

# Hao Chen

## CONTACT INFORMATION

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Assistant Professor  
Department of Systems and Enterprises (SE)  
Stevens Institute of Technology  
Babbio Center 534  
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Director, Complex Engineering Systems Lab: <https://complex-systems-lab.com/>

## ACADEMIC APPOINTMENTS

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### Stevens Institute of Technology, Hoboken NJ

Assistant Professor, Aug. 2021 - Present

### Georgia Institute of Technology, Atlanta GA

Postdoctoral Fellow, Jul. 2021 - Aug. 2021

## EDUCATION

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### Georgia Institute of Technology, Atlanta GA

May 2021

#### Ph.D. in Aerospace Engineering

Thesis: Interdisciplinary Space Logistics Optimization Framework for Large-Scale Space Exploration

Committee: Prof. Koki Ho (Chair), Prof. E. Glenn Lightsey, Prof. Brian Gunter, Prof. Christopher Carr, Prof. Harrison M. Kim

Major/Minor: Aerospace Engineering (Major), Mathematics (Minor)

### University of Illinois Urbana-Champaign, Urbana IL

Aug. 2016

#### M.S. in Aerospace Engineering

### Sun Yat-sen University, Guangzhou China

Jun. 2014

#### B.S. in Theoretical and Applied Mechanics

## AWARDS/SCHOLARSHIPS

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- **Excellence in Teaching as an Assistant Professor (SSE)**, Stevens Institute of Technology 2024
- **SSE Dean Research Incentive Award**, Stevens Institute of Technology 2023
- **Luigi G. Napolitano Award**, International Astronautical Congress 2019
  - Conferred every year to a young scientist who has significantly contributed to the advancement of the aerospace science.
- **Mavis Future Faculty Fellowship (MF3)**, University of Illinois Urbana-Champaign 2018
- **Warren W. Yee Memorial Fellowship**, University of Illinois Urbana-Champaign 2017
- **The First Prize Scholarship**, Sun Yat-sen University 2012

**Book Chapters**

- [B1] K. Ho, **H. Chen**, and T. Sarton du Jonchay, "Chapter 16: Mathematical Methods for Space Mission Planning and Architecture Design," in *The Planning and Execution of Human Missions to the Moon and Mars*, ed. Michelle Poliskie (Reston, VA: American Institute of Aeronautics & Ast., 2023), pp. 597-624.

**Submitted Journal Articles**

- **I. Pena** and **H. Chen**, "Exploring Team Dynamics and Performance in Extended Space Missions Using Agent-Based Modeling," *PLOS One*. (Under Review)
- **E. Gkaravela**, H. Lee and **H. Chen**, "Distributed Space Resource Logistics Architecture Optimization under Economies of Scale," *Journal of Spacecraft and Rockets*. (Under Review)
- **A. Abdul-Hamid** and **H. Chen**, "System Level Analysis and Management of Orbital Debris Using Empirical Dynamic Modeling," *Journal of Aerospace Information Systems*. (Under Review)

