

# Sriram Krishnaswamy

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## EDUCATION

### UNIVERSITY OF FLORIDA

MS Mechanical Engineering

May 2016 | Gainesville, FL

Cum. GPA: 3.06 / 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, GOPALAPURAM

Grad. May 2009 | Chennai, India

## LINKS

Github:// [sriramkrishnaswamy](#)

LinkedIn:// [sriramkrishnaswamy](#)

SSL:// Stochastic Systems Lab

## COURSEWORK

### GRADUATE

Computational Fluid Dynamics\*

Uncertainty Quantification\*

Turbulence\*

Fluid Mechanics II

Fluid Mechanics I

Gas Turbines and Jet Engines

Incompressible flow

Control Systems (**TA x1**)

### UNDERGRADUATE

Fluid Mechanics

Numerical Methods

Applied Thermodynamics

Mechanics of Solids

CAD and FEA

## SKILLS

### PROGRAMMING

Experienced:

C++ • Python • MATLAB •  $\LaTeX$

Intermediate:

Shell • C • Octave

Amateur:

Java • R

### LIBRARIES

Boost • Intel MPI • Intel OpenMP

### SOFTWARES

ICEM CFD • FLUENT •

ANSYS • 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

Nov 2014 – April 2015 | Gainesville, FL

- Predicted the optimal cost and allocated appropriate risks for reservoir in a multi-reservoir system.
- Simulated the model using Stochastic optimization and Chance constrained programming in MATLAB

### THERMAL TURBOMACHINES LABORATORY | Honors Thesis

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 to analyze the effects of Synthetic jet active flow control in airfoils.
- Collaborated with Shubham Jain to analyze the effects of Gurney Flap.

### INDIAN INSTITUTE OF SCIENCE | Summer Intern

May 2012 – July 2012 | Bangalore, India

- Vibrational analysis of human body based on Lumped parameter models.
- Simulated the effects aircraft seat ejection in SimuLink and MATLAB.

## 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)

### CFD PYTHON SOLVER | Independent Project

June 2015 – Present | Gainesville, FL

- Python based solver for solving 2D Heat equation.
- Based on the CFD course by Prof. Lorena Barba
- Parallelizing the code using **mpi4py** package.

### CFD COURSE PROJECTS | As a part of CFD coursework

Sep 2015 – Present | Gainesville, FL

- Python based central difference scheme to solve the diffusion equation

## 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.