Prashanth **Kanduri**

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prashanth.kanduri

EDUCATION

ETH Zürich, Switzerland 2013 – 2017
Master of Science in Computational Science & Engineering, specialization in Robotics
Department of Mathematics, Swiss Federal Institute of Technology
Funded by the *Masters Scholarship Program & Birkigt Scholarship Funds*

VIT University, India 2009 – 2013
Bachelor of Technology with Honours in Mechanical Engineering
School of Mechanical & Building Sciences, Vellore Institute of Technology University
Awarded 'Honours' credential, CGPA of 8.91/10

KEY EXPERIENCES AND PROJECTS

Developer **CSCS**, Zürich Apr 2017 – Present
- Scientific Software and Libraries unit of the *Swiss National Supercomputing Centre*
- Development of high performance scientific & simulation software for research projects in the area of particle (n-body/atomistic) simulations and domain-specific API design
- Performance optimization, software engineering on current/emerging HPC hardware

Thesis Student **ABB/D-MATH, ETH Zürich** July 2016 – Feb 2017
- Project titled *Enriched Discontinuous Galerkin Method for resolving Boundary Layers of the Eddy Current Problem on Curved Surfaces* for ABB's Power Device Simulations group
- Numerical software development on an in-house FEM simulation framework

Visiting Student **Institute of Neuroinformatics**, UZH/ETH Feb 2016 – June 2016
- Project titled *Low-Latency Classification of Poker Card Symbols using a Dynamic Vision Sensor and a Neuromorphic Co-Processor* with Dr. Giacomo Indiveri's group
- Worked on spiking convolutional neural networks, hardware interfacing and learning methods

Development Intern **AutoForm Development GmbH**, Zürich Sept 2014 – Sept 2015
- Developed an algorithm for *non-rigid surface registration algorithm for 3D meshes* and integrated with the AutoForm™ codebase
- Implemented features to post-process solver data

Summer Student **MPI-CBG**, Dresden July 2014
- Awarded fellowship in the summer school on *Spatiotemporal Modeling and Simulation of Biological Systems* by the *Max Planck Institute of Molecular Cell Biology and Genetics*
- Acquired training in *modeling biochemical reactions, diffusion, pattern formation and flows*

Research Fellow **IIT Bombay**, India Dec 2012 – July 2013
- Awarded the *IITB IRCC Research Internship Awards* fellowship
- Developed prototypes for Limited View Tomographic Reconstruction for plasma visualization in an experimental fusion reactor at the *Institute for Plasma Research, Gandhinagar*
- Formulated methods involving optimization, a-priori information embedding, frequency domain analysis and improvement of the posed-ness of the problem

Research Fellow **IIT Madras**, India May 2012 – July 2012
- Selected at the Dept. of Applied Mechanics for a project on *Design of Low Speed Airfoils using Evolutionary Optimization Algorithms* for the *IITM Summer Research Fellowship Program 2012*
- Prototyped a tool to generate parameterized *NACA airfoils* fitting an optimization criterion
- Coded a *Gridless Flow Solver* based on the *Hess-Smith Panel Method*

PUBLICATIONS

Limited View Tomographic Image Reconstruction using Genetic Algorithm
Saran S, Prashanth K R, Atul Srivastava, Ajay Kumar and M. K. Gupta
Proceedings of the International Conference on Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT) – 2013 at SVNIT, Surat

LINKS

linkedin.com/in/prashanthkanduri
github.com/kanduri
instagram.com/prashanth.kanduri

IMMIGRATION STATUS

Swiss Permit C
Permanent Residency

SKILLS

Software Design & Development
High Performance Computing
Mathematical Modeling
Numerical Methods
CAD & Engineering Simulations
Data Analysis & Machine Learning

PERSONAL SKILLS

Organized & Quick Learner
Versatile, Independent Worker
Effective Communicator

SOFTWARE TOOLS

CUDA/HIP/ROCm, OpenMP/MPI
MATLAB, R
SolidWorks, CATIA
ANSYS, Comsol Multiphysics

COMPUTER LANGUAGES

C/C++, Java
Python
HTML/CSS, PHP

NATURAL LANGUAGES

English (C2)
Hindi (C1)
Kannada, Telugu, Bengali (B2)
German (B1)

RELEVANT COURSEWORK

Physical Modeling and Simulation
FEM Based Optimization
Numerical Methods for PDEs
High Performance Computing I & II
Optimization using Soft Computing
Software Design
Visual Computing
Machine Learning
Model Predictive Control
Autonomous Mobile Robots
Data Mining

ET CETERA

Political & Environmental Activist
Birdwatcher & Photographer
Comics and TV Buff
Quizzing Enthusiast
Hobbyist Sketcher
Awesome Cook!