L3Pilot
Driving Automation

SUMMER SCHOOL 2020

L3Pilot Summer School
"Developing and Testing Automated Driving"

Virtual
September 9-10, 2020

Agenda

Timeslot	Topic	Presenter
FIRST DAY – Wednesday, 9 September 2020		
09:00-09:05 (CET) L3Pilot Summer School Welcome Note by Angelos Amditis, ICCS, Greece		
09:05-10:30 (CET) Tutorial A: Setting the scene		
Moderator: Yves Page, Project Leader on Automated Driving Experiments, RENAULT, France		
09:05 (10 min)	*L3Pilot introduction*	**Aria Etemad,** Senior Project Manager, Volkswagen Group Innovation, Germany
09:15 (15 min)	*Automated Driving L3 and beyond – the key aspects*	**Angelos Amditis,** Research Director, Institute of Communication and Computer Systems, Greece
09:30 (15 min)	*Towards a Code of Practice for Automated Driving*	**Stefan Wolter,** Senior Researcher, Human-Centered Technologies**,** Ford, Germany
09:45 (15 min)	*Admission procedures for testing on public roads in the Netherlands*	**Pieter van der Stoep,** Account Manager, Automated and Connected Driving, Applied Innovation and Exemptions Unit, the Netherlands Vehicle Authority (RDW), the Netherlands
10:00-10:30	**Q&As**	
10:30-12:00 (CET) Tutorial B: Human factors in focus		
Moderator: Natasha Merat, Chair in Human Factors of Transport Systems, Leader, Human Factors and Safety Group, Institute for Transport Studies, University of Leeds, UK		
10:30 (15 min)	*Human, what human?*	**Oliver Carsten,** Professor of Transport Safety, Institute for Transport Studies, University of Leeds, UK
10:45 (15 min)	*Transition between AD Levels*	**Alexander Eriksson**, Senior Design Engineer (AD Human Factors/UX), Volvo Car Corporation, Sweden
11:00 (15 min)	*Transition from automated to manual driving: What factors influence take-over time and performance?*	**Marieke Martens,** Director of Science, TNO Traffic & Transport, Professor, Automated Driving & Human Interaction, Eindhoven University of Technology, The Netherlands
11:15 (15 min)	*Designing interaction of automated vehicles for mixed traffic environment: Development, integration and evaluation of the interACT system*	**Fabio Tango**, Senior Researcher, Centro Ricerche Fiat, AD/ ADAS Innovation, Italy
11:30-12:00	**Q&As**	
12:00-14:00 Break		
14:00-15:15 (CET) Tutorial C: The road and infrastructure as an AD enabler		
Moderator: Tom Michael Gasser, Head of Section "Automated Driving", BASt, Germany		
14:00 (15 min)	*Intelligent Road and Infrastructure data for automated driving*	**Dominique Gruyer,** Research Director, University Gustave Eiffel, Deputy Director, COSYS department for CAV researches, Research Director, PICS-L lab, France
14:15 (15 min)	*Case for Connected Autonomy and Implications for 5G Systems*	**Mehrdad Dianati,** Professor, Warwick Manufacturing Group, University of Warwick, UK
14:30 (15 min)	*Enabling automation for Heavy Duty Vehicles (What the key aspects are)*	**Marc-Michael Meinecke**, Senior Researcher, Volkswagen Group Innovation, Lecturer, Ostfalia University Wolfsburg, Germany
14:45-15:15	**Q&As**	

15:15-16:15 (CET) Tutorial D: Security and Privacy concerns		
Moderator: Mehrdad Dianati, Professor, Warwick Manufacturing Group, University of Warwick, UK		
15:15 (15 min)	*Data Privacy for Automation: Leveraging Privacy Enhancing Technologies*	**Jesus Diaz Vico,** Postdoctoral Researcher, IBM Research Division, Switzerland
15:30 (15 min)	*Cyber-Security for Automation: The Challenge*	**Jonathan Petit,** Director, Qualcomm, USA
15:45-16:15	**Q&As**	

