

Student Advisory Committee (SAC) Members

2020-2021



Deepanshu Singh
Chair

I am a third-year doctoral student in the Department of Engineering Science at University of Oxford. I am working with Rolls-Royce to improve the efficiency of gas turbine aircraft engines. My research focuses on experimental and computational investigation of Over-Tip Leakage flow in a shroudless high pressure gas turbine. Using thin-film based instrumentation, I have been studying turbine blade tip and casing heat transfer for a variety of tip designs in the OTRF (Oxford Turbine Research Facility), a high-speed rotating facility at engine representative conditions. Before starting my DPhil at Oxford, I completed my undergrad in Mechanical Engineering at IIT (Indian Institute of Technology) Delhi. My Bachelor's thesis was focused on Optimisation of the performance of Vertical Axis Wind Turbine through radial overlap between twin rotor. During my undergrad, I completed two research internships at University of Oxford, both focused on instrumentation projects. My findings were published at ASME Turbo-Expo 2016 (Seoul, South Korea) and 2017 (Charlotte, USA), both of which I was able to present upon securing ASME Student Advisory Committee Travel Award. I also undertook an internship at National Cheng Kung University in Taiwan during which I worked on ducted fan design for electrically powered aircraft engines. In my spare time, I enjoy playing tennis. At Oxford, I have represented the men's team in numerous league matches. In addition, I am presently serving as the President of Oxford University Scientific Society, oldest student run science society in the world with the goal of disseminating scientific knowledge through weekly talks delivered by eminent speakers invited across the globe.

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Mavroudis D. Kavvalso
Vice- Chair

Born in Greece, Mavroudis is research-oriented mechanical engineer, holding a first-class honours MSc in Gas Turbine Technology from Cranfield University in 2018, UK and a Dipl.-Ing. in Mechanical Engineering from the Aristotle University of Thessaloniki, Greece in 2017. Mavroudis is active in the areas of modelling and simulation, electrified propulsion, gas turbine performance, turbomachinery design, open-rotor aerodynamics and probabilistic analysis.

Mavroudis' doctoral research focuses on aero-engine conceptual design under uncertainty for innovative aircraft architectures, including advanced fan/compressor transient performance modelling. His work lies within the purview of two EU-funded collaborative research projects; namely Turbo Electric Aircraft Design Environment (TRADE) and Hybrid Electric Small Commuter Aircraft Conceptual Design (HECARRUS), where he is in charge of the propulsion system architecture and whole systems integration.

He has been involved in several propulsion-related projects; among others, propeller-airframe interaction aerodynamics, rotorcraft performance and gas turbine diagnostics. Mavroudis serves also as a teaching assistant for the gas turbine and turbomachinery design course within the Energy and Environmental Engineering postgraduate scheme at Mälardalen University since 2018.

Mavroudis has been elected as Vice-Chair of the IGTI Student Advisory Committee (SAC) for the upcoming ASME Turbo Expo 2021 and is a recipient of five scholarships, including two SAC travel awards by ASME IGTI in 2019 and 2020. He serves as reviewer and member of the Aircraft Engines and Cycle Innovations IGTI Committees for over two years.

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Manas Payyappalli
Secretary

Manas Payyappalli is a PhD candidate at the Department of Aerospace Engineering, Indian Institute of Technology Bombay, working under the supervision of Dr. A M Pradeep. He completed his master's in Aerospace Propulsion from Indian Institute of Space Science and Technology. He is keen to work in the area of aero-thermodynamics of turbomachines and his present research focuses on aerodynamics of contra-rotating fans and tandem rotors. He is also a recipient of the ASME IGTI Young Engineer Travel Award 2019 and ASME IGTI Student Advisory Committee Travel Award 2020. Apart from his research interests, Manas is enthusiastic about football, music and arts.

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Shawn Siroka
Past Chair

Shawn Siroka is from West Hazleton, PA. He received his Bachelors in Mechanical Engineering in 2016 from the Penn State University. He continues his education at Penn State as a Ph.D. Candidate under Dr. Karen Thole working on turbine instrumentation development for The Steady Thermal Aero Research Turbine (START) Lab. Apart from his education, Shawn is the vice chair to the Student Advisory committee, was denoted as an ASME IGTI student scholar in 2016 and is a current NASA Pennsylvania Space Grant Fellow.