Nicolas Brissonneau

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Education and qualifications

University of Texas, Austin ***2017-2020***
Dynamics Systems and Control – Master's degree (Graduation May 2020)
- Control theory, sensor-based algorithms, physical simulation, machine learning
- Human-inspired impedance controllers
- Multi-agent robotics systems

UPMC – SORBONNE UNIVERSITES (Paris VI) ***2016-2017***
Advanced Systems and Robotics – Master's degree
- Mobile Robotics, Multi-body Systems Mechanics, Advanced Control Law
- Augmented Reality, Vision, Simulation, Haptic interfaces

ARTS ET METIERS, Paris Institute of Technology **2015-2016**
Engineering Diploma – Expertise in Mechatronics
- Control Law of multi-body systems
- State Estimation
- Dynamic behavior of complex systems

Bachelor of science, Industrial Engineering **2011-2015**
Arts et métiers, Lille (France)
- Mathematics: Advanced Algebra, Function Analysis and Probabilities
- Physics: Electronics, Thermodynamics, Mechanics
- Science of Engineering: Thorough studies of existing Mechanical and Electrical systems
- Production, Industrial processes

Work Experience

Teaching Assistant **2019-2020**
Supporting ~90 undergraduate students in dynamics classes

Designing control laws for exoskeleton (GRA) **2017-2019**
Apptronik - Austin
- Safe and robust force amplification
- Modeling and testing of human-exoskeleton interactions

R&D Engineer Assistant **2015**
Akeoplus – Château Gaillard, France
- Designing an Automated Guided Vehicle (AGV)
- Vision, mapping, pathfinding algorithms and IHM designs

Academic Projects

RoboCup@Home competition with HSR (Human Support Robot) **2017**
Nagoya - Japan
- Vision, mapping, manipulation
- Team effort lead us to 3rd place

Development of a Smart Pen **2016**
Arts et Métiers ParisTech – Paris, France
Designing a Smart Pen able to recognize 3D writing and convert it to text in MS Word

Sizing of a Series Elastic Actuator (SEA) **2015**
Arts et Métiers ParisTech – Lille, France
- Define Requirement Specifications, make Technological choices
- Simulate the system on Matlab & Simulink, Establish a sizing protocol

Additional skills and achievements

Machine learning *: Online courses -* ***Stanford University***
Computer skills *: ROS,C++,Python, Labview, Matlab, Catia, PowerMill, Excel, Word, Power Point*
English *: TOEIC : 930/990, TOEFL : 100/120, GRE : 151(VR)/160(QR)/3.5(AR)*