ARUN BASKARAN

75 14th Street
Troy, NY 12180
(518) 833-2551

baskaa2@rpi.edu
arupad@gmail.com
https://github.com/ArunBaskaran

Professional Summary

Ph.D candidate in Computational Material Science and Masters graduate in Computer Science, with a strong publication record, 5+ years of experience in developing software for scientific computing, and a strong academic knowledge of statistical techniques. Seeking a full time position as a Data Scientist.

Skills

- OOP languages - C++, Python
- Parallel Computing platforms - MPI, CUDA
- ML Frameworks - TensorFlow, Keras, Scikit
- Data Visualization - Paraview, Mathematica

Education

- PhD in Material Science & Engg, Rensselaer Polytechnic Institute, Troy NY **GPA : 3.58**
  Aug 2014-Dec 2019
- Masters in Computer Science & Engg, Rensselaer Polytechnic Institute, Troy, NY **GPA : 3.40**
  January 2018-May 2019
- B.Tech in Metallurgical & Materials Engg, IIT-Madras, India **GPA : 8.1/10**
  Aug 2010-May 2014

Recent Publications

- Quantitative Analysis of Microstructure using a Two Stage Image Driven Machine Learning Approach - Arun Baskaran, Genevieve Kane et al., *Computational Material Science, Accepted under review ; Draft of a manuscript shall be provided under request*
- Effect of initial variance of microstructures on grain growth under mean curvature - Arun Baskaran, David Crist, and Daniel J Lewis. *Modelling and Simulation in Materials Science and Engineering, 2017 Volume 25, Number 6*

Recent Conference Presentations

- Materials Science & Technology, OH, 2019
  Phase field modeling of the influence of thermo-mechanical conditions on phase transformation in titanium alloys , Arun Baskaran and Daniel J Lewis
- 5th World Congress on Integrated Computational Materials Engineering, IL, 2019
  Multiscale Modeling of Microstructural Evolution Induced by Thermomechanical Processing in Ti-6Al-4V Alloys , Arun Baskaran, Sagar Bhatt, Daniel Lewis, Antoinette Maniatty
- Numiform:International Conference on Numerical Methods in Industrial Forming Processes, NH, 2019
  Numerical Modeling Of Ti-6Al-4V Microstructural Evolution For Thermomechanical Process Control, Sagar Bhatt, Arun Baskaran, Daniel Lewis, Antoinette Maniatty

Projects

- **NearptD on IBM BG/Q** : Implemented NearptD, a nearest neighbor search algorithm with grid-based data structure, on the parallel platform of IBM's BG/Q using OpenMPI
- **Pacman (Python)** : Application of fundamentals of reinforcement learning and search heuristics like minimax, expectimax, etc., on the game of Pacman

Leadership Roles

- President, RPI Cricket Club. August 2017 - August 2018

Work Experience

- Teaching Assistant, Rensselaer Polytechnic Institute, Troy, NY **August 2014-May 2016**
  Involved in the design and demonstration of experiments for various core courses in the undergraduate material science curriculum.
- Undergraduate Summer Trainee, Tata Steel Limited, India **May 2013 - July 2013**
  Computational alloy design of two-phase high strength steels using MatCalc. Subsequently, performed characterization experiments on the alloys.