

Wanting Jin

Robotics, UAV, Autonomous Driving, Motion Planning, Control

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Education

Swiss Federal Institute of Technology (EPFL)

Doctor of Philosophy in Robotics, Control and Intelligent Systems

Lausanne, Switzerland

May 2021 - Present

Centrale Nantes(ECN)

Master of Science in Advanced Robotics

Nantes, France

Sep. 2017 - Nov. 2019

Nankai University

Bachelor of Engineering in Intelligence Science and Technology

Tianjin, China

Sep. 2013 - Jul. 2017

Working Experience

Swiss Federal Institute of Technology (EPFL)

Scientific Assistant at DISAL, fulltime

Lausanne, Switzerland

May 2021 - Present

- Scientific assistant working on a project of 3D Gas Source Localization (GSL) and Gas Distribution Mapping (GDM) in a realistic indoor environment by using Unmanned Aerial Vehicles (UAVs)
- Teaching assistant in the Signals, Instruments, and Systems (SIS), and Distributed Intelligent Systems (DIS) courses at DISAL

Suzhou Zhito Technology Co., Ltd

Planning and Decision Making Algorithm Engineer, fulltime

Suzhou, China

Jul 2020 – Apr. 2021

- One of the developers of the decision making and planning system for a *L4* level autonomous driving vacuum road sweeper working in urban scenarios
- One of the developers of the decision making and planning system for a *L4* level autonomous driving truck working in highway scenarios

SenseTime Shenzhen

Research Intern at Robotics Group, fulltime

Shenzhen, China

Oct. 2019 – Jun. 2020

- One of the developers of the outdoor localization system for the robotic product “Gophield”, an automowing robot working on golf courses
- One of the developers of the object classification and segmentation algorithm for a robotic vacuum

National Institute for Research in Digital Science and Technology (INRIA)

Master thesis at CHORALE Group, fulltime

Valbonne, France

Feb. 2019 – Aug. 2019

The thesis is in the framework of the French national project MOBI-DEEP.

- Studied and analyzed the Human Robot Interaction (HRI) problem
- Formalized the problem as a multi-objective optimization problem and a control strategy for the robot is obtained by using the Model Predictive Control (MPC) approach
- Developed a control strategy that enables the robot to proactively move in order to induce desired and socially acceptable cooperative behaviors in neighboring pedestrians.
- Simulated the human motion and the robot algorithm in Matlab

Awards

Elite Scholarship of Ecole Centrale de Nantes

2019

Elite Scholarship of Ecole Centrale de Nantes

2017

The Second Prize Nationally in China Undergraduate Mathematical Contest in Modeling

2015

Honorable (H) Mention of Interdisciplinary Contest In Modeling

2015

Publication

- Wanting Jin, Faezeh Rahbar, Chiara Ercolani and Alcherio Martinoli. **Towards Efficient Gas Leak Detection in Built Environments: Data-Driven Plume Modeling for Gas Sensing Robots**, 2023 IEEE International Conference on Robotics and Automation (ICRA). To appear.
- Wanting Jin, Paolo Salaris and Philippe Martinet. **Proactive-Cooperative Navigation in Human-Like Environments for Autonomous Robots**. International Conference on Information in Control, Automation and Robots, Jul 2020, Paris, France. (Oral Presentation)

Projects

Optimization of the Wrench Feasible Workspace (WFW) of 2dof Tensegrity Manipulator

Supervisor: *Philippe Wenger, Matthieu Furet*

2018 Feb. 2018 - Jul. 2018

- Developed different criteria to measure the performance of the tensegrity manipulator design
- Determined the ratio between the area of WFW and the area of reachable workspace as the objective function for the optimization design problem

The Realization of Human Motion Reconstruction System Based on Android Platform

Supervisor: *Lin Xu*

Nov. 2016 - Jun. 2017

- Built a virtual 3D scene and realize a human motion recognition system in Unity 3D by using of the data from ten wearable IMU sensors bounded to experimenter joints

Design and implementation of Rat Behavior System Based on BCI

Supervisor: *Feng Duan*

Mar. 2015 - May 2016

- Developed a bidirectional transmission system by using two CC2530 SCMs and MPU6050.

Professional Skills

- **Academical Knowledge:** Robotics, Control Theory, Nonlinear Control, Optimization, Motion Planning, Computer vision, Advance Modeling and Control of Manipulators, Real-time System, Advanced Visual Geometry, Autonomous Vehicle ,UAV
- **Programming Languages:** C++/C, Python, Matlab
- **Tools:** ROS, Ubuntu, Git, Docker, Webots, \LaTeX

Additional

- **Summer School Experience:** 2019 ETH Robotics Summer School
- **Language:** Chinese (mother tongue), English (fluent), French (basic knowledge)
- **Hobby ♡:** Taekwondo (black belt), Badminton, Crafts