Sriram Krishnaswamy

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EDUCATION

UNIVERSITY OF FLORIDA
MS Mechanical Engineering
May 2016* | Gainesville, FL
Cum. GPA: 3.33 / 4.0

BITS, PILANI
MSc Chemistry
BE Mechanical Engineering
May 2014 | Hyderabad, India
Cum. GPA: 7.54 / 10.0
Major GPA: 8.07 / 10.0

DAV BOYS
May 2009 | Chennai, India

LINKS

Github:// sriramkswamy
LinkedIn:// sriramkswamy
SSL:// Stochastic Systems Lab

COURSEWORK

GRADUATE
Computational Fluid Dynamics
Uncertainity Quantification
Fluid Mechanics I & II
Gas Turbines and Jet Engines
Compressible flow
Control Systems (***TA x1***)

UNDERGRADUATE
Numerical Methods
Applied Thermodynamics
Mechanics of Solids
CAD and FEA

SKILLS

PROGRAMMING
Experienced:
C++ • Python • MATLAB
LaTeX •
Intermediate:
Shell • C • Octave
Amateur:
JavaScript • Fortran

LIBRARIES
Boost • Intel MPI • OpenMP

SOFTWARES
Experienced:
FLUENT • ANSYS •
Amateur:
SolidWorks • OpenFOAM

EXPERIENCE

STOCHASTIC SYSTEMS LABORATORY | Student Assistant
May 2015 - Present | Gainesville, FL

- Worked with Dr. Yifei Sun and Prof. Mrinal Kumar to create a Parallel Fokker-Planck equation solver based on CPD Tensor methods.
- Simulated a 4 dimension 2 body problem using the Boost uBLAS library
- Extended the Tensor CPD method for Lorenz parameterized models used in wind forecasting

Nov 2014 – April 2015 | Gainesville, FL

- Predicted the optimal cost and risks for a multi-reservoir system using Chance-constrained Optimization

THERMAL TURBOMACHINES LABORATORY | Project Assistant
June 2013 – May 2014 | Chennai, India

- Automated the CFD analysis of airfoils using Python and Scheme.
- Implemented intelligent data interpretation and post-processing.
- Used it analyze the effects of Synthetic jet active flow control in airfoils.
- Collaborated with Shubham Jain to analyze the effects of Gurney Flap.

PROJECTS

CANSAT 2013 | Team Leader
Nov 2012 – June 2013 | Abilene, TX

- Led Team Varuna - the first team from BITS, Pilani to a successful launch.
- Scored 97.15% in the Critical Design Review
- Raised a sponsorship of $1,500 and presented the design to the Director of ISRO (Indian Space Research Organization)

COMPUTATIONAL FLUID DYNAMICS | Independent Projects
Jan 2016 – Present | Gainesville, FL

- Python based solver for solving 2D Heat equation.
- Based on the CFD course by Prof. Lorena Barba

Sep 2015 – Dec 2015 | Gainesville, FL

- Central difference scheme to solve the diffusion equation
- First and second order upwind schemes to solve the convection-diffusion equation.
- AB3 and RK4 methods for 1D and 2D cases of the Burgers equation

May 2012 – July 2012 | Hyderabad, India

- Modelled NACA4421 airfoil using ANSYS and ICEM CFD for a term project.
- Analyzed the flow separation spectrum to identify the most effective point for flow control.

SELECTED PUBLICATIONS

[1] S. Jain, S. Krishnaswamy, and N. Sitaram. Computational investigations on the effects of gurney flap on airfoil aerodynamics. *International Scholarly Research Notices*, 2015.

[2] S. Krishnaswamy, S. Jain, and N. Sitaram. Exhaustive analysis of gurney flap as a passive control mechanism. In *Fluid Mechanics and Fluid Power, IIT Kanpur*, 2014.