

RESUME



SYED SAMEER HUSSAIN

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Objectives

Experienced academic professional specializing in Machine Design, with a proven track record of high-impact research and student mentorship. Seeking an Assistant/Associate Professor role to contribute to cutting-edge research, curriculum development, and community engagement.

Present qualification

Ph.D. in IC Engines (Bio-Fuel) from Visvesvaraya Technological University, Belgaum, Karnataka.

Tools Knowledge Possessed

Auto CAD, Solid Edge, CATIA, ANSYS, MAT Lab, CNC Programming, MS Office and Excel.

Subject Knowledge

Strength of Materials, Machine Design, Kinematics and Dynamics of Machine, Finite Element Method, Fluid Mechanics, Mechatronics, Engineering Economics, Research Methodology and IPR, Biology for Engineers and Thermodynamics.

Industrial Experience

Autoliv India Pvt Ltd, Bangalore. (June 2015 to Jan 2016)

Role: Internship, 3rd semester, M-Tech (Machine design)

Key projects: Involved in **VEVA projects** for seat belt Steering wheel and air bag assembly with guidance from PUR lead, Data collection for Tool life monitoring.

Academic Project

Ph.D. Thesis: “The effect of Nanomaterial based biodiesel on performance and emission characteristics of CI engine”

Developed and validated machine learning models to predict thermophysical, performance, and emission characteristics of nanomaterial-enhanced waste cooking oil biodiesel for CI engines. Conducted experimental analysis using TiO₂ and MWCNT additives, achieving improved engine efficiency and reduced emissions compared to diesel, with MLNN models offering high prediction accuracy and minimized experimental efforts.

M-Tech Project: Static and Buckling Analysis of Center Fuselage of a Transport Aircraft through FEA Approach.

Establishing simulation model and identifying key contributors for buckling of center fuselage of a transport aircraft.

Sizing of the Center Fuselage with standard calculations, Modelled with **CATIA V5**, discretization

utilizing **Hyper Mesh** and analysis utilizing **Nastran**. Calculate the stresses in at different conditions and buckling load factor.

BE Project: Seat Belt vibration as a stimulating device for awakening the driver from drowsiness. **Establishing the experimental setup and identifying key contributors for drowsiness of drivers along with this awakening the drivers by using seat belt vibration as a stimulating device.**

Driving while drowsy is one of the main causes of car accidents. Constructed a driving simulator, which was able to induce driver's drowsiness. By using a driving simulator, the driver's drowsiness was detected by changes in the eye movements measured by electrooculography.

Academic Qualifications

SL. No	Class / Degree	College / University	Aggregate	Year of passing
1	PhD (IC Engines/ Biofuels)	SECAB Institute of Engineering and Technology, Vijayapura/ Visvesvaraya Technological University Belagavi, Karnataka	-	2025
2	M-Tech (Machine design)	Dr. Ambedkar Institute of Technology, Bangalore / VTU Belagavi.	78.0%	2016
3	B.E (Mechanical Engg.)	R.T.E Society's Rural Engineering College, Hulkoti. (Gadag) /VTU Belagavi.	69.47%	2014
4	Diploma (Mechanical Engg)	GPT Bellary/ DTE Board Bangalore.	65.56%	2011
5	SSLC	Butti Basavesvara High School, Kushtagi. (Koppal) / Karnataka State Board.	84.24%	2008

Work Experience

1) **Autoliv India Pvt Ltd**, Hoskote Industrial Area, Bangalore.

Designation: Internship, 3rd semester, M-Tech(Machine design)

Role: As a Graduate Engineering Intern, I worked on two projects: VEVA and Tool life monitoring.

- VEVA of auto components like steering wheel, seatbelt components and airbag. This project aimed at improving product value by reducing and optimizing cost.
- Tool life monitoring is a process of monitoring continuously the life of tools which are used for production of seatbelt and steering wheel component. Monitoring of tools like pressing, punching, molding etc.

2) **Dr. Ambedkar Institute of Technology, Bangalore.**

Designation: Teaching Assistant.

Work Duration: (From Sept-05/09/2014 to May-05/05/2015)

3) SECAB Institute of Engineering Technology, Vijayapura, Karnataka

- Designation: Assistant Professor.
- Work Duration: (From July/10/2017 to till date)
- Subjects Taught: Finite Element Analysis, Fluid Mechanics, Strength of Materials, Management and Engineering Economics, Computer Aided Drawing, Mechatronics.
- Laboratories Handled: Fluid Mechanics and Machinery laboratory, Material Testing laboratory, ANSYS Lab, CNC Lab, C++, Python

4) Malik Sandal Polytechnic, Vijayapura, Karnataka

Designation: Principal.