SECOND DAY – Thursday, 10 September 2020		
10:00-11:30 (CET) Tutorial E: Testing and validation framework		
Moderator: Johannes Hiller, Group Leader Data & Intelligent Infrastructure, Institute for Automotive Engineering, Aachen, Germany		
10:00 (15 min)	*Testing framework for Automated Driving*	**Adrian Zlocki,** Senior Manager Driver Assistance, Forschungsgesellschaft Kraftfahrwesen mbH Aachen, Germany
10:15 (15 min)	*Testing of CAD and its Key Enabling Technologies*	**Álvaro Arrúe,** Project Manager Connected and Automated Driving, Applus IDIADA, Spain
10:30 (15 min)	*Towards a robust verification methodology for ADS*	**James McCallion**, Senior Engineer, Connected Autonomous Vehicles, Horiba Mira (VeriCAV project), UK
10:45 (15 min)	*Wizard of Oz design for testing automated driving on public roads*	**Thomas Streubel,** Postdoctoral Researcher, Division of Vehicle Safety, Chalmers University of Technology, Sweden
11:00-11:30	**Q&As**	

11:30-12:00 (CET) Poster Pitches Session & Q&As		
Moderator: Panagiotis Pantazopoulos, Senior Researcher, Institute of Communication and Computer Systems, Greece		

12:00-13:30	**Break**	
13:30-14:45 (CET) Tutorial F: Data magic or Data into scenarios?		
Moderator: Anastasia Bolovinou, Research Engineer, Intelligent Transport Systems, Institute of Communication and Computer Systems, Greece		
13:30 (15 min)	*Deep neural network based simulations for next generation of AD virtual testing*	**Heikki Laine,** VP Product, Cognata, Israel
13:45 (15 min)	*Multisensor Large Scale Data Management for training sets and ground truth automatic generation*	**Marcos Nieto,** Principal Investigator on ITS and Engineering, Vicomtech, Spain
14:00 (15 min)	*Validation of automated driving systems using scenario-based massive simulations*	**Alexandru Forrai,** Fellow Engineer and Consultant, Siemens Digital Industries Software, The Netherlands
14:15-14:45	**Q&As & Wrap-up**	

Moderators Bios

Yves Page, Project Leader on Automated Driving Experiments, RENAULT, France

Yves Page is currently working at RENAULT as project leader on automated driving experiments. He was previously Expert in Traffic Safety (2011-2015), Deputy Director of advanced engineering projects in safety (2009-2010) and Deputy Director of the Laboratory of Accidentology, Biomechanics and study of human behavior PSA-RENAULT (2004-2008), and previously in the ministry in charge of road safety policies. He was/is member of the Scientific Committee of the French National Road Safety Foundation, of the Committee of Experts for the National Council for Road Safety, of the Scientific Committee of the Belgian Road Safety Institute, of the Ethics Committee of IFSTTAR, and of the Scientific program Committee of the AAAM . He published close to 100 articles and reports about road safety those last 30 years.

Natasha Merat, Chair in Human Factors of Transport Systems, Leader, Human Factors and Safety Group, Institute for Transport Studies, University of Leeds, UK

Professor Merat is an experimental psychologist and research group leader of the Human Factors and Safety Group, @ITS, University of Leeds. Her main research involves understanding the interaction of road users with new technologies. She applies this interest to studying factors such as driver distraction and driver impairment, and she is an expert in studying the human factors implications of highly automated vehicles. Dr Merat is Chair of the TRB sub-committee on Human Factors in Road Vehicle Automation, and has appointments as expert advisor to the European Commission, Zenzic and Veoneer Inc.

Tom Michael Gasser, Head of Section "Automated Driving", BASt, Germany

Tom Gasser is Head of Section 'Automated Driving' at BASt, the German Federal Highway Research Institute, a research institution within the portfolio of the Federal Ministry of Transport and digital Infrastructure. As a lawyer, his field of work has covered legal issues of Driver Assistance Systems and Vehicle Automation in the past and inter alia has led to fundamental work on definitions of sustained vehicle automation (today standardised as SAE J3016). The very much cross-sectional field of vehicle automation has also led him to activities on the enabling effect of road infrastructure. The main responsibilities of the Automated Driving section at BASt, however, lie in research on Human-Machine-Interaction, development of evaluation schemes and future validation methods for Automated Driving.

