

Kursat Kara, Ph.D.

Associate Professor | AIAA Associate Fellow

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Selected Appointments

Aug 2025–Present	Associate Professor , School of Mechanical & Aerospace Engineering, Oklahoma State University, Stillwater, OK
Aug 2019–Jul 2025	Assistant Professor , School of Mechanical & Aerospace Engineering, Oklahoma State University, Stillwater, OK
Jul 2010–Aug 2018	Assistant Professor , Aerospace Engineering Department, Khalifa University, Abu Dhabi, UAE. Founding Faculty. ABET-accredited. The first Aerospace Engineering Program in the UAE.

Selected Funding

Sep 2026–Nov 2028	Co-PI , FAA, ASSURE, <i>A94 – Effect of Turbulence on Aircraft Structural Loading of AAM VTOL Vehicles</i> , \$772,698, Contract No. 25-C-UAS-OKSU-01
Feb 2026–Jan 2028	PI , U.S. Navy (NAWCAD), <i>Artificial Intelligence for Real-time Wake Inference in Ship Environments (AIRWISE)</i> , \$199,999, Award No. G10007133, Contract No. N00421-26-1-0004
Jan 2026–Jan 2027	PI , NASA, Early Stage Innovations (ESI22) - Paid Extension, <i>Physics-Guided Multifidelity Learning for Characterization of Blunt-Body Dynamic Stability</i> , \$291,955, Award No. 80NSSC23K0231-P00003
Jan 2023–Jan 2026	PI , NASA, Early Stage Innovations (ESI22), <i>Physics-Guided Multifidelity Learning for Characterization of Blunt-Body Dynamic Stability</i> , \$649,879, Award No. 80NSSC23K0231
Jul 2021–Jun 2022	Co-PI , OCAST, AR20-020, <i>Next Generation Smart Heatsinks</i> , \$45,000
Jan 2021–Dec 2021	PI , NSF, REU Supplement to Award 1925147, <i>Safe Wind-Aware Navigation for Collaborative Autonomous Aircraft in Low Altitude Airspace REU Supplement</i> , \$15,994, Award No. 1925147, Supported two undergraduate researchers.
Jan 2020–Dec 2025	PI , NSF, NRI: INT, <i>Safe Wind-Aware Navigation for Collaborative Autonomous Aircraft in Low Altitude Airspace</i> , \$1,490,043, Award No. 1925147

Selected Teaching

2026SP	MAE 5020 , Data-Driven Methods in Aerospace Engineering, Graduate, Oklahoma State University, Enrollment: 20, In-person
2025FA	MAE 3293 , Fundamentals of Aerodynamics, Undergraduate, Oklahoma State University, Enrollment: 125, In-person
2025SP	MAE 5020 , Data-Driven Methods in Aerospace Engineering, Graduate, Oklahoma State University, Enrollment: 16, In-person
2024FA	MAE 3293 , Fundamentals of Aerodynamics, Undergraduate, Oklahoma State University, Enrollment: 120, In-person
2020FA	MAE 5943 , Unsteady Aerodynamics and Aeroacoustics, Graduate, Oklahoma State University, Enrollment: 10, In-person

Selected Awards and Student Outcomes

Apr 2025	Kursat Kara , Excellent Faculty Award, College of Engineering, Architecture and Technology
Jan 2015	Kursat Kara , President's Faculty Excellence Award for Outstanding Teaching, Khalifa University
Apr 2026	Ashraf Kassem , MAE Outstanding Graduate Student Award, Spring 2026, School of Mechanical & Aerospace Engineering
Apr 2026	Ashraf Kassem , Dean's Overall Outstanding Graduate Student Award, Spring 2026, College of Engineering, Architecture and Technology
Dec 2025	Ashraf Kassem , MAE Outstanding Graduate Research Assistant Award, Fall 2025, School of Mechanical & Aerospace Engineering
Jan 2025	Shafi Al Salman Romeo , MAE Excellent GTA Award, School of Mechanical & Aerospace Engineering
Jun 2024	Ashraf Kassem , NASA Ames Research Center Internship, NASA Ames Research Center

Selected Service

Jan 2024–Dec 2025	Guest Editor, Quantum Computing Collection , Nature Scientific Reports, international, Count: 7 manuscripts, Managed manuscripts, reviewers, and editorial decisions.
Jan 2023–Present	Editorial Board Member , Nature Scientific Reports, international, Count: 11 manuscripts, Managed manuscripts, coordinated reviewers, and executed decisions.
Jan 2022–Present	Review Committee Member , NSF ACCESS Allocation Review Committee, national, Includes Maximize ACCESS and Accelerate ACCESS review panels.

Selected Publications

6. Kassem et al., Aerospace Science and Technology (2026): data-driven reduced-order modeling for blunt-body aerodynamic characterization.
5. Romeo et al., Aerospace Science and Technology (2026): multifidelity data fusion for atmospheric entry vehicle dynamic stability.
4. Tiwari et al., Scientific Reports (2026): adaptive Bayesian learning for re-entry vehicle stability characterization.
3. Oz et al., Journal of Spacecraft and Rockets (2025): nonlinear parameter estimation and uncertainty quantification for entry-capsule dynamics.
2. Vuppala et al., Scientific Reports (2024): data-driven reduced-order modeling of realistic urban winds for AAM aircraft.
1. Oz, San, and Kara, Scientific Reports (2023): efficient quantum PDE solver with Chebyshev points.