**Journal Articles**

- [J1] H. Lee, D. Rogers, B. Pearl, **H. Chen**, and K. Ho, "[Deterministic Multi-stage Constellation Reconfiguration Using Integer Linear Programming and Sequential Decision-Making Methods](#)," *Journal of Spacecraft and Rockets*. (Accepted).
- [J2] Y. Takubo, **H. Chen**, and K. Ho, "[Hierarchical Reinforcement Learning Framework for Stochastic Spaceflight Campaign Design](#)," *Journal of Spacecraft and Rockets*, Vol. 59, No. 2, pp. 421-433, 2022.
- [J3] **H. Chen**, M. Ornik, and K. Ho, "[Space Exploration Architecture and Design Framework for Commercialization](#)," *Journal of Spacecraft and Rockets*, Vol. 59, No. 2, pp. 538-551, 2022.
- [J4] T. Sarton du Jonchay, **H. Chen**, M. Isaji, Y. Shimane, and K. Ho, "[On-Orbit Servicing Optimization Framework with High- and Low-Thrust Propulsion Tradeoff](#)," *Journal of Spacecraft and Rockets*, Vol. 59, No.1, pp. 33-48, 2022.
- [J5] **H. Chen**, B. Gardner, P. Grogan, and K. Ho, "[Flexibility Management for Space Logistics via Decision Rules](#)," *Journal of Spacecraft and Rockets*, Vol. 58, No. 5, pp. 1314-1324, 2021.
- [J6] T. Sarton du Jonchay, **H. Chen**, O. Gunasekara, and K. Ho, "[Framework for Modeling and Optimization of On-Orbit Servicing Operations Under Demand Uncertainties](#)," *Journal of Spacecraft and Rockets*, Vol. 58, No. 4, pp. 1157-1173, 2021.
- [J7] **H. Chen**, T. Sarton du Jonchay, L. Hou, and K. Ho, "[Multifidelity Space Mission Planning and Infrastructure Design Framework for Space Resource Logistics](#)," *Journal of Spacecraft and Rockets*, Vol. 58, No. 2, pp. 538-551, 2021.
- [J8] T. Sarton du Jonchay, **H. Chen**, Anna Wieger, Zoe Szajnfarber, and K. Ho, "[Space Architecture Design for Commercial Suitability: A Case Study in In-Situ Resource Utilization Systems](#)," *Acta Astronautica*, Vol. 175, pp. 45-50, 2020.
- [J9] **H. Chen**, T. Sarton du Jonchay, L. Hou, and K. Ho, "[Integrated In-Situ Resource Utilization System Design and Logistics for Mars Exploration](#)," *Acta Astronautica*, Vol. 170, pp. 80-92, 2020.
- [J10] **H. Chen**, H. Lee, and K. Ho, "[Space Transportation System and Mission Planning for Regular Interplanetary Missions](#)," *Journal of Spacecraft and Rockets*, Vol. 56, No. 1, pp. 12-20, 2019.
- [J11] Z. Chen, **H. Chen**, and K. Ho, "[Analytical Optimization Methods for Space Logistics](#)," *Journal of Spacecraft and Rockets*, Vol. 55, No. 6, pp. 1582-1586, 2018.
- [J12] **H. Chen** and K. Ho, "[Integrated Space Logistics Mission Planning and Spacecraft Design with Mixed-Integer Nonlinear Programming](#)," *Journal of Spacecraft and Rockets*, Vol. 55, No. 2, pp. 365-381, 2018.