Johannes Hiller, Group Leader Data & Intelligent Infrastructure, Institute for Automotive Engineering, Aachen, Germany

Johannes Hiller studied Electrical Engineering, Information Technology and Computer Engineering at RWTH Aachen University. Currently, he is Group Leader Data & Intelligent Infrastructure within the research area Vehicle Intelligence & Automated Driving at the Institute for Automotive Engineering (ika) at RWTH Aachen University. He works on the assessment and evaluation of automated driving and advanced driver assistance system with a focus on data analysis, enrichment and the analysis of video. Within L3Pilot, he works on the technical and traffic analysis as well as the impact analysis and helped develop a common data format and toolchain for the project.

Mehrdad Dianati, Head of Cooperative Autonomy Research, Warwick Manufacturing Group, University of Warwick, UK

Prof Mehrdad Dianati leads Cooperative Autonomy Research Group within Intelligent Vehicle Directorate at Warwick Manufacturing Group, University of Warwick. He also leads Applied AI Research for Intelligent Vehicles at WMG. The focus of Cooperative Autonomy Research Group is on System Engineering for Cooperative Intelligent Systems, particularly, AI-Driven perception and Autonomous Decision-Making Systems for Cooperative Autonomous Systems, with particular focus on Connected and Autonomous Vehicles (CAV). He has over 28 years of combined industrial and academic experience, with 20 years in leadership roles. He has spent the past 12 years in leading multi-disciplinary collaborative R&D projects. Prof Dianati has established extensive collaboration links to the Automotive and ICT industries. He is also Co-Director of Warwick's Centre for Doctoral Training on Future Mobility Technologies. As a senior member of IEEE VTS, he developed an extensive network of international collaborators and has served as the associate editor for the IEEE Transactions on Vehicular Technology and the Field Chief Editor of Frontiers in Future Transportation. Prof Dianati's research interest includes, Connected Autonomous Vehicles, Applied Machine Learning and AI for Intelligent Vehicles, Intelligent Communication Systems and Networks, Mobile Edge Computing for Cooperative Intelligent Systems, Cyber Physical Systems and IoT.

Panagiotis Pantazopoulos, Senior Researcher, Institute of Communication and Computer Systems, Greece

Dr. Panagiotis Pantazopoulos holds a Bachelor's in Physics, a 2-years MSc Degree in Control and Computing and a PhD degree in computer networks, all awarded by the National and Kapodistrian University of Athens. He has been working on Intelligent Transport Systems (ITS) research along the last six years. His interests lie in the areas of design, analysis and performance evaluation of ITS protocols. Lately, his research has focused on security assurance for connected vehicles under V2I communications following firstly the technical/managerial activities of the H2020 DS SAFERtec project and subsequently the CEF Telecom 2CeVau project. He is one of the contributors to a modular Protection Profile for Connected Vehicles. Since 2017, he serves as an associate editor for the IEEE Intelligent Vehicles Symposium. Prior to the ITS involvement he spent several years working as a researcher on Internet protocols at the National & Kapodistrian University of Athens.

Anastasia Bolovinou, Research Engineer, Intelligent Transport Systems Group, ISENSE Lab, Institute of Communication and Computer Systems, Greece

Anastasia Bolovinou holds a Diploma degree in Electrical and Computer Engineering from National Technical University of Athens (2004). After a short period working in European-funded projects as computer system engineer and a period of phd studies on image spatio-visual data extraction and patterns' classification tracked jointly by Computational Intelligence lab of NCSR Demokritos and the Department of Informatics and Telecommunications of the University of Athens (DIT/UoA), at 2012 she has joint the ICCS I-SENSE group focusing on Intelligent Transport Systems and conducting scientific and technical management of EU-funded projects. Her interests lie in the design, analysis and performance evaluation of intelligent vehicle's algorithms and recently she has worked on Automated Driving systems design and testing. Her research experience includes machine learning for intelligent vehicle apps (data feature extraction, high-dimensional data clustering and classification/regression in images and vehicle time-series data captured from vehicles or mobile platforms) and cybersecurity risk assessment frameworks. (Publications can be found here: https://www.researchgate.net/profile/Anastasia_Bolovinou).

