Stanford



Grace Gao

Associate Professor of Aeronautics and Astronautics and, by courtesy, of Electrical Engineering

Curriculum Vitae available Online

Bio

BIO

Grace Gao is an associate professor in the Department of Aeronautics and Astronautics at Stanford University, with a courtesy appointment in the Electrical Engineering Department. She leads the Navigation and Autonomous Vehicles Laboratory (NAV Lab) and serves as co-director of the Stanford AI Safety Center and co-lead of the Stanford SystemX Robotics area. Her research focuses on robust and secure perception, localization, and navigation, with applications in crewed and uncrewed aerial vehicles, autonomous cars, humanoid robots, and space robotics.

Prof. Gao has won numerous awards, including the NSF CAREER Award, the Institute of Navigation Early Achievement Award, the RTCA William E. Jackson Award, and the Inspiring Early Academic Career Award from Stanford University. In addition to her research achievements, she has received significant recognition for her teaching and advising, including the AIAA Stanford Chapter Excellence in Advising and the Excellence in Teaching Awards.

ACADEMIC APPOINTMENTS

- Associate Professor, Aeronautics and Astronautics
- Associate Professor (By courtesy), Electrical Engineering

HONORS AND AWARDS

- 1st Place Winner, NASA Lunar Autonomy Challenge (together with students), NASA (2025)
- 2024 Most Cited Manuscript (together with students), Journal of the Institute of Navigation (2025)
- Best Paper of the Track Award (together with students), IEEE Aerospace Conference (2025)
- AIAA Teacher of the Year, AIAA Stanford Chapter (2023)
- AIAA Advisor of the Year, AIAA Stanford Chapter (2022)
- Inspiring Early Academic Career Award, Stanford Faculty Womens Forum (2022)
- Campus Distinguished Promotion Award, University of Illinois at Urbana-Champaign (2019)
- List of Teachers Ranked as Excellent by Their Students, University of Illinois at Urbana-Champaign (2018, 2017, 2015, 2014)
- Engineering Council Award for Excellence in Advising, University of Illinois at Urbana-Champaign (2018, 2017)
- CAREER Award, National Science Foundation (2018)
- Dean's Award for Excellence in Research, University of Illinois at Urbana-Champaign (2017)
- AIAA Teacher of the Year, AIAA Illinois Chapter (2016)
- Best Paper Award, IEEE/ION PLANS Conference (2016)
- Everitt Award for Teaching Excellence, University of Illinois at Urbana-Champaign (2015)

- 50 GNSS Leaders to Watch, GPS World Magazine (2009)
- William E. Jackson Award (for outstanding PhD thesis), Radio Technical Commission for Aeronautics (RTCA) (2009)
- Early Achievement Award, Institute of Navigation (2008)
- Best Paper/Presentation of the Session Award (33 times over 19 years, together with students), ION GNSS+ Conference (2007-2025)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- Ph.D., Stanford University

LINKS

- Stanford NAV Lab: https://navlab.stanford.edu/

Teaching

COURSES

2026-27

- Flight Mechanics & Controls: AA 173 (Win)
- Global Positioning Systems: AA 272 (Aut)
- Lunar Positioning, Navigation, and Timing (PNT): AA 278 (Spr)

2025-26

- Flight Mechanics & Controls: AA 173 (Win)
- Global Positioning Systems: AA 272 (Aut)
- Lunar Positioning, Navigation, and Timing (PNT): AA 278 (Spr)

2024-25

- Flight Mechanics & Controls: AA 173 (Spr)
- Global Positioning Systems: AA 272 (Aut)
- Navigation for Autonomous Systems: AA 275 (Win)

2023-24

- Flight Mechanics & Controls: AA 173 (Spr)
- Global Positioning Systems: AA 272 (Aut)
- Navigation for Autonomous Systems: AA 275 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Timothy Chen, Pol Francesch Huc, Anargyros Kriezis, Mason Murray-Cooper

Doctoral Dissertation Advisor (AC)

Guillem Casadesus Vila, Kaila Coimbra, Daniel Neamati, Mira Partha, Elena Wittemyer, Asta Wu

Orals Evaluator

Timothy Chen, Shane Lowe, Mason Murray-Cooper

Master's Program Advisor

Andrew Bernas, William Covington, Abhik Das, Grace Hendricks, Tyler Mapes, Erwin Poussi, Alexander Saltmarsh, David Stier, Alissa Tong

Doctoral (Program)

Sri Aditya Deevi, Hosei O