### Conference Proceedings (Selected)

- [C1] **A. Abdul-Hamid**, B. D. Pearl, H. Lee, and **H. Chen**, “Developing Commercialization Framework for Space Debris Removal,” *2025 AIAA Science and Technology Forum and Exposition (AIAA SciTech Forum)*, Orlando, FL, no. AIAA-2025-1105, Jan. 2025.
- [C2] **L. Cottrill**, **A. Tiscareno**, **L. Park**, **J. Bardaji**, **A. Abdul-Hamid**, H. Lee, and **H. Chen**, “Cost and Benefit Analysis of Removing Small Debris Using Space-Based and Ground-Based Laser Systems,” *2025 AIAA Science and Technology Forum and Exposition (AIAA SciTech Forum)*, Orlando, FL, no. AIAA-2025-1161, Jan. 2025.
- [C3] **A. Bahengam**, M.-A. Miri, R. J. Rupert, W. Dyk, and **H. Chen**, “Quantum-Assisted Space Logistics Mission Planning,” *2025 AIAA Science and Technology Forum and Exposition (AIAA SciTech Forum)*, Orlando, FL, no. AIAA-2025-1107, Jan. 2025.
- [C4] **E. Gkaravela** and **H. Chen**, “Logistics Analysis for Lunar Post-Mission Disposal,” *2025 AIAA Science and Technology Forum and Exposition (AIAA SciTech Forum)*, Orlando, FL, no. AIAA-2025-1480, Jan. 2025.
- [C5] **I. Pena** and **H. Chen**, “Heterogeneous vs Homogeneous Teams in Mars Settlement Missions,” *AIAA ASCEND 2024*, Las Vegas, NV, no. AIAA 2024-4844, Jul. 2024.
- [C6] **A. Abdul-Hamid** and **H. Chen**, “Understanding System Level Impacts of Orbital Debris Management Using Empirical Dynamic Modeling,” *2024 AIAA Science and Technology Forum and Exposition (AIAA SciTech Forum)*, Orlando, FL, no. AIAA 2024-2053, Jan. 2024.
- [C7] **C. Chullen**, **I. Pena**, and **H. Chen**, “Technology Infusion in Spacesuits – A Comparative System Analysis,” *20<sup>th</sup> International Conference on Systems Engineering Research (CSER 2023)*, Hoboken, NJ, Mar. 2023.
- [C8] **C. Chullen**, **I. Pena**, **K. Ganesan**, and **H. Chen**, “Advanced Technology Infusion into Spacesuit Systems,” *AIAA ASCEND 2022*, Las Vegas, NV & Virtual, no. AIAA 2022-4351, Oct. 2022.
- [C9] H. Lee, **H. Chen**, and K. Ho, “Maximizing Observation Throughput via Multi-Stage Satellite Constellation Reconfiguration,” *2022 AAS/AIAA Astrodynamics Specialist Conference*, Charlotte, NC, AAS 22-825, Aug. 2022.
- [C10] **H. Chen**, and H. Lee, “Distributed In-Situ Resource Utilization System Optimization for Multi-Mission Space Exploration,” *AIAA ASCEND 2021*, Las Vegas, NV & Virtual, no. AIAA 2021-4079, Nov. 2021.
- [C11] T. Sarton du Jonchay, Y. Shimane, M. Isaji, **H. Chen**, and K. Ho, “On-Orbit Servicing Logistics Framework Generalized to the Multi-Orbit Case,” *2021 AAS/AIAA Astrodynamics Specialist Conference*, Online, Aug. 2021.
- [C12] **H. Chen**, B. Gardner, P. Grogan, and K. Ho, “Flexibility Management for Space Logistics Through Decision Rules,” *AIAA ASCEND 2020*, AIAA-2020-4187, Online, Nov. 2020.
- [C13] Y. Takubo, **H. Chen**, and K. Ho, “Performance Analysis of Hierarchical Reinforcement Learning Framework for Stochastic Space Logistics,” *AIAA ASCEND 2020*, AIAA-2020-4230, Online, Nov. 2020.
- [C14] T. Sarton du Jonchay, **H. Chen**, O. Gunasekara, and K. Ho, “Rolling Horizon Optimization Framework for the Scheduling of On-Orbit Servicing Operations under Servicing Demand Uncertainties,” *AIAA ASCEND 2020*, AIAA-2020-4131, Online, Nov. 2020.
- [C15] K. Ikeya, H. Sakamoto, **H. Chen**, and K. Ho, “Integrated Orbit Design and Network-Based Optimization of Interplanetary Mission Architectures,” *AIAA SciTech Forum 2020*, AIAA 2020-0072, Orlando, FL, Jan. 2020.
- [C16] **H. Chen**, M. Ornik, and K. Ho, “Incentive Design for Commercial Participation in Space Logistics Infrastructure Development and Deployment,” *70TH International Astronautical Congress*, Washington D.C., United States, IAC-19,D3,1,6,x51353, Oct. 2019.
- [C17] **H. Chen**, T. Sarton du Jonchay, L. Hou, and K. Ho, “Space Resource Logistics for Human Exploration to Mars,” *70TH International Astronautical Congress*, Washington D.C., United States, IAC-19,A5,2,4,x49279, Oct. 2019.