Speakers Bios

Aria Etemad, Senior Project Manager, Volkswagen Group Innovation, Germany

Aria Etemad is Senior Project Manager at Volkswagen Group Innovation where is working in the area of Advanced Driver Assistance Systems (ADAS) and Automated Driving. Since 2008 he has been Coordinator of European flagship projects in the field: euroFOT, the first European large-scale field operational test for studying the benefit of ADAS on traffic safety and efficiency; interactIVe, which dealt with the development of the next generation of ADAS that autonomously brakes and steers to avoid vehicle collisions; and AdaptIVe, a major European effort for developing Automated Driving Applications & Technologies. He currently leads L3Pilot, a large-scale European pilot for bringing SAE level 3 automated vehicles to European roads.

Angelos Amditis, Research Director, Institute of Communication and Computer Systems, Greece

Dr. Angelos J. Amditis is Research Director in the Institute of Communication and Computer Systems, and member of its Board of Directors. In June 2018 he was elected ERTICO Chairman while he has been a member of the ERTICO Supervisory Board since 2013. He is the Vice President and one of the founding members of ITS Hellas. He is participating or has participated to the several EC Working Groups and Platforms (CCAM, C-ITS Platform, INATBA, eMI³, MaaS Alliance DTLF, TM2.0 Platform, Trilateral WG on Automation, euRobotics, SENSORIS, WssTP, ALICE, UITP, AIOTI et al). He is the writer of several peer reviewed journal articles, book chapters and conference papers. His current research interests are in the fields of ITS include Automated Transport Systems, Cooperative Systems, Electromobility and Smart Mobility. He has participated in a large number of Research projects being the scientific responsible of more than 150 projects in the last 20 years and currently, he is the coordinator of the following projects: CitySCAPE (newly accepted), eCharge4Drivers, HYPERION, Cyber-MAR, COREALIS, ICT4CART, RESIST, ELVITEN, IN-PREP and DIONE projects. He has also successfully coordinated the NeMo, PLUGGY, SCENT, SAFERtec, INACHUS, SENSKIN, FABRIC, RECONASS, ROBO-SPECT, Autonet2030, INTE-TRANSIT and AQUAKNIGHT projects.

Stefan Wolter, Senior Researcher, Human-Centered Technologies, Ford, Germany

Stefan Wolter is a researcher in the field of Human-Centered Technologies at the Ford Research & Innovation Center in Aachen, Germany. He has a PhD in Psychology. His research and development activities are focused on the human factors and user experience aspects of automotive systems. This includes human-machine interfaces, driver assistance, automated driving and occupant wellbeing. His external activities comprise several European and German public funded projects.

Pieter van der Stoep, Account Manager, Automated and Connected Driving, Applied Innovation and Exemptions Unit, the Netherlands Vehicle Authority (RDW)

Pieter van der Stoep is a senior account manager at the Dutch Vehicle Authority (RDW). He joined the RDW in 2001. Since 2016, he is responsible for the process of exemptions in the area of automated and connected driving and other innovative vehicles field tests. He is the connector between the applicant, the different departments of the RDW, the ministry, the road owner and the other parties which are needed to make the exemption and field tests possible. His starting point is: a good process in a level playing field, motivating the different parties and challenge the manufactures/applicants to be the first of raising the bar, with or without driver.

Oliver Carsten, Professor of Transport Safety, Institute for Transport Studies, University of Leeds, UK

Oliver Carsten's major research focus is on driver interaction and safety with new driver support systems and automation. He led the UK national project on Intelligent Speed Assistance and has acted as chair of the Road User Behaviour Working Party of PACTS, the Parliamentary Advisory Council for Transport Safety. He has provided advice on safety policy to the UK Department for Transport and to the European Commission, especially on behalf of the European Transport Safety Council. He was a member of the European Commission's GEAR 2030 High-