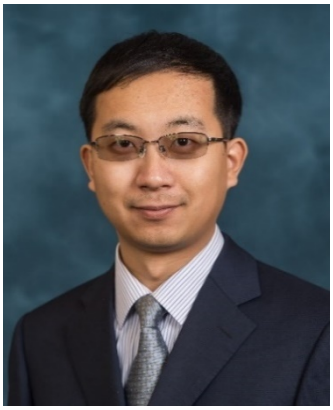
**B203-Integrated Traffic Management and CVs/CAVs for Freeways and Arterials**

**Simeon Calvert**
Delft University of Technology

Dr. ir. Simeon Calvert is an assistant professor (tenured) in the department of Transport & Planning, and co-director of the Delft Data Analytics and Traffic Simulation lab DiTTlab, and co-director of CiTy-AI-lab focused on urban traffic and mobility behavior. Simeon's research is focused on the impacts of disturbances (e.g. environment, incidents) and technologies (e.g. connected automated vehicles, C-ITS) on traffic flow and performance, and ways to influence this (e.g. through traffic management). This includes describing and understanding traffic behavior to estimate and forecast traffic flow impacts of automated driving, connected traffic and external disturbances in traffic (roadworks, incidents, environmental impacts, etc.). And to offer solutions to improve traffic flow and/or mitigate negative effects of disturbances, for example through traffic management. Prior to joining TU Delft, Simeon worked as a research scientist at the Netherlands Institute for Applied Scientific Research (TNO) on a wide range of transportation and mobility related projects, both European and national. He obtained an MSc and BSc in Civil Engineering (specialization transportation) and a PhD in Transportation studies at TU Delft.

**Bingchu Chen**
University of Pennsylvania

A second-year grad student in the Master of City Planning/Master of Urban Spatial Analysis program at Penn.



**Yiheng Feng**
Purdue University

Dr. Yiheng Feng is an assistant professor at Lyles School of Engineering, Purdue University. He received his Ph.D. from Department of Systems and Industrial Engineering at University of Arizona. His research interests include connected and automated vehicles (CAVs) and smart transportation infrastructure, with a focus on traffic control with CAVs. He has published more than 50 research articles, which appeared in top journals, including Natural Communications, Transportation Research Part B/C, and IEEE Transactions on ITS. He has served as PI and Co-PI in several research projects funded by NSF, U.S. DOT, and U.S. DOE.

**Carlos Flores**
University of California Berkeley

Carlos Flores received the B.Sc. degree in Electronics Engineering from Simón Bolívar University, Venezuela, in 2014. He received the PhD degree from Paris Sciences et Lettre University and INRIA in 2018. He worked as a research engineer in INRIA in 2019. Since 2019, he has been working as a postdoc with the California PATH program of UC Berkeley. His research interests include automated vehicles, cooperative driving and vehicle dynamics control.

**Glenn Havinoviski**
JMT

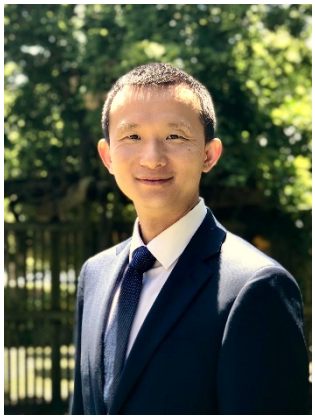
Glenn Havinoviski, PE recently joined JMT as Vice President and Director of the firm's national ITS practice. An international expert in applying technology to mobility and traffic operations, Glenn brings 37 years of consulting experience in 18 states and abroad. This includes connected and automated vehicles, active traffic management for freeways and arterials, CAV program planning, integrated corridor management, managed lanes, road pricing, interactive traveler information and mobility services, bus rapid transit, related traffic signal priority operations activities, and the full life cycle of the systems engineering process along with ITS architectures. Additionally, he has provided training for the International Road Federation and National Highway Institute. Glenn is a civil engineering graduate of the University of Wisconsin-Milwaukee and a registered professional engineer (PE) in 8 states. Over the years, he has been active in TRB and various national and state ITS organizations and is a former president of ITS Virginia.

