

SYAM S.

Contact Number: +917872683619

Email ID: syam007sasidharan@gmail.com

[LinkedIn](#)



QUALIFICATION & SKILLS

ACADEMIC CREDENTIAL:

Courses	Specialization	Educational Body	Percentage
Ph.D. (2013 - Present)	Propulsion	Indian Institute of Technology Kharagpur, Kharagpur, India.	NA
M. Tech (2011 - 2013)	Turbomachines	S. V. National Institute of Technology, Surat, India.	8.98/10
B. E (2005 - 2011)	Aeronautical Engineering (Aeromechanical)	Aeronautical Society of India.	58.35
Higher Secondary (2003 - 2005)	Civil Engineering and Maintenance	Kerala State Board	71.5
SSLC (10 th) (2003)	NA	Kerala State Board	59.16

PROJECT (CURRICULUM):

- **Ph.D. Topic:** An Experimental and Numerical Investigation on Droplet Combustion
 - Development of droplet combustion experimental setup
 - Study the effect on droplet combustion by biofuel blending of different hydrocarbon fuels
 - Numerical analysis of single and multi-component fuel droplet combustion using the two-fluid method
- **M. Tech Dissertation:** Design and Optimization of High-Pressure Ratio Airfoils for Axial Flow Compressors
 - Parameterization of CDA aerofoil of the high speed axial flow compressor cascade
 - Optimization of CDA aerofoil with Genetic Algorithm (GA) coupled with Ansys Gambit and Fluent to offer minimum pressure loss
- **B.E. Project:** A Review of Shock Wave Boundary Layer Interaction

AREA OF INTEREST:

- Droplet Combustion, Alternative/Renewable Fuels
- Gas Turbine Engines and Propulsion
- Flow through Turbomachines, Design of Axial Flow Compressor and Axial Flow Turbine
- Fluid Mechanics, Aerodynamics and Computational Fluid Dynamics
- Thermodynamics, Heat and Mass Transfer
- Numerical and Practical Experimentation

SOFT SKILLS:

- **Working environment:** Windows (also familiar with Linux)
- **Application:** MS Office and LaTeX/ LyX
- **Software:** CFD software's GAMBIT and FLUENT, Ansys, SolidWorks, LabVIEW, and AX-Stream
- **Languages:** FORTRAN and MATLAB

KEY ACADEMIC ACHIEVEMENT:

- **Graduate Aptitude Test in Engineering (GATE):** GATE 2011 (AE-Aerospace Engineering)
All India Rank: 58
Score: 555
Percentile: 98.02
- Recipient of **MHRD Fellowship** during M. Tech (2011-2013) and PhD (2013-present).

ROLES AND RESPONSIBILITIES HELD:

- **Member of Research Scholars' Representative Council IIT Kharagpur** representing the Department of Aerospace Engineering for the academic year 2017-18.
- **Teaching Assistant** for Aerospace Propulsion for 3rd year B. Tech students under Prof. S. Karmakar and Prof. R. Joarder.
- **Teaching Assistant** for Engineering Drawing for 1st year B. Tech students under Prof. A. Gosh and Prof. B. Dubey (autumn 2016 and autumn 2017).
- **Research Scholars' Representative** (2014-15) of the Department of Aerospace Engineering, IIT Kharagpur.
- **Volunteer** for Sixth International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM), IIT Kharagpur, December 29-31, 2014.

TRAINING:

- A course of 3 days at "Sardar Vallabhabhai National Institute of Technology" in Ax-Stream software in the following modules "Axial Flow Compressor", "Axial Flow Turbine", "Radial Turbine" and "Centrifugal Flow Compressors".

PUBLICATIONS:

- D. Chaitanya Kumar Rao, **S. Syam**, Srinibas Karmakar, and Ratan Joarder, “Experimental investigations on nucleation, bubble growth, and micro-explosion characteristics during the combustion of ethanol/Jet A-1 fuel droplets”, *Experimental Thermal and Fluid Science*, 89, 284-294, 2017.
- D. Chaitanya Kumar Rao, **S. Syam**, Srinibas Karmakar. “Droplet Combustion Characteristics of Butyl Butyrate, Limonene, and their Blends with Jet A-1", 54th AIAA Aerospace Sciences Meeting, AIAA SciTech Forum, 4-8 January 2016, San Diego, California, USA (AIAA 2016-1682).
- **S. Syam**, D. Chaitanya Kumar Rao, Srinibas Karmakar, and Ratan Joarder. "Puffing and Micro-explosion behaviour of Ethanol/Jet A-1 Fuel Droplets", 54th AIAA Aerospace Sciences Meeting, AIAA SciTech Forum, 4-8 January 2016, San Diego, California, USA (AIAA 2016-1683).
- **S. Syam**, Srinibas Karmakar, Ratan Joarder, “An experimental study on droplet combustion of different fuels and biofuel blends in open atmosphere”, ICTACEM 2014, December 29-31, 2014, IIT Kharagpur, India, No. 335.
- **S. Syam**, Nilesh S., Vilash R. S., and Channiwala S. A., “Optimization of CDA Cascade using Parameterization and Genetic Algorithm coupled with CFD”, 2nd International Conference on Mechanical, Automotive and Aerospace Engineering (ICMAAE 2013), 2-4 July 2013, Kuala Lumpur, Malaysia, Paper No. 30027.

PERSONAL VITAE

- Self-starter and passionate to dive into the depths of engineering, to learn and apply new concepts and technologies.
- Strong verbal and written communication skills and self-motivated to achieve realistic goals.
- Can work independently and in a group.

Languages Known: To write: Malayalam (Mother tongue), Hindi, English
To speak: Malayalam, English, Hindi, and Tamil

Member (Professional): The Aeronautical Society of India, New Delhi

DECLARATION

I hereby declare that the information provided above is correct and true to the best of my knowledge. If I am given a chance to work with your esteemed concern, I assure you that I shall discharge my duties to the utmost satisfaction of my superiors for the growth of the company.

Date : 19/01/2018

Place : Kharagpur

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