

DOĞA YÜCALAN

Assistant Professor of Teaching
Department of Engineering Education

WORK ADDRESS

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EDUCATION

Ph.D., Aerospace Engineering, Cornell University Aug 2022
Dissertation title: Autonomous Navigation of Relativistic Spacecraft: Theory and Applications
Adviser: Dr. Mason Peck, Committee: Dr. Dmitry Savransky, Dr. Thomas Hartman
M.S., Aerospace Engineering, Cornell University May 2019
B.S., Electrical and Electronics Engineering, Middle East Technical University Jun 2016
B.S., Physics, Middle East Technical University Jun 2016

PROFESSIONAL EXPERIENCE

Assistant Teaching Professor, Dept. of Engineering Education Sep 2022–Present
University at Buffalo, Buffalo, NY
Graduate Student Lecturer, Mechanical and Aerospace Eng. Dept. Jun 2020–Aug 2021
Cornell University, Ithaca, NY

HONORS AND AWARDS

CATT EDJI Faculty Fellowship, University at Buffalo 2023
SEAS EJAC Faculty Development Micro-grant, University at Buffalo 2023
Center for Teaching Innovation Fellowship, Cornell University 2020
Amelia Earhart Fellowship, Zonta International 2018

TEACHING AND COURSES TAUGHT

University at Buffalo, Buffalo, NY
EAS 207: Statics Fall '24, '23, '22, Spring '24, '23
EAS 208: Dynamics Spring '24, '23
Cornell University, Ithaca, NY
MAE 2030: Dynamics Summer '21, '20

ADDITIONAL TEACHING AND CURRICULUM CONTRIBUTIONS

Department of Engineering Education, University at Buffalo, Buffalo, NY

Teaching Assistant Trainer

Spring '23

Trained Spring 2023 EAS207 and EAS208 TAs with Dr. Jessica Swenson.

Mechanical and Aerospace Engineering Department, Cornell University, Ithaca, NY

Teaching Assistant, MAE 3260: System Dynamics

Spring '21, '20, '18, Summer '19

Original contributions to laboratory manuals and recitations.

Teaching Assistant, MAE 3780: Mechatronics

Fall '20

Original contributions to project grading rubrics and recitations.

Engineering Learning Initiatives, Cornell University, Ithaca, NY

Teaching Assistant Mentor

Fall '21

Co-founded the teaching assistant training program “Interactive Learning Collaborative.”

Workshop Co-facilitator

Spring '21, Fall '20

Original contributions to the “Group Dynamics and Management Workshop.”

Center for Teaching Innovation, Cornell University, Ithaca, NY

Workshop Co-facilitator

Spring '21, Fall '20

Original contributions to the “Assessing Student Learning Workshop.”

PUBLICATIONS

Google Scholar: ([link](#))

ORCID ID: 0000-0003-2926-1928 ([link](#))

Refereed Journal Articles (* denotes graduate students, + denotes undergraduate student)

Published

1. Evans, C., Adler, K., Yucalan, D., Schneider-Bentley, L., Gender Patterns in Engineering PhD Teaching Assistant Evaluations Corroborate Role Congruity Theory, *International Journal of STEM Education*, 11(5), 2024.
2. Yucalan, D.*, Peck, M., Autonomous Navigation of Relativistic Spacecraft in Interstellar Space, *Journal of Guidance, Control, and Dynamics*, 44(6), 1106-1115, 2021.

Refereed Proceedings Articles (presenter name underlined, *graduate student, +undergraduate student)

1. Yucalan, D.*, Evans, C., Schneider-Bentley, L., Utilizing Teaching Assistants to Increase Active Learning in Lectures, *ASEE St. Lawrence Section Annual Conference*, Syracuse, NY, 2022.
2. Yucalan, D.*, Peck, M. An Optimal Navigation Filter for Relativistic Spacecraft. *AIAA SciTech Forum*, Virtual Event, 2021.

3. Yucalan, D.*, Peck, M. A Static Estimation Method for Autonomous Navigation of Relativistic Spacecraft. *IEEE Aerospace Conference*, Big Sky MT, 2019.
4. Cerri-Serim, D., Serim, M. M., Yucalan, D.+ , Sahiner, S., Inam, S. C., and Baykal, A. The Timing Noise of Magnetars. *11th INTEGRAL Conference Gamma-Ray Astrophysics in Multi-Wavelength Perspective*, Amsterdam, The Netherlands, 2016.

TECHNICAL PRESENTATIONS

Invited Talks

1. “Autonomous Navigation of Relativistic Spacecraft,” Middle East Technical University, January 11, 2019

PROFESSIONAL ACTIVITIES

Reviewer

NSF Review Panel	2024
<i>ASEE St. Lawrence Section Annual Conference</i> , Conference Reviewer	2022
<i>Acta Astronautica</i> , Manuscript Reviewer	2021

Membership in Professional and Honor Societies

Association of American Colleges & Universities, Member	Oct 2020–Present
American Society for Engineering Education (ASEE), Member	Feb 2020– Present
Institute of Electrical and Electronics Engineers (IEEE), Member	Jun 2018–Dec 2022
American Institute of Aeronautics and Astronautics (AIAA), Member	Sep 2017–Sep 2022
Cornell University Carl Sagan Institute (CSI), Member	Dec 2018–Aug 2022
Cornell University Engineering Learning Initiatives (ELI), Facilitator	May 2020–Dec 2021
Cornell University Center for Teaching Innovation (CTI), Fellow	Jun 2020–May 2021
Cornell University NextGen Professors, Member	Oct 2019–May 2020

UNIVERSITY SERVICE

Department Committees

DEE Graduate Students Admissions Committee, University at Buffalo, Buffalo NY	
Member	Sep 2022–Present

School Committees

JEDI Inclusive Teaching Subcommittee, University at Buffalo, Buffalo NY	
Co-chair	Mar 2023– Present