

# 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:// [sriramkrishnaswamy](#)

LinkedIn:// [sriramkrishnaswamy](#)

SSL:// [Stochastic Systems Lab](#)

## SKILLS

### PROGRAMMING

Experienced:

C++ • Python • MATLAB

Intermediate:

Shell •  $\text{\LaTeX}$

Amateur:

JavaScript • SQL

### LIBRARIES

Boost • OpenMP

### SOFTWARES

Experienced:

FLUENT • ANSYS •

Amateur:

SolidWorks

## COURSEWORK

### GRADUATE

Computational Fluid Dynamics

Uncertainty 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

Dynamics and Vibrations

## 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

### 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 to 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

### HOVERCRAFT | Team Leader

Jan 2012 – May 2012 | Hyderabad, India

- Designed, analysed and fabricated a single seater Hovercraft capable of lifting a person of 80 kgs
- Raised a sponsorship of INR 15,000 for the equipment and testing as the treasurer of collegiate SAE Chapter
- Successfully completed manned tests for levitation

## 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.