

# Jonas Wagner

## Curriculum Vitae

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### Education

Since **The University of Texas at Dallas**

Fall 2020 PhD Mechanical Engineering

Concentration: Dynamic Systems and Controls

Overall GPA: 3.47

Fall 2016 - **University of Wisconsin-Platteville**

Spring 2020 B.S. Engineering Physics and B.S. Electrical Engineering

Emphasis: Control Systems, Minor: Mathematics

Overall GPA: 3.37

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### Teaching Experience

Spring 2023 **Team Mentor - UTDesign EPICS**

School of Engineering and Computer Science, The University of Texas at Dallas

- Mentored two five-person teams of undergraduate students
- Assisted nonprofit sponsors in defining the project requirements
- Aided students on technical aspects of their projects

Fall 2021 & **Teaching Assistant - Introduction to Mechanical Engineering I & II**

Spring 2022 Mechanical Engineering, The University of Texas at Dallas

Professors: Dr. Oziel Rios and Dr. Dani Fadda

- Instructed students in person on weekly labs and assignments
- Graded weekly deliverable and answered any grading related questions
- Collected and aggregated assignments for ABET Accreditation
- Developed new course activities and lectures for future semesters

Fall 2020 & **Teaching Assistant - Introduction to Mechanical Engineering I & II**

Spring 2021 Mechanical Engineering, The University of Texas at Dallas

Professors: Dr. Oziel Rios and Dr. Dani Fadda

- Managed discussion forums to answer student questions and provide supplementary instruction
- Graded weekly deliverable and answered any grading related questions
- Communicated with students via email and MS Teams to answer course-related questions

Spring 2020 **Lab Assistant - Introduction to Automatic Controls**

Electrical and Computer Engineering, University of Wisconsin-Platteville

Professor: Dr. Mehdi Roopaei

- Supervised and instructed junior and senior engineering students in control labs
- Transitioned DC-motor control labs into virtual Simulink-based labs (still used today)
- Provided students with video lectures for completing lab assignments virtually

Fall 2019 **Lab Assistant - Introduction to Engineering Projects**

Electrical and Computer Engineering, University of Wisconsin-Platteville

Professor: Dr. Mehdi Roopaei

- Assisted in teaching first year undergraduate students through the Electrical Engineering Module
- Guided students through a lab performing simple analysis and testing of amplifier circuits

Dec 2019 **Guest Lecturer - FEA Automation Workshop**  
 Engineering Physics, University of Wisconsin-Platteville  
 Professor: Dr. Gokul Gopalakrishnan  
 o Hosted a workshop for automating FEA testing using ANSYS workbench

Summer **Student Assistant - Online Course Development**  
 2019 Center for Distance Learning, University of Wisconsin-Platteville  
 Professor: Dr. Mehdi Roopaei  
 Assisted in the development of course materials for the online graduate course:  
 Engineering 7310 - Control Systems Engineering I

Fall 2016 - **Robot Design and Controls Mentor**  
 Spring 2020 FIRST Robotics Competition Team 171, Platteville, WI  
 o Mentor High School students to design, build, and control robots for competition  
 o Teach fundamental math and physics concepts while inspiring students to pursue STEM careers  
 o Facilitate the logistics of traveling for competition and outreach events  
 o Restructured the club administration to allow expansion of the organization to additional STEM programs throughout the area K-12 education system

## Relevant Skills

### Programming Experience

Basic C/C++/C#, Mathematica  
 Proficient Linux, Git, L<sup>A</sup>T<sub>E</sub>X  
 Advanced PYTHON, numpy, matplotlib, MATLAB, Simulink

### Engineering Tools

Proficient AutoCAD, ANSYS Workbench, Solidworks, Autodesk Inventor

### Teaching Tools

Proficient Adobe Photoshop and Premier Pro, OBS Studio  
 Advanced eLearning/Blackboard, MS Outlook/Word/Excel/Teams/PowerPoint/OneNote

## Relevant Coursework

Spring 2023 Optimal Control and Dynamic Programming  
 Fall 2022 Real Analysis  
 Spring 2022 Robust Control Systems · Multi-Agent Robotic Systems · Elementary Analysis II  
 Fall 2021 Engineering Optimization · Elementary Analysis I  
 Spring 2021 Nonlinear Systems · Convex Optimization · Dynamics of Complex Networks and Systems  
 Fall 2020 Linear Systems · Optimal Estimation & Kalman Filters · Probability & Random Variables  
 Spring 2020 Digital Signal Processing · Measurements and Instrumentation · Senior Design  
 Fall 2019 Discrete Time Controls · Electric and Magnetic Fields  
 Spring 2019 Modern Control Systems · Engineering Physics Sensors Lab · Analog Electronics  
 Fall 2018 Automatic Controls · Logic and Digital Design · Applied Mechanics  
 Spring 2018 Signals and Systems · Engineering Computation · Applied Optics

## **■** Awards

- Spring 2022 UTD Jonsson School - Best Teaching Assistant in Mechanical Engineering
- Spring 2022 UTD Jonsson School - Deans Teaching Fellowship
- Spring 2021 UTD Mechanical Engineering - Outstanding Contributions to Undergraduate Education
- Fall 2019 Undergraduate Research, Scholastic and Creative Activity (URSCA) Scholarship
- Spring 2019 UW Platteville Prototype Hackathon - 3<sup>rd</sup> Place
- Spring 2019 Foxconn Smart Cities Smart Futures Competition - Winner (Round 1 & 2)  
Honorable Mention (Round 3)
- Spring 2019 Undergraduate Research, Scholastic and Creative Activity (URSCA) Scholarship