Nan Wang

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Personal Website: http://www.warnerion.com/resume/resume.html

Research interests

Motion Planning & Control in Autonomous Vehicle and Robotics
Computer Vision
Sensor Fusion in Autonomous Vehicle
Machine Learning

Education

09/2011–06/2015 BSc in Automation, **East China University of Science and Technology**, Shanghai, China

09/2015–06/2018 MSc in Control Science and Engineering, **Tongji University**, Shanghai, China

Publications

Paper:

Nan Wang, Mengxuan Song, Jun Wang, A Flow Field Guided Path Planning Method for Unmanned Ground Vehicle, *56th IEEE Conference on Decision and Control (CDC 2017)*. (Accepted)

Mengxuan Song, **Nan Wang**, Jun Wang, Timothy Gordon, A fluid dynamics approach to motion control for rigid autonomous ground vehicles, *25th International Symposium on Dynamics of Vehicles on Roads and Tracks (IAVSD 2017)*. (Published)

Patent:

Nan Wang, Mengxuan Song, Jun Wang, A Fluid Flow based Planning Method for Autonomous Vehicle. (Application Number: 201710805297.2)

Awards

Team Awards

Oct. 2015 Top 8 of Chinese 7th Intelligent Vehicles Future Challenge (IVFC 2015), Changshu, Suzhou, China

Aug. 2014 2nd Prize in Siemens Cup Challenge for Industry Automation for Nation-wide College Students, Ma'anshan, Anhui, China

Jan. 2014 3rd Prize in China Undergraduate Mathematical Contest in Modeling

Personal Awards

Jun. 2015 Honor Graduate of 2015 in East China University of Science and Technology

Jun. 2015 Outstanding Graduate of Shanghai City

Jun. 2013 Excellent Student

Jun. 2012 Excellent Student Cadre

Jun. 2012 Community Contribution Award Class A

Grades

Graduate: 88/100(General) 88/100(Overall)
Undergraduate: 86/100(General)(10/105)

Research experiences

Undergraduate

Apr. 2014-Jul. 2014	Designed a health-care device based on Microsoft Kinect, pulse sensor, temperature sensor and humidity sensor **Achievement**: Awarded the 2nd Prize in Siemens Cup Challenge for Industry Automation for Nation-wide College Students.
May. 2015-Jul. 2015	Proposed a knitting fabric pattern recognition method for automated textile industry using simulated annealing genetic algorithm (SAGA)
Jan. 2015-Jul. 2015	Proposed an improved path planning method based on Theta* algorithm. **Achievement**: Awarded outstanding graduation thesis honor.

Graduate

Jul. 2015-Oct. 2015	Developed a software tool for high-accuracy GPS data processing **Achievement**: Awarded in the *Chinese 7th Intelligent Vehicles Future Challenge (IVFC 2015),* Changshu, Suzhou, China
Nov. 2015-Jun. 2016	Proposed and verified a path planning method for auto-parking task ***Achievement**:* Our team implemented an experiment prototype with auto-parking function
Sep. 2016-Mar. 2017	Proposed a path planning framework based on the fluid flow in static environment ***Achievement**:* Two papers are accepted by *the 56th IEEE Conference on Decision and Control (CDC2017) and the 25th International Symposium on Dynamics of Vehicles on Roads and Tracks (IAVSD2017)*. A patent is submitted and under review.
Mar. 2017-Now	Working on the trajectory planning of autonomous vehicle in dynamic environment based on 3D fluid flow field ***Achievement**:* Journal paper draft

Other Activities

Reviewer of *The 2017 American Control Conference*
Reviewer of *the 56th IEEE Conference on Decision and Control*

Skills

Professional:	Matlab, C/C++, C#, LaTeX, ICEM CFD software package.
Other Skills:	CUDA, OpenCV, LINGO.

Referees

Jun Wang	Professor Department of Control Science & Engineering, **Tongji University** Email:junwang@tongji.edu.cn
Timothy Gordon	Professor Head of School of Engineering in **University of Lincoln** President of **the International Association for Vehicle System Dynamics (IAVSD)** former Research Professor, **University of Michigan** Email:TGordon@lincoln.ac.uk
Mengxuan Song	Assistant Professor Department of Control Science & Engineering, **Tongji University** Email:songmx@tongji.edu.cn