

Niladri Das

CONTACT	Intelligent Systems Research Laboratory , Dept. of Aerospace Engineering, Texas A&M University (TAMU), 575 Ross St, College Station, TX 77843.	E-Mail : niladridas@tamu.edu GitHub : github.com/niladridas Homepage : www.niladridas.com
RESEARCH	Nonlinear filtering & control Optimal Sensing Situational Awareness (SSA) A.I.	
EDUCATION	PhD in Aerospace Engineering — TAMU Dissertation: Optimal sensing for estimation of nonlinear dynamical systems. Master's in Electrical Engineering — IIT Kanpur, India Dissertation: Learning to grasp & programming by demonstration using a 7-DOF Barrett WAM . Bachelor's in Electrical Engineering — Jadavpur University, India Project: Image processing based object detection algorithms.	Adviser: Dr. R. Bhattacharya Sep 2015 - Dec 2020, GPA : 3.826 Adviser: Dr. L. Behera July 2012 - May 2014, GPA : 7.91/10 Adviser: Dr. A. Chatterjee July 2008 - May 2012, GPA : 7.84/10
EXPERIENCE	Graduate Teaching Assistant (TAMU) — Aero-422 — Dr. Raktim Bhattacharya Sep - Dec 2020. Graduate Research Assistant (TAMU) — PI: Dr. Kyle deMars Jun - Aug 2020. Graduate Teaching Assistant (TAMU) — Aero-422 — Dr. Kyle deMars Jan - May 2020. Graduate Teaching Fellow (TAMU) — Active Controls for Aerospace Vehicles Sep - Dec 2019. Graduate Research Assistant (TAMU) — PI: Dr. Raktim Bhattacharya Sep 2015 - Aug 2019. — Worked on an Air Force Research Laboratory project and developed in-house orbit propagator for Intelligent Fusion Technology, Inc. (2018 - 2019). — Worked on an Air Force Office of Scientific Research project, collaborated with Dept. of Statistics (TAMU), and developed filtering framework for SSA (2015 - 2018). Winner of A-Hack-of-the-Drones — Member of the A-Team from TAMU 28 - 30 Sep 2018. that won the A-Hack-of-the-Drones competition (Sponsor: USArmy Futures Command and MD5) in Austin, Texas. We developed vision based solution for C-SUAS. Project Associate (PI: Dr. L. Behera, IITK) Aug 2014 - Jun 2015 — Developed GMM to compensate the unknown non-linearities of 7 DOF Barrett WAM — Collaborated in implementing a, Inverse Dynamic Model and Higher Order Sliding Mode Control for 7 degree of freedom Barrett WAM — Developed dynamical system based trajectory learning for Barrett WAM — Served as a Thesis mentor for a master's student — Taught ROS to two Master's student. Master's Research (Adviser: Dr. L. Behera, IITK) Aug 2012 - Jun 2014 — Developed Inverse Kinematic model for Barrett WAM — Implemented Kinect based Object segmentation for grasping using Deep Learning — Developed a hand-eye autonomous calibration technique for Barrett WAM — Implemented Symbolic Encoding based skill learning on Barrett WAM — Implemented Symbolic Encoding based skill learning on Barrett WAM — Mentored two Under-graduate interns. Teaching Assistant — Dr. L. Behera, Dr. R. Potluri, Dr. N. K. Verma (IITK) Aug 2012 - Jun 2014	
RECENT JOURNALS	— Optimal Sensor Precision and Sensor Selection for Kalman Filtering with Bounded Errors (Signal Processing, Elsevier, submitted, 2020) — Privacy and Utility Aware Data Sharing for Space Situational Awareness from Ensemble and Unscented Kalman Filtering Perspective (IEEE TAES, submitted, 2019) — Optimal Transport Based Tracking of Space Objects in Cylindrical Manifolds (Journal of Astronautical Sciences, Springer, published, 2019) — Optimal Transport based Tracking of Space Objects using Range Data from a Single Ranging Station (Journal of Guidance, Control, and Dynamics, published, 2019)	
SKILLS	Matlab Julia Python C++ ROS.	
AFFILIATIONS	Professional — AIAA, IEEE, SIAM, AAS University — (TAMU) Aero GSC mentor (2018), Aero GSC member & GPSC Aero delegate (2017) Reviewer — IEEE Systems Journal, CDC	