**Risto Kulmala**
Traficon Ltd

Professor Risto Kulmala works as Principal Advisor on ITS at Traficon Ltd, with past positions at Finnish Transport Agency, VTT and University of Lund. He has been a coordinator of several major national and international R&D&I and deployment programmes and projects with more than 300 publications. He has been a member or chair of various international ITS bodies as well as scientific and technical committees. His areas of expertise include connected and automated driving, physical and digital infrastructures for CCAM, ODDs for highly automated driving, ITS evaluation, deployment road maps, road safety, statistical modeling, and field studies of road user behaviour. His latest projects include coordination of CEDR project MANTRA on the impacts of highly automated driving on road operators, socio-economic evaluation of C-ITS in NordicWay2, specification of operating environments for European ITS services, and classifying the Finnish road network according to its readiness for automated driving.

**Virginia Lingham**
WSP USA

Ms. Virginia Lingham, PE, is a Senior Lead Consultant at WSP with a focus on helping clients to advance deployment strategies and understand the impacts of connected and automated vehicles and other emerging technologies. Ms. Lingham is a licensed Professional Engineer who holds a B.S. in Industrial Engineering from Wayne State University in Detroit and a M.S. in Transportation Engineering along with a Certificate in the Management of Technology from the University of California, Berkeley. She volunteers with Transportation Research Board as an active committee member of Regional TSMO, Truck Industry Research, and Human Factors of Infrastructure Design and Operations (previously User Information Systems), ITS America, and WTS.



**Hao Liu**
UC Berkeley

Dr. Hao Liu is an Assistant Research Engineer with PATH, where his primary research interest is traffic flow modeling and simulation for traffic streams affected by Connected Automated Vehicles (CAV). He is passionate about extending the traffic flow modeling capability by incorporating the latest technology advancements in CAV control, communication, and machine learning. With the modeling tools, he wanted to find out the best traffic operation and management strategies that maximize the benefit of the CAV technologies. He wishes to promote the CAV development, evaluation and deployment by helping researchers over the world implement the PATH simulation models in their tailored CAV studies. His other research interests include arterial traffic management, hardware-in-the-loop simulation, and vehicle energy consumption estimation. Dr. Liu received B.S. in Transportation from Sun Yat-Sen University in China, an M.Sc. in Transportation Engineering from the Research Institute of Highway in China, and a Ph.D. in Civil Engineering from the University of Cincinnati.

**Xiao-Yun Lu**
UC Berkeley PATH

Dr. Xiao-Yun Lu (https://path.berkeley.edu/xiao-yun-lu ) is a Research Engineer at California PATH, U. C. Berkeley and affiliated Scientist at Lawrence Berkeley National Laboratory. He is the PI of this project. He got BSc. in Mathematics from Sichuan University, China (1982), MSc. in Applied Mathematics from the Institute of Systems Science, Chinese Academy of Sciences (1985), and Ph. D. in Systems and Control from University of Manchester, UK (1994). He worked as a Research Associate in University of Leicester UK (1994-1999) and joined PATH in 1999. He has 38 total years of experience in systems modeling, control and optimization and 21 years of specialized expertise in: vehicle system modeling, longitudinal control design and implementation; vehicle active safety; traffic systems detection, modeling, control design, micro/macro simulation, and real-time implementation. His significant accomplishments include: control design, simulation, implementation and field test passenger car and truck platooning; automated vehicle merging; integrated ACC (Adaptive Cruise Control) and CACC (Cooperative ACC) design with string stability analysis; multi-vehicle longitudinal collision avoidance and impact mitigation with V2V; active control to prevent truck rollover; and integrated optimal control of truck braking system (engine brake, transmission retarder, and pneumatic brake). He is a member of TRB Committee on Vehicle and Highway

Automation (ACP30), former member of ABJ35 (Traffic Monitoring) and ATM (Active Traffic Management) Subcommittee; reviewer of Mathematical Review.

