Xuewei Qi, Ph.D.

Artificial Intelligence and Machine Learning Scientist
Autonomous Vehicle Technology (AVT) Laboratory
Global Technical Center, General Motors
6400 Zora Arkus-Duntov Rd.
Warren, Michigan, 48092-2025, USA
Tel: 706-206-5972;
Email: qixuewei@gmail.com; or xuewei.qi@gm.com
https:// http://www.ece.ucr.edu/~qixuewei/index.html

Brief Bio and Qualification

Dr. Xuewei Qi is an AI and Machine Learning Research Scientist at Autonomous Vehicle Technology (AVT) Laboratory of General Motors (GM). The AVT lab at GM is focused on the state-of-the art autonomous vehicle and self-driving system research and development. It is among the top autonomous vehicle R&D groups from automotive industry all over the world. Dr. Qi has a wide spectrum of research interests and expertise in Deep Learning (including Deep Neural Network and Deep Reinforcement Learning) and autonomous vehicle control and testing (including motion planning, path planning, etc.). He is currently serving on the Transportation Research Board (TRB) standing committee on Artificial Intelligence and Advanced Computing Applications (ABJ70) and standing committee on Alternative Transportation Fuel Technologies (ADC80). He has been serving as editors and reviewers for several top journals and international conferences in the area of intelligent transportation systems, such as *IEEE transactions on Intelligent Transportation Systems*, *IEEE transactions on Intelligent Vehicles and IEEE Sensors* Journal.

Before joining GM, Dr. Qi was a Researcher and Co-PI at the Center for Environmental Research and Technology at University of California, Riverside. His research was focused on connected automated vehicles (CAV), intelligent and sustainable transportation and machine learning, as well as evolutionary computation techniques (including swarm intelligence). He had proposed, participated or led multiple projects to design and apply various artificial intelligence algorithms to solve the optimization, prediction and control problems in connected and automated vehicle applications with an emphasis on improving energy efficiency for both single vehicle level and connected vehicle network level. During his postdoctoral research at University of California-Riverside, Dr. Qi proposed several proposals that were funded by state and federal agencies such as Department of Energy Advanced Research Project Agency (ARPA-E) and National Center for Sustainable Transportation (NCST). Dr. Qi was serving as a Co-PI of an ARPA-E project (NEXTCAR) and PI of a NCST project on "Machine Learning enhanced Eco-driving system for Electric Vehicles".

Dr. Qi's recent research work has been reported by multiple major science and tech media, including *Science Daily, IEEE spectrum* and *ACM communications*, and many other major media such as *The Economist*, *Washington Post*, *Xinhua Agency* and *Peoples' daily*, and so forth. Dr. Qi has published one book, titled *Engineering Optimization* and 3 book chapters, published by Springer and Elsevier, and more than 25 papers on the top IEEE journals and conference proceedings in the area of connected and automated vehicles, such as *IEEE Transections on Intelligent Transportation Systems*. Dr. Qi obtained his Ph.D. degree in electrical and computer engineering from the University of California Riverside. He was awarded with the Deans Distinguished Fellowship, University of California System CNI Fellow and Best Dissertation Award (UCCONECT).

Dr. Qi is very active in participating and serving Chinese-American professional organizations. He is currently serving as a Board Member of Southern California Chinese-American

Environmental Protection Association (SCCAEPA http://sccaepa.org/) and Chinese Institute of Engineers (CIE-USA) Southern California Chapter. He has participated in the successful organization of 2017 Los Angeles Forum (http://www.la-ef.org/content/about-laef), which is currently the most influential annual technical forum in the area of environment protection (water and air quality control) between China and USA. A US congressman has been invited to give an opening speech each year in past. As this forum has been more well-known since recent years, many Chinese cities are requesting to host the parallel meeting, and this year's meeting will be hosted simultaneously at Suzhou and Hefei. As an active board member of the organizing committees for these event, Dr. Qi has accumulated much valuable cooperative experiences, which are supposed to be greatly beneficial to his future service on the COTA Board of Directors (BOD), if he will be selected.

Envisioned Commitment

I am so proud that I have been a COTA member for years and have witnessed its continuous growing in the past few years due to the joint efforts of the current and past leaders. Attending various COTA events and activities has proved invaluable in my development as a transportation professional. I have benefited both professionally and personally from many people I have met or made friendship with via these events. With such appreciation, I would like to make more contributions to COTA by investing my time, idea and expertize. I believe my unique experience from both academia and industry will be helpful to promoting COTA with the following envisioned commitments:

- To bring diversity and support from industry (i.e., General Motors) to sponsor more COTA events, including COTA Winter Symposium, CICTP, and other technical workshops or symposiums;

- To be working closely together with other BOD members to establish COTA Industrial Advisory committee and other technical committees in the areas of my strong expertise so as to well increase COTA's growth and strength.

- To help build strong and deepen the relationship between COTA and China DOT with my special relationship with higher level officials of China DOT. Potentially we can have more sponsorship for organizing more events in China;

- To help promote the collaboration between COTA and IEEE Intelligent Transportation Society (ITSS) (Note: My Ph.D. advisor is serving as the IEEE ITSS Advisory Board and the Passed President of IEEE ITSS from 2014-2016). For example, I can put effort in getting the sponsorship from IEEE ITSS for CICTPs in the future.

I am committed to my best serving on the COTA BOD. Your support is highly appreciated!

Endorsements received from the following active COTA members:

- Dr. Yinhai Wang, Professor, University of Washington, Past President of COTA;
- Dr. Haizhong Wang, Assistant Professor, Oregon State University, Current COTA BOD Member;
- Dr. Guohui Zhang, Assistant Professor, University of Hawaii, current COTA BOD member;
- Dr. Ping Yi, Professor at University of Akron, Passed President of COTA;
- Mr. Jun Wang, Senior Specialist of Appalachian Regional Commission (ARC), Passed President of COTA.