Work Duration: (From 10th Nov 2022 to 10th Dec 2024)

Responsibilities Handled: Academic Progress and Validation, AICTE Inspections, DTE Inspections, Finance of institute.

Portfolio's

- Colloquium Co-Ordinator
- Magazine and News Letter Co-Ordinator
- HR Co-Ordinator
- Workshop/ Seminar Co-Ordinator
- Boys and Girls Hostel Co-Ordinator

List of publications

- 1) Syed Sameer Hussain, Syed Abbas Ali, Dilawar Husain, Manish Sharma, “**A machine learning model for the computation of thermophysical properties of WCO biodiesel mixed with multiwalled carbon nanotubes**” Science and Technology for Energy Transition, 2025, EDP Sciences, <https://doi.org/10.2516/stet/2025021>
- 2) Asifiqbal M Doddamani, Iresh G Bhavi, R Noorahmed, Mohan B Vanarotti, J Balaji, **Syed Sameer Hussain**, “Studies on Physical, Mechanical and Tribological Properties of Al6063 Incorporated with” Tribology in Industry CNT & Nano Clay as Filler Materials, [10.24874/ti.1748.09.24.11](https://doi.org/10.24874/ti.1748.09.24.11)
- 3) **Syed Sameer Hussain**, Syed Abbas Ali, Altaf Hussain Bagwan, Dilawar Husain, Akbar Ahmad, “**Prediction of CI Engine Emissions Fueled with Multiwalled Carbon Nanotube-Doped Waste Cooking Oil Biodiesel using Multilayer Neural Network**”, Journal of Nanomaterials, 2023, Hindawi. <https://doi.org/10.1155/2023/2508422>.
- 4) T Deepak Kumar, BK Venkatesha, **Syed Sameer Hussain**, DK Ramesha, “**Performance and emissions characteristics of biodiesel in diesel engine**”, *Journal of Mines, Metals and Fuels*, 2021. [http://dx.doi.org/10.18311/jmmf/2021/30093](https://doi.org/10.18311/jmmf/2021/30093)
- 5) Sachin Pande, Ravindra G Tikotkar, Asifiqbal M Doddamani, **Syed Sameer Hussain**, “**Experimental Investigation of Sliding Wear Characteristics on Aluminium-Based Metal Reinforced with SiC, Al₂O₃ and Cadmium Sulphide**” *Proceedings of Fourth International Conference on Inventive Material Science Applications: ICIMA 2021, Springer Singapore*. https://doi.org/10.1007/978-981-16-4321-7_50
- 6) Syed Abbas Ali, Shirajahammad Hunagund, **Syed Sameer Hussain**, Altaf Hussain Bagwan, “**The effect of nanoparticles dispersed in waste cooking oil (WCO) biodiesel on thermal**

- performance characteristics of VCR engine”** *Materials Today: Proceedings*, 12 July 2020. <https://doi.org/10.1016/j.matpr.2020.07.214>.
- 7) Syed Abbas Ali, Shirajahmad, **Syed Sameer Hussain**, Altaf Hussain Bagwan, “**Neural network approach of estimating CI engine performance and emission parameters from WCO based biodiesel**”, *Materials Today: Proceedings*, 12 July 2020. <https://doi.org/10.1016/j.matpr.2020.07.223>.
 - 8) Deepak Kumar T., **Syed Sameer Hussain**, D.K. Ramesha, “**Effect of a zinc oxide nanoparticle fuel additive on the performance and emission characteristics of a CI engine fueled with cotton seed biodiesel blends**” *Materials Today: Proceedings*, 13 February 2020 <https://doi.org/10.1016/j.matpr.2020.02.509>.
 - 9) Mahammadrafeeq Manvi, **Syed Sameer Hussain**, Sunil Thaned, Muttappa Domanal, Sarfarazali Khazi, Asif Iqbal Doddamani., “**Energy-Exergy Analysis of CI Engine Fuelled with Rapeseed/Waste Cooking Oil based Biodiesel**”, *International Research Journal of Engineering and Technology (IRJET) Volume 6, Issue 4, April 2019*.
 - 10) **Syed Sameer Hussain**, Syed Abbasali, Altaf Hussain Bagwan, Dilip Sutraway, Mahammadrafeeq Manvi, Abbasali L Bagwan., “**Influence of Al₂O₃ Nano Material Additives based Biodiesel Blends on the Performance of Diesel Engine**”, *International Research Journal of Engineering and Technology (IRJET) Volume 6, Issue 4, April 2019*.
 - 11) Veerachari M Ravitejy P, Ramesh S, **Syed Sameer**, Vedavathi Banda., “**Bending Stresses And Wear Reduction In An Involute Spur Gear**”, *International Journal of Advanced Research Trends in Engineering and Technology*, Volume 5, Issue 3, Jan-2018. ISSN 2394-3785.
 - 12) **Syed Sameer Hussain**, Syed Abbas Ali, Sunil Thaned., “**Influence of Injection Pressure On The Performance of CI Engine Using Waste Cooking Oil As A Fuel**”, *International Multidisciplinary Conference on Emerging Trends in Engineering, Science and Technology*, 23rd Dec, 2017, RSR RUNGTA College of Engineering & Technology Kohka, Kurud, Bhilai (C.G.), ISBN: 978-93-87405-99-8.
 - 13) **Syed Sameer Hussain**, Muttappa Domanal, Mahammadrafeeq Manvi, Sunil Thaned, “**Numerical Study on Static Behavior of Fiber Reinforced Composite Panels**” , *International Journal of Mechanical and Production Engineering (IJMPE)* , pp. 15-21, Volume-5, Issue-11
 - 14) Mohammad Rafiq Zyur Rahaman, Syed Abbas Ali, Asif Iqbal, **Syed Sameer Hussain.**, “**Experimental Investigation of Bending Properties of Carbon Fiber Reinforced Epoxy Composites**”, *International Multidisciplinary Conference on Emerging Trends in Engineering, Science and Technology*, 23rd Dec, 2017, RSR RUNGTA College of Engineering & Technology Kohka, Kurud, Bhilai (C.G.), ISBN: 978-93-87405-99-8.
 - 15) Altafhussain Bagwan, Syed Abbas Ali, Dilip Sutrave, Mohammadshakir, **Syed Sameer Hussain.**, “**Performance Analysis of CI engine using WCO as Biodiesel**”, *International Journal of Current Engineering and Scientific Research*, Volume 4, Issue 11, September-2017.
 - 16) **Syed Sameer Hussain**, Chandan R., “**Buckling and Linear Static Analysis of centre fuselage Structure of a four seated Aircraft**”, *International Journal For Technological Research In Engineering*, Volume 4, Issue 1, September-2016.