- [C18] T. Sarton du Jonchay, **H. Chen**, A. Wieger, Z. Szajnarfarber, and K. Ho, “Space System Architecting for Commercial Suitability: A Case Study in Cislunar Space Transportation,” *70TH International Astronautical Congress*, Washington D.C., United States, IAC-19,D3,4,4,x49785, Oct. 2019.
- [C19] A. Wieger, **H. Chen**, T. Sarton du Jonchay, K. Ho, and Z. Szajnarfarber, “An Approach to Endogenously Incentivizing Commercial Participation through System Architecture Choices,” *70TH International Astronautical Congress*, Washington D.C., United States, IAC-19,D3,1,4,x52667, Oct. 2019.
- [C20] **H. Chen**, T. Sarton du Jonchay, L. Hou, and K. Ho, “Multi-Fidelity Space Mission Planning and Space Infrastructure Design Framework for Space Resource Logistics,” *AIAA Propulsion & Energy Forum 2019*, Indianapolis, IN, no. AIAA 2019-4134, Sep. 2019.
- [C21] **H. Chen** and K. Ho, “Hierarchical Reinforcement Learning Framework for Space Exploration Campaign Design,” *AIAA Propulsion & Energy Forum 2019*, Indianapolis, IN, no. AIAA 2019-4135, Sep. 2019.
- [C22] **H. Chen**, A. Lapin, T. Ukai, C. Lei, and K. Ho, “Optimization for Large-Scale Multi-Mission Space Campaign Design by Approximate Dynamic Programming,” *AIAA SPACE 2018 Conference and Exposition*, Orlando, FL, no. AIAA 2018-5287, Sep. 2018.
- [C23] **H. Chen**, and K. Ho, “Multi-Actor Analysis Framework for Space Architecture Commercialization,” *AIAA SPACE 2018 Conference and Exposition*, Orlando, FL, no. AIAA 2018-5410, Sep. 2018.
- [C24] **H. Chen**, K. Ho, B. Gardner, and P. Grogan, “Built-in Flexibility for Space Logistics Mission Planning and Spacecraft Design,” *AIAA SPACE 2017 Conference and Exposition*, Orlando, FL, no. AIAA 2017-5348, Sep. 2017.
- [C25] **H. Chen**, H. Lee, and K. Ho, “Space Transportation System and Infrastructure Design for Regular Interplanetary Cargo Missions,” *AIAA SPACE 2017 Conference and Exposition*, Orlando, FL, no. AIAA 2017-5197, Sep. 2017.
- [C26] Z. Chen, **H. Chen**, and K. Ho, “Analytical model of Space Infrastructure Staged Deployment Strategy in Space Logistics,” *AIAA SPACE 2017 Conference and Exposition*, Orlando, FL, no. AIAA 2017-5349, Sep. 2017.
- [C27] K. Ho, **H. Chen**, and H. M. Kim, “Value of Bootstrapping Staged Deployment of Infrastructure: Case Study in Space Infrastructure Deployment,” *ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, Cleveland, OH, no. DETC2017-67610, Aug. 2017.
- [C28] **H. Chen**, and K. Ho, “Integrated Space Mission Planning and In-Orbit Infrastructure Design with Mixed-Integer Programming,” *AIAA SPACE 2016 Conference and Exposition*, Long Beach, CA, no. AIAA 2016-5309, Sep. 2016.

### Extended Abstracts

- [A1] **A. Bahengam** and **H. Chen**, “Analyzing Technology Evolvement and Innovation Pattern in Engineering Systems Development,” *2024 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, IDETC2024-148323, Washington, DC, Aug. 2024.
- [A2] **A. Bahengam** and **H. Chen**, “Hamiltonian Representation for Engineering Systems Design,” *2024 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, IDETC2024-148307, Washington, DC, Aug. 2024.

### Magazine Articles

- [M1] **H. Chen**, and P. Grogan, “[Navigating Challenges and Fueling Growth in Space Logistics Capabilities](#),” *AIAA Aerospace America*, Dec. 2024.
- [M2] **H. Chen**, and K. Ho, “[Space Logistics - A Burgeoning Commercial Market](#),” *AIAA Aerospace America*, Dec. 2023.
- [M3] **H. Chen**, and K. Ho, “[Development of On-Orbit Servicing, Assembly and Manufacturing Creates New Capabilities in Spacefaring Operations](#),” *AIAA Aerospace America*, Dec. 2022.

[M4] **H. Chen**, and K. Ho, "[Gateway Leads the Era of Deep Space Infrastructure Development](#)," *AIAA Aerospace America*, Dec. 2021.

