Panel on Dependability Software for Autonomous Vehicles

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Today's automobile industry has faced three challenges: from the internal combustion engine to the electric engine, from human driver-based mechanical operations to software-enabled autonomous driving, and from the ownership business model to the mobility as a service.

The Technical Committee on Electric Autonomous Vehicles (EAV) of the IEEE Reliability Society will collaborate with the 9th International Conference on *Dependable Systems and Their Applications* (DSA 2022) to organize a panel on *Dependability Software for Autonomous Vehicles*. The focus is to discuss techniques and experiences that can help practitioners develop highly dependable software for safe, secure, and reliable autonomous vehicles. The panel will be held on August 4th in Wulumuqi, Xinjiang, China, which was a major hub on the Silk Road during China's Tang dynasty (618 to 907 AD) and has developed its reputation as a leading cultural and commercial center during the Qing dynasty in the 19th century.

This annual panel is one of the two major events organized by the EAV Technical Committee every year. The other event is the workshop on *Autonomous Vehicle Software* (AVS) at the QRS conference. Both QRS and DSA are sponsored by the Reliability Society.

There will be two invited talks at this year's panel.

Invited Talk 1: Path Planning for Self-Driving Vehicles: An Online RRT-based Algorithm and Deep Reinforcement Learning Approaches

Professor Jianmin Ji China

Professor, School of Computer Science and Technology
University of Science and Technology of China

Winner of Best Technique Solutions for Cognition, RoboCup@Home, in 2015
Winner of Best Autonomous Robotics Video, IJCAI-13 Video Award, in 2013

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Invited Talk 2: Online Verification-based Safety Monitoring and Control Synthesis of Real-time Cyber-physical System

Professor Lei Bu China

Professor, Software Institute
Nanjing University

Awardee of NASAC Young Software Innovation in 2019
Participant of Young Talent Development Program, China Computer Federation

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More details can be found at the panel's website. We thank all the speakers, panelists, and attendees for their participation. We also give our special thanks to GuardStrike, Inc. for its support both logistically and financially.