Key strengths

Strong Academic and Subject Expertise: In-depth knowledge of Mechanical Engineering fundamentals and specialization in biodiesel, nano-additives, and CI engine performance and emissions. Skilled in integrating theoretical concepts with practical applications.

Effective Teaching and Pedagogy: Experienced in designing and delivering engaging lectures, laboratory sessions, and project guidance. Proficient in modern teaching methods, including simulation tools, MATLAB, and ICT-based instruction.

Research and Publications: Active researcher with publications in reputed journals and conferences. Skilled in experimental design, data analysis, modeling, and simulation. Capable of leading research projects and applying for grants.

Student Mentorship: Strong commitment to mentoring undergraduate and postgraduate students in projects, internships, and career development. Encourages student participation in technical events, competitions, and innovative initiatives.

Professional and Analytical Skills: Excellent communication, presentation, and problem-solving skills. Collaborative team player with the ability to balance teaching, research, and administrative responsibilities effectively.

Administrative and Institutional Contribution: Experience in organizing workshops, seminars, industrial visits, and faculty development programs. Actively contributes to departmental committees, syllabus development, and academic quality initiatives.

Industry–Academia Linkage: Builds strong connections with industry for collaborative projects, consultancy, and student placements. Promotes entrepreneurship, innovation, and translation of research into practical engineering solutions.

Personal Attributes: Lifelong learner with adaptability to emerging technologies. Passionate about teaching and research excellence, demonstrating integrity, leadership, and a student-centered approach.

Hobbies and interest

Reading and Knowledge Enhancement: Keeping up with latest developments in mechanical engineering, renewable energy, and emerging technologies.

Research and Innovation: Exploring new materials, energy solutions, and mechanical design concepts.

Mentoring and Volunteering: Guiding students in projects, competitions, and skill development activities.

Outdoor Activities & Fitness: Jogging, cycling, and outdoor sports to maintain physical well-being and focus.

Technical Hobbies: Working on mechanical projects, CAD modeling, 3D printing, and simulations.

Travel and Culture: Exploring new places, cultures, and industrial sites for learning and inspiration.

Personal Dossier:

Name : Syed Sameer Hussain
Date of birth : 22nd April, 1993
Father's name : Syed Hasan
Marital status : Single
Nationality : Indian
Language : English, Kannada, Hindi and Telugu
Permanent Address : #104, Krishna Giri Colony, Kushtagi, Koppal, 583277.
References : 1. Dr. Syed Abbasali (Professor, SIET, Vijaypur),
2. Dr. A S Prashant (Professor, Dr. Ambedkar Institute of Technology, Bangalore)

Declaration:

I hereby declare that the above-mentioned information is true, as to best of my knowledge and belief.

Place: Vijaypura



Syed Sameer Hussain