Rajeev Jain

Principal Research Software Developer · Argonne National Laboratory · Mathematics and Computer Science

⌂ rajeeja.github.io   ✉ jain@anl.gov   in linkedin   🎓 google scholar   ⓞ github

Education

2017 – 2020	**Masters of Science** Computer Science	University of Chicago
2007 – 2009	**Master of Science** Structural Engg. (Minor Computer Science)	Arizona State University
	Thesis title: "Blast Mitigation solutions via FEM-Based Design Optimization."	
2002 – 2006	**B.Tech** Mechanical Engineering	IIT Dhanbad, India

Work Experience

2018 – 2022	**Principal Research Software Specialist**, Mathematics and Computer Science	Argonne National Laboratory
2011 – 2018	**Software Developement Specialist**, Mathematics and Computer Science	Argonne National Laboratory
2009 – 2011	**Pre-doctoral Appointee**, Mathematics and Computer Science	Argonne National Laboratory
2013 – 2014	**Research and Teaching Assistant**, Civil Engineering in the School of Sustainable Engineering and the Built Environment	Arizona State University
2006 – 2007	**Project Engineer**, SAP/Java	Wipro Technologies, Bangalore/Hyderabad, India
Summer 2005	**Research Trainee**, Engineering Research Division	Tata Motors, Pune, India
Summer 2004	**Trainee Process Engineer**, Research and Development	Bhilai Steel Plant, Bhilai, India

Software Development Projects

2016 – present	**Co-Developer**, ECP-CANDLE	GitHub link
	Published papers on model robustness with counterfactuals / noise injection and hyper-parameter optimization framework "Supervisor". Currently focussed on testing claims made by the recent cancer drug-response papers, creating a framework for understanding model sensitivity and XAI	
2018 – present	**Co-Developer**, Flash-X	Documentation
	Designed/coded asynchronous write and compression of HDF5 checkpoint file. Help with performance benchmarking on DOE supercomputers, CI, documentation. Review/manage GitHub policies, actions, PRs, issues etc.	
2020 – present	**Co-Developer**, UXarray	GitHub link
	Helped design and code the first draft of the UXARRAY API, wrote python functions to integrate and read/write unstructured grids.	
2009 – 2016	**Lead Developer**, MeshKit	BitBucket link
	Principal Investigator for MeshKit (mesh generation C++ toolkit) for the reactor geometry generation package. Wrote several mesh/geometry generation algorithms and published in peer-reviewed conferences/journals.	

Honors

2010 – present	**Mentor**, Supervised several summer students/postdocs and staff members	Argonne National Laboratory
2015	NUMGRID 2020 **Invited: Program Committee Member**, Managed and reviewed papers **Reviewer and Session Chair**	Computational Geometries, SNA and MC conference
2015-2017	**Mentor**	Kitware Inc. for SBIR Phase I and II
	Basis of this work was my tool RGG, click on the link for details	
2007 – 2009	**University Graduate Fellowship**, $4000	Arizona State University
2004 – 2004	**1st Prize for Low Budget Car Design Contest**, INR 40k+	Tech Fest IIT Kharagpur and MINDA Ltd. Delhi

Interests

Software Development, Research, AI, Blockchain