

MAE

Seminar Series

THURSDAY,

MAY 6

4:00 PM

Zoom Information

Meeting ID: 983 6137 4638

PASSWORD: MAE2021

FULBRIGHT EXPERIENCE AND A SNAPSHOT OF RESEARCH ON SENSOR FUSION

ABSTRACT

Sensor fusion is a widely researched topic and has undergone several developments in recent times. The tuning of these fusion schemes, varying from simple complementary filters to widely popular Kalman filters is a non-trivial process. Some of my research efforts address their adaptation with the help of multiple model adaptive and evolutionary optimization approaches. I have also worked on the development of vision-based navigation schemes to obtain reliable position and attitude estimates in a GPS-denied environment. I have recently worked on the adaptation of a fixed-lag smoother design by determining a reliable lag length for a state estimation problem. This is significantly relevant in the simultaneous localization and mapping (SLAM) environment where we need to achieve high accuracy with minimum computational efforts. Towards the end, I will talk about my Fulbright experience at the university and its inter-cultural diversity that helped me grow my dimensions as an international scholar.

BIO SKETCH

Dr. Poddar has received his bachelor's degree in electronics & communication engineering from SRM University, India, and his Masters's in instrumentation engineering from the Academy of Scientific & Innovative Research (AcSIR), India. He then joined as a scientist with CSIR - Central Scientific Instruments Organisation, Chandigarh, India. He went ahead with pursuing his Ph.D. from AcSIR and was later selected for a Fulbright grant in the USA with University at Buffalo, New York. He completed his post-doctoral research from the University at Buffalo, SUNY under the guidance of Professor John Crassidis in February 2021. His research interests include optimal state estimation, image processing, computer vision, and machine learning.



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