### **Invited Conference/Workshop/Seminar Presentations**

- [I1] **H. Chen**, "Space Logistics: Building Astro-logistics Supply Chain Throughout the Solar System," *Aerospace Engineering Seminar Series*, West Virginia University, Oct. 2024.
- [I2] **H. Chen**, "The Grand Challenge of Space Logistics for Space Stations, Moon, and Mars," *Space Education & Strategic Applications 2023 Conference*, Online, Sep. 2023.
- [I3] **H. Chen**, and K. Ho, "Time-expanded Network for Long-Term Human Space Mission Planning," *INFORMS Annual Meeting*, National Harbor, MD, Nov. 2020.

### **Conference Presentations**

- [P1] "Flexibility Management for Space Logistics Through Decision Rules," at *ASCEND 2020*, Online, Nov. 2020.
- [P2] "Incentive Design for Commercial Participation in Space Logistics Infrastructure Development and Deployment," at *70TH International Astronautical Congress*, Washington D.C., United States, Oct. 2019.
- [P3] "Space Resource Logistics for Human Exploration to Mars," at *70TH International Astronautical Congress*, Washington D.C., United States, Oct. 2019.
- [P4] "Multi-Fidelity Space Mission Planning and Space Infrastructure Design Framework for Space Resource Logistics," at *AIAA Propulsion & Energy Forum 2019*, Indianapolis, IN, Sep. 2019.
- [P5] "Hierarchical Reinforcement Learning Framework for Space Exploration Campaign Design," at *AIAA Propulsion & Energy Forum 2019*, Indianapolis, IN, Sep. 2019.
- [P6] "Optimization for Large-Scale Multi-Mission Space Campaign Design by Approximate Dynamic Programming," at *AIAA SPACE 2018 Conference and Exposition*, Orlando, FL, Sep. 2018.
- [P7] "Multi-Actor Analysis Framework for Space Architecture Commercialization," at *AIAA SPACE 2018 Conference and Exposition*, Orlando, FL, Sep. 2018.
- [P8] "Integrated Space Mission Planning and In-Orbit Infrastructure Design with Mixed-Integer Programming," at *AIAA SPACE 2016 Conference and Exposition*, Long Beach, CA, Sep. 2016.

### **Other Presentations**

- [P9] **H. Chen**, T. Sarton du Jonchay, L. Hou, and K. Ho, "Integrated Analysis Framework for Space Propellant Logistics: Production, Storage, and Transportation," Lunar ISRU Workshop, Columbia, MD, Jul. 2019.
- [P10] K. Ho and **H. Chen**, "Space Transportation Network Analysis for CisLunar Space Economy with Lunar Resources," Annual Meeting of the Lunar Exploration Analysis Group, Columbia, MD, Oct. 2017.
- [P11] T. Ukai, **H. Chen**, and K. Ho, "Optimization for Campaign-level Human Space Mission Design," *INFORMS Annual Meeting*, Houston, TX, Oct. 2017.

### **AWARDED RESEARCH FUNDING**

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Total awarded as a PI: **\$346K**. (My total share: **\$337K**)

#### External grant

- [G1] Space Logistics Analysis and Incentive Design for Commercialization of Orbital Debris Remediation
- Role: **PI**
  - Co-PI (WVU PI): Hang Woon Lee
  - Source: **NASA**
  - Period of Performance: **Oct. 2023 – Sep. 2025**.
  - Amount: **\$105,916**
  - Chen's share: **92% (\$97,357)**

[G2] ERI: Representations of Complex Engineering Systems via Technology Recursion and Renormalization Group

- Role: **sole PI**
- Source: *NSF*
- Period of Performance: **Sep. 2023 – Aug. 2025.**
- Amount: **\$199,997**
- Chen's share: **100%**

Internal grant

[G3] Real-time Brain State and Wellness Assessment Framework based on Multimodal EEG Platform

- Role: **PI**
- Co-I (Stevens): Feng Liu and Zhongyuan (Annie) Yu
- Source: *Stevens Institute of Technology (SSE Dean's Research Incentive Award)*
- Period of Performance: **Feb. 2023 – Feb. 2024.**
- Amount: **\$39,955**

**POSTDOC/STUDENT ADVISING**

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- Ph.D. Thesis, Supervisor

In Progress

- **Cinda Chullen** (In Progress)
- **Asaad Abdul-Hamid** (In Progress)
- **Amiratabak Bahengam** (In Progress)
- **Iser Pena** (In Progress)

- Ph.D. Thesis, Committee Member

In Progress

- **Shihao Yang**, (Advisor: Feng Liu)
- **Ishan Aryendu**, (Advisor: Ying Wang)

Completed

- **Josue I. Tapia**, "A Conceptual Mission Engineering Framework for Evaluating the Performance of Precipitation Observing Missions," Ph.D., Stevens Institute of Technology, 2023 (Advisor: Paul Grogan).

