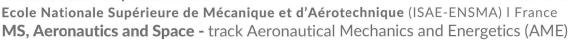# Suryadeb Malik
Hydrogen Combustion Researcher, IFPEN

Doctoral researcher working on hydrogen combustion to facilitate development of future engines. Background in aerospace and mechanical engineering, and over 5 years of automotive industrial experience. Looking for a CDI position in energetics, propulsion and combustion domains.

Contact

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+33-745499541

Email
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Address
92500 Rueil-Malmaison, France

Skills

Scientific programming:
Python, C++, Fortran, LaTeX, gnuplot, Matlab

Software:
CATIA V6, SOLIDWORKS, Shapr3D, AutoCAD, OpenFOAM, Gmsh, MS Office, SAP MM Module

Software skills in progress
Amesim, Converge

Miscellaneous

Volunteer work:
Secretary, InternASSOnal (ENSMA)
Blood donor (SEG Automotive) '21
Polling Officer (Bosch) '17

Recognitions:
Rank 2, 50m freestyle swimming '14
7th Kyu, Shotokan Karate

Languages

English (C1)   Bengali (Native)

French (B1)   Hindi (Native)

References

Christian ANGELBERGER, **IFPEN**
Scientific Assistant Director, Mobility & Systems Division
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Phone: +33 (0) 1 47 52 57 45

Julien SOTTON, ISAE-ENSMA
Pr. Academic advisor for international relations
julien.sotton@ensma.fr
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Education

October 2021 - September 2023
Ecole Nationale Supérieure de Mécanique et d'Aérotechnique (ISAE-ENSMA) I France
MS, Aeronautics and Space - track Aeronautical Mechanics and Energetics (AME)

Specialisation: Energetics and Propulsions

August 2012 - August 2016
Maulana Abul Kalam Azad University of Technology (formerly WBUT) I India
Bachelor of Technology in Mechanical Engineering

Fluid Mechanics, Thermal Sciences, Applied Mechanics, Design, Materials, Manufacturing, Engineering Mathematics and Industrial Engineering

Experience

November 2023 - Present
IFP Energies nouvelles I Rueil-Malmaison, France
PhD Candidate

- Investigating abnormal combustion sources in a hydrogen-driven IC engine, using a 3-way approach: engine experiments with 0D & 3D simulations of operating points

Software in use: Amesim (0D), Converge (3D), Python

May 2023 - October 2023
Institut Pprime (CNRS Laboratory) I Chasseneuil-du-Poitou, France
Research Intern (Graduation Project)

- Performed experimental study of flame/wall interaction with premixed hydrogen/air, characterising the associated wall heat transfer

Software used: Python (Cantera suite), Matlab, Microsoft Excel

Achievement: Won 2nd prize in the 20th PEGASUS-AIAA Student Conference, Spain, presenting this project amongst 35 aerospace projects by participants from 8 countries

June 2022 - September 2022
Institut Pprime (CNRS Laboratory) I Chasseneuil-du-Poitou, France
Research Intern

- Studied combustion regime transitions in a pressurised vessel through numerical simulations and helped in building the experimental setup.

Gas mixtures used: hydrogen/air, hydrogen/n-decane/air

Software used: Python (Cantera suite), Microsoft Excel

August 2017 - August 2021
SEG Automotive India Pvt. Ltd. I Bangalore, India
Senior Engineer (Purchasing Engineering)

August 2016 - August 2017
Robert Bosch Starter Motors Generators India Pvt. Ltd. I Bangalore
Graduate Apprentice

Professional Memberships

The Combustion Institute (2023-present)
- Presented a poster on my Master thesis topic in Journee thematique Combustion H2, 2023
- Participated in 19th edition of the Combustion Thematic School, 2024

American Institute of Aeronautics and Astronautics, AIAA (2024-present)
- Participated in the 20th PEGASUS-AIAA Student Conference and won 2nd prize