012 - May 2019 — Graduate Researcher and Teaching Assistant at U. Buffalo

Graduate Researcher: Investigated Composable Multiphysics problems through grins and enabled Geometric Multigrid in libMesh

Graduate Assistant: Calculus 1,2,3, Linear Algebra, Differential Equations, High Performance Computing

Dec 2010 - Jun 2012 — Developer/Analyst at AmkaiSolutions in Armonk,New York

Designed and developed large health software project involving Java, SQL, HQL and XML integration. Experience with project management, database analysis, and algorithm optimization.

Jan 2009 - May 2010 — Mathematical Researcher at R.P.I.

Explored numerical optimization strategies relating to stochastic epidemiology studies over various networks. Study of disease and social cost minimization strategies with various parameter investigations, data exploration and interpretation through Matlab.

Education

Sep 2014 - May 2019 — Ph.D. in Computational and Data Enabled Sciences

University at Buffalo, Buffalo, NY

Gpa: 3.9/4.0 | Advisor: Paul T. Bauman

Thesis | Geometric Multigrid for Unstructured Finite Elements: Implementation and Applications

Sep 2012 - May 2014 — Masters in Mathematics

Gpa: 3.9/4.0 | University at Buffalo, Buffalo, NY

Sep 2006 - May 2010 — B.S. Dual Degree in Applied Mathematics and Physics

Rensselaer Polytechnic Institute, Troy, NY

Gpa: 3.2/4.0 | Advisor: Peter R. Kramer

Thesis : Risk Perception in Epidemic Modeling with Heterogeneous Connection Strengths

Minors : Philosophy, Psychology | Deans list : Fall 2006 - Spring 2009

Presentations, Publications, and Awards

July 2019 — Journal of Computational Science: Enabling Composable Linear Solvers for Unstructured Finite Element Methods using libMesh and PETSc

May 2019 — Ph.D. Dissertation: Geometric Multigrid for Unstructured Finite Elements: Implentation and Applications

April 2019 — UB CDSE Best Research Poster Award

March 2017 — SIAM Conference on Computational Science and Engineering, Boston, MA

Presented: (Towards a) Variational Immersed Boundary Implementation through grins and libMesh

Dec 2014,2015 — U. Buffalo Computational Data Science Fellowship

June 2014 — Mathematical Problems in Industry, New Jersey Institute of Technology

Collaboratively investigated various problems posed by industrial representatives while peer reviewing partner groups in week long exploratory project sprints.

Report Presented: A smooth ride on a bumpy road, modeling and numerical investigation of vehicles driving on bumpy roads.

Languages and Computer Skills

Proficient	Russian, C++, C, Python, MPI, Matlab/Octave, SQL, Linux, Git, LaTeX
Working Knowledge	Spanish, Maple, Mathematica, Java, HTML, CSS