MARK JENNINGS

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Education – The University of Texas at Austin

MS Mechanical Engineering **2019 – May 2021**
Dynamic Systems and Control, 3.95 GPA

BS Mechanical Engineering **2015 – 2019**
Robotics Certificate Program, 3.84 GPA

Research Experience

Nuclear & Applied Robotics Group **2019 – May 2021**
Graduate Research Assistant

- Develop real-time controls for passively-balanced robotic arm
- Implement collaborative manufacturing and confined manipulation tasks

Rehabilitation and Neuromuscular (ReNeu) Robotics Lab **2016 – 2019**
Undergraduate Research Assistant

- Designed and manufactured parts for rehabilitation robots
- 3D printed and assembled prosthetic hand and prosthetic finger

Work Experience

Sandia National Labs **Summer 2019**
R&D Intern

- Proposed qualification procedure for additively manufactured metal parts
- Designed electronics housing and validated it through non-destructive CT and vibration techniques as well as mechanical stress/strain testing
- Awarded 1st place team in summer-long intern competition

Apptronik Systems **Summer 2018**
Engineering Intern

- Designed and fabricated mechanical fixtures for lower-body powered exoskeleton
- Updated actuator testbed product to achieve higher loads with lower machining costs
- Developed forward kinematics for 10 DoF bipedal robot

Leadership Experience

Capstone Engineering Project **Spring 2019**
Engineering Lead

- Collaborated with 3 other seniors to redesign a feedstock hopper for an SLS printer
- Delivered final prototype with significantly improved powder retention and distribution

UT Robotics & Automation Society (RAS) **2015 – 2019**
Mentor, Officer

- Assisted in community outreach events to introduce youth to robotics
- Mentored 3 teams of 5-6 students in annual robotics competition throughout undergrad

Technical Skills

	Proficient	*Familiar*
Programming	C++, Robot Operating System (ROS), Linux	Python, MoveIt
Software	SolidWorks, MATLAB, MS Office	PTC Creo, LabVIEW
Algorithms	Manipulator control, Obstacle avoidance, A*	SLAM, Point set registration
Fabrication	Manual machining, Additive manufacturing	CNC operation