**Evangelos Mintsis**
Centre for Research and Technology Hellas - Hellenic Institute of Transport

Evangelos Mintsis received the Dipl. Eng. degree in civil engineering from Aristotle University of Thessaloniki, Greece, in 2009 and the M.Sc. degree in transportation engineering from University of Florida, Gainesville, FL, USA in 2012. He is currently pursuing the Ph.D. degree in transportation engineering at National Technical University of Athens, Greece. From 2009 to 2012, he was a Research and Teaching Assistant with the University of Florida Transportation Institute, Gainesville, FL, USA. From 2013, he has been a Research Associate with the Hellenic Institute of Transport, Centre for Research and Technology Hellas, Thessaloniki, Greece. His research interests include traffic flow theory, microscopic traffic simulation, traffic management, intelligent transportation systems and connected and automated driving. Mr. Mintsis is a member of the Hellenic Institute of Transportation Engineers and of the Technical Chamber of Greece.

**Faisal Saleem**
Maricopa County DOT

Faisal Saleem serves the Maricopa County Department of Transportation (MCDOT) as Intelligent Transportation Systems Branch Manager and the MCDOT SMARTDrive ProgramSM Manager. He is responsible for the overall supervision and management of MCDOT ITS Program, AZTech Regional Partnership Program, Regional Emergency Action Coordinating Team (REACT) Incident Management Program, Anthem Connected Vehicle SMARTDrive Test Bed and Regional Archived Data System. He also serves as the Chair of the Technical Resources Working Group of the Cooperative Automated Transportation (CAT) Coalition and Co-Chair of Infrastructure Owner Operator - Original Equipment Manufacturer Forum. He represents MCDOT on Arizona Institute of Automated Mobility technical committee and TRB Automated Vehicle and Shared Mobility Forum. Saleem has a Bachelors and Masters Degree in Civil Engineering and is the former President of Intelligent Transportation Society of Arizona and a member of ITE.

**Jaap Vreeswijk**
MAP traffic management

Jaap Vreeswijk is Traffic Architect Connected and Automated Driving (CAD) at MAP traffic management, the Netherlands. He has a Master degree in Civil Engineering & Management and a Doctoral degree in travel choice behavior, both from the University of Twente. Before joining MAPtm he worked in the traffic systems industry as researcher and product manager. He has been and is active in a variety of national, but mainly international research and innovation projects, pilots, working groups and platforms on smart mobility and CAD. His interest and focus is adapting and advancing infrastructure and traffic management through the application of new innovations and technologies. At the same time he likes to understand and accommodate societal and city views, needs and expectations. Today Jaap is active the national Talking Traffic partnership as standards specialist and chair of the Change Advisory Board where public and private sector organizations gather to maintain the national standards for connected vehicle and connected traffic light applications. In addition, he is involved in several EU-funded projects like TransAID

and MAVEN on centralized management for automated vehicles; SOCRATES 2.0 on interactive traffic management; C-Mobile and C-Roads on C-ITS deployment, and MyCorridor on Mobility-as-a-Service. Jaap is representative of MAPtm in the single platform for Connected and Cooperative Automated Mobility (CCAM) of the European Commission, and expert for ISO TC204 WG18 and CEN TC278 WG16.

**Ken Yang**
AECOM

Mr. Yang has 20+ years of experience in transportation engineering/operations. He specifically experiences in designing and building the integrated ITS solutions for transportation systems. He has been involved in numerous emerging ITS principles, technology and programs, where he offers a unique blend of innovative expertise in the latest transportation trends coupled with the advanced technical proficiency to deliver full solutions. He is currently focusing on the development of data-driven analysis solutions for Traffic Management Center (TOC) operations, and is leading on the planning, development, testing, implementation and troubleshooting of software solutions for ITS applications such as traffic websites, data analysis tools, and performance assessment tools. His activity areas include: Effective integration and optimization of transportation system; ITS/Transportation data processing, fusing, archiving and visualization; Data –driven analytics and software solutions for ITS/TOC operations; Performance based advanced traffic signal control and arterial operations, and Connected Vehicle data and applications. Mr. Yang received his B.S. and M.S degrees in Electrical Engineering in 1989 and 1992 from Dalian Maritime University, P.R.China, and a M.S. degree in Civil Engineering (Intelligent Transportation System) in 1999 from Michigan State University, East Lansing, Michigan. He has been working as a grant researcher of the “Eisenhower Grant Research Fellowship” at the US Department of Transportation’s Turner-Fairbank Highway Research Center in 1998. Mr. Yang has more then 20 published conference and journal papers.