- M.S. Thesis, Supervisor

In Progress

- **Evangelia Gkaravela** (In Progress)

- M.S. Thesis, Reader

Completed

- **Iser Pena**, "Improving Satellite-Based Convective Storm Observations: An Operational Policy Based on Static Historical Data," M.S., Stevens Institute of Technology, 2023 (Advisor: Paul Grogan)

- M.S. Non-Thesis (Special Problem Advisee)

In Progress

- **John Machacon**, M.S. (Non-Thesis; Special Problem); at Stevens, 2025.

Completed

- **Brooke Cole**, M.S. (Non-Thesis; Special Problem); at Stevens, 2022.
- **Matthew Crisman**, M.S. (Non-Thesis; Special Problem); at Stevens, 2022.
- **Nestor Mercado**, M.S. (Non-Thesis; Special Problem); at Stevens, 2022.
- **Iser Pena**, M.S. (Special Problem); at Stevens, 2022.
- **Harrup Singh**, M.S. (Non-Thesis; Special Problem); at Stevens, 2022.
- **Benjamin Stanley**, M.S. (Non-Thesis; Special Problem); at Stevens, 2022.

- **Jorge Alvarez-Jimenez**, M.S. (Non-Thesis; Special Problem); at Stevens, 2022.
- **Ryan Burns**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Keishaun Griffin**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Alan Hairston**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Christopher Rovatsos**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Siddharth Lokhande**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Larissa Cottrill**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023, 2024.
- **Sean Duffy**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Julia Dresser**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Ryan Poust**, M.S. (Non-Thesis; Special Problem); at Stevens, 2023.
- **Jaime Bardaji**, M.S. (Non-Thesis; Special Problem); at Stevens, 2024.
- **Anthony Mendo**, M.S. (Non-Thesis; Special Problem); at Stevens, 2024.
- **Albert Tan**, M.S. (Non-Thesis; Special Problem); at Stevens, 2024.
- **Aaron Tiscareno**, M.S. (Non-Thesis; Special Problem); at Stevens, 2024.
- Undergraduate Students (Independent Study Advisee/Funded Student Researcher/Stevens Pinnacle Scholars Program)
  - **Kaushikk Ganesan**, at the Stevens Institute of Technology, May 2022 – Aug. 2022
  - **Christina Longo**, at the Stevens Institute of Technology, May 2023 – May 2024
  - **Tyler Chipetine**, at the Stevens Institute of Technology, May 2024 – Aug. 2024
  - **Lawrence Park**, at the Stevens Institute of Technology, May 2024 – Aug. 2024
  - **Abhi Prajapati**, at the Stevens Institute of Technology, May 2024 – Aug. 2024
  - **Aden Parikh**, at the Stevens Institute of Technology, May 2024 – Aug. 2024
  - **Michael Sikiric**, at the Stevens Institute of Technology, May 2024 – Aug. 2024
- Other
  - **Iser Pena**, Research Assistant Staff, Stevens Institute of Technology, Jun. 2023 – Aug. 2024
  - **Jaime Bardaji**, Research Assistant Staff, Stevens Institute of Technology, Jun. 2024 – Aug. 2024

## TEACHING EXPERIENCE

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### Stevens Institute of Technology, Hoboken NJ

#### *Instructor*

<u>Term</u>	<u>Course (U = Undergraduate level, G = Graduate level)</u>	<u>Overall Rating</u>
Spring 2025	EM/ISE 322 <i>Engineering Design VI (U)</i>	<i>In Progress</i>
Spring 2025	EM/ISE 424 <i>Engineering Design VIII (U, Senior Design)</i>	<i>In Progress</i>
Fall 2024	PRV 101 <i>First Year Experience (U)</i>	4.43/5.00
Fall 2024	EM/ISE 423 <i>Engineering Design VII (U, Senior Design)</i>	4.80/5.00
Summer 2024	SYS 640 <i>System Supportability and Logistics (G)</i>	4.50/5.00
Spring 2024	EM/ISE 322 <i>Engineering Design VI (U)</i>	4.40/5.00
Spring 2024	EM/ISE 424 <i>Engineering Design VIII (U, Senior Design)</i>	5.00/5.00
Fall 2023	EM/ISE 423 <i>Engineering Design VII (U, Senior Design)</i>	4.67/5.00
Fall 2023	SYS 640 <i>System Supportability and Logistics (G)</i>	4.69/5.00
Spring 2023	EM/ISE 424 <i>Engineering Design VIII (U, Senior Design)</i>	4.80/5.00
Spring 2023	SYS 640 <i>System Supportability and Logistics (G)</i>	4.80/5.00
Fall 2022	EM/ISE 423 <i>Engineering Design VII (U, Senior Design)</i>	4.83/5.00
Fall 2022	SYS 640 <i>System Supportability and Logistics (G)</i>	5.00/5.00
Spring 2022	SYS 640 <i>System Supportability and Logistics (G)</i>	4.60/5.00
Fall 2021	SYS 640 <i>System Supportability and Logistics (G)</i>	4.75/5.00

## **Georgia Institute of Technology, Atlanta GA**

*Graduate Teaching assistant*

AE 6353 Orbital Mechanics (Graduate Level)

**Fall 2020**

## **University of Illinois Urbana-Champaign, Urbana IL**

*Graduate Teaching assistant*

AE 403 Spacecraft Attitude Control (Undergraduate/Graduate Level)

**Spring 2017, Spring 2019**

AE 352 Aerospace Dynamical Systems (Undergraduate Level)

**Fall 2017**

## **EDUCATIONAL INNOVATIONS AND CONTRIBUTIONS**

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- Founding Faculty Advisor, Students for the Exploration and Development of Space (SEDS) at Stevens Institute of Technology, Sep. 2022 – May 2023.
- Revamped EM and ISE senior design course materials (EM/ISE 423/424 Engineering Design VII/VIII) at Stevens Institute of Technology; the newly developed senior design course by Dr. Chen became highly interdisciplinary engaging 10-20 senior students from CHE, CPE, EE, EN, and ME each year. One senior design team won the First Prize in 2023 Ansary Entrepreneurship Competition.
- Faculty advisor for a student team at NASA RASC-AL Design Competition, Stevens Institute of Technology, 2022, 2023, and 2024.
- Invited by the Division of Student Affairs at Stevens to be one of the inaugural faculty facilitators to teach a section of PRV101 First-Year Experience course. This class is to help freshmen successfully transit from high school to college and navigate their college experience at Stevens.

## **SERVICES**

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### **University service**

- Graduate Curriculum Committee, Stevens Institute of Technology, 2022 - 2024.

### **School/Department service**

- Systems Leaders Seminar Series Committee, Department of Systems and Enterprises, 2024.
- Tenured/Tenure-track Faculty Search Committee, School of Systems and Enterprises, 2023 - 2024.
- Graduate Curriculum Committee, School of Systems and Enterprises, 2022 - Present.
- EM/ISE Academic Committee, School of Systems and Enterprises, 2021 - Present.

### **Society Offices, Activities, and Membership**

- AIAA Space Logistics Technical Committee
  - Vice Chair, 2024 - Present.
  - Chair of Conference Subcommittee, 2021-2024.
  - Member, 2018-present.
- Young Professional, American Institute of Aeronautics and Astronautics (AIAA)
- Member, International Council on Systems Engineering (INCOSE)
- Member, American Society of Mechanical Engineers (ASME)
- Member, Institute of Electrical and Electronics Engineers (IEEE)

### **Organization and Chairmanship of Technical Sessions, Workshops, and Conferences**

- AIAA ASCEND Technical Program
  - Deputy Technical Program Chair, Space Science and Exploration, 2024 - Present.



