Samantha Hoang

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Education

PhD. in Mech Eng, University of Washington (UW), Seattle, WA   2017–2022
 Faculty Advisor: Dr. I.Y. (Steve) Shen
 Thesis: Effects of Modeling Choices on High-Performance, Multi-Rotor Drone Dynamics and Energy Efficiency

M.S. in Mech Eng, UW, Seattle, WA   2017–2020

B.S. in Eng, Harvey Mudd College (HMC), Claremont, CA   2013–2017
 Faculty Advisor: Dr. Ziyad Duron

Teaching Experience

Asst Prof, Seattle University, Seattle, WA   2022–

Part-time Lecturer, UW, Seattle, WA   2020–2022
 Duties: Develop lectures and extra materials to aid learning, organize and delegate duties to teaching assistants. Hold office hours for students. Create exams and homework assignments. Adapt course materials for online learning due to COVID19.

 Courses:

 - Kinematics and Dynamics (Winter 2020 & Summer 2020 [online]) (40–150 Students)
 - Finite Element Analysis (Summer 2021 [online]) (25 students)

Teaching Asst, UW, Seattle, WA   2018–2022
 Duties: Lead and develop materials for recitation sections. Grade all assignments and exams. Hold office hours to answer student questions. Adapt course materials for online learning due to COVID19.

 Courses:

 - Undergraduate:

   – Kinematics and Dynamics (Winter 2018, Winter 2021 & Spring 2021 [online]) (130-160 Students)
   – Machine Design Analysis (Spring 2018) (65 students)
   – Introduction to System Dynamics (Winter 2019) (160 Students)
   – Systems Dynamic Analysis and Design (Spring 2019 & 2020 [online]) (160 Students)

 - Graduate:

   – Dynamics and Vibrations (Fall 2020 & 2021 [online]) (50 Students)

Teaching Asst and Lab Prep, HMC, Claremont, CA   2016–2017
 Duties: Assist with example problems in recitation sections. Grade all assignments and exams. Assist in lab experiments and building of model rockets, underwater robots, and sensor circuits

 Courses: Experimental Engineering (Spring 2016 & Spring 2017) (80-90 students)

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Smith is mith Can , Doctoral Student Researcher   2021–
Ava Obenaus & Elizabeth Rasmussen, Graduate Students, Mechanical Engineering Department, UW

- Collect data from student evaluations and instructor interviews on the transition from in-person to online learning for ME 230

- Identify changes in student engagement during transition to online learning

- Identify effective teaching strategies for increasing student engagement in both in-person and online settings

3. Hoang, S., Marsh, L., Aliseda, A., and Shen, I. Y. "Analysis of High Fidelity Modeling of Drone Dynamics and Aerodynamics for Reduced Energy Consumption." IDETC-CIE Vol. 83969 (2020): p.V007T07A022. https: //doi . org/10. 1115/DETC2020-22481

2. Hoang, S., Liu, Y., Aliseda, A., and Shen, I. Y. "Stability analysis of high-performance drones with suspended payloads." IDETC-CIE Vol. 59285 (2019): p.V008T10A039. https: //doi . org/10. 1115/DETC2019-97947

1. Abi Ghanem, M., Liang, X., Lydon, B., Potocsnak, L., Wehr, T., Ghanem, M., Hoang, S., Cai, S., and Boechler, N. "Wrinkles Riding Waves in Soft Layered Materials." Advanced Materials Interfaces Vol. 6, No. 1 (2019): p. 1801609. https: //doi . org/10. 1002/admi . 201801609

Presentations

Invited Talks

Hoang, S. and Shen, I. Y. "Effects of High Fidelity Modeling of Multirotor Drones." IDETC-CIE Spotlight Session, Virtual, August 2021.

Conference Talks

Hoang, S. and Shen, I. Y. "Cost of Controls for Multi-rotor Drones." IDETC-CIE, Virtual, August 2021.

Hoang, S., Marsh, L., Aliseda, A., and Shen, I. Y. "Analysis of High Fidelity Modeling of Drone Dynamics and Aerodynamics for Reduced Energy Consumption." IDETC-CIE, Virtual, August 2020.

Hoang, S., Liu, Y., Aliseda, A., and Shen, I. Y. "Stability analysis of high-performance drones with suspended payloads." IDETC-CIE, Anaheim, CA, August 2019.