- Deputy Technical Program Chair, Space Exploration and Infrastructure, 2023-2024.
- Space Logistics Topic Admin, 2021-2022.
- AIAA SciTech 2025 Forum and Exposition, Orlando, FL, Jan. 2025
  - Session Chair, EXPL-12, Space Logistics: Joint Session with Space Logistics TC I
  - Session Chair, EXPL-15, Space Logistics: Joint Session with Space Logistics TC II
  - Session Chair, EXPL-18, Lunar Exploration- Novel Logistics Concepts
- AIAA ASCEND 2024, Las Vegas, NV, Jul. 2024
  - Session Chair, EXPL-20: Orbital Space Infrastructure
  - Session Chair, EXPL-21: In-Space Servicing/Assembly/Manufacturing
- AIAA SciTech 2024 Forum and Exposition, Orlando, FL, Jan. 2024
  - Session Chair, EXPL-12: Humans in Space Logistics, Medical issues, Bio-Research
  - Session Chair, EXPL-23: Lunar/Mars Exploration - ISRU Operations
  - Session Chair, EXPL-26: Space Logistics (Joint Session with Space Logistics TC)
- 20<sup>th</sup> International Conference on Systems Engineering Research (CSER 2023), Hoboken, NJ, Mar. 2023
  - Technical Committee Co-Chair, Session Organizer
  - Session Chair, Systems Modularity
- AIAA SciTech 2023 Forum and Exposition, National Harbor, MD & Online, Jan. 2023
  - Session Chair, EXPL-18: Robotic Precursor and Human Exploration Missions
  - Session Chair, EXPL-21: Planetary Surface Interaction with Landing and Ground Robotics Systems
- ASCEND 2021 (AIAA) Conference, Las Vegas, NV & Online, Nov. 2021
  - Session Organizer.
  - Session Chair, SLS-01: Space Logistics Campaign Planning
  - Session Chair, SLS-02: Space Logistics Design for Commonality and Affordability
  - Session Chair, SLS-03: Resilient Architectures and Space Logistics

#### **Technical Journal or Conference Referee Activities**

- Review Coordinator & Reviewer, AIAA ASCEND 2025 Conference, Las Vegas, NV.
- Reviewer, AIAA SciTech 2025 Forum and Exposition, Orlando, FL.
- Review Coordinator & Reviewer, AIAA ASCEND 2024 Conference, Las Vegas, NV.
- Reviewer, AIAA SciTech 2024 Forum and Exposition, Orlando, FL.
- Reviewer, AIAA SciTech 2023 Forum and Exposition, National Harbor, MD & Online.
- Review Coordinator, 20<sup>th</sup> International Conference on Systems Engineering Research (CSER 2023), Hoboken, NJ.
- Review Coordinator & Reviewer, ASCEND 2021 (AIAA) Conference, Las Vegas, NV & Online.
- Reviewer, *Acta Astronautica*, 2022, 2023
- Reviewer, *Journal of Spacecraft and Rockets*, 2018, 2021, 2022, 2023, 2024
- Reviewer, *Journal of Aerospace Information Systems*, 2024
- Reviewer, *Advances in Space Research*, 2024
- Reviewer, *Journal of Engineering Design*, 2024
- Reviewer, *Aerospace*, 2021, 2022, 2023, 2024
- Reviewer, *Mathematics*, 2022, 2023
- Reviewer, *Mathematical and Computational Applications*, 2022
- Reviewer, *Remote Sensing*, 2023
- Reviewer, *Systems*, 2024
- Reviewer, *The Innovation Energy*, 2024
- Reviewer, *International Journal of Aerospace Engineering*, 2023, 2024

- Reviewer, *IEEE Transactions on Aerospace and Electronic Systems*, 2021, 2022, 2024
- Reviewer, *Transactions of the JSASS / Aerospace Technology Japan*, 2019, 2020, 2022, 2023

**Proposal Panels and Reviews**

- Fellow, National Science Foundation (NSF) CMMI's Game Changer Academies, 2022
- External Proposal Review Panel, Sandooq Al Watan (SW), Abu Dhabi, UAE, 2022 - Present.
- NSF Proposal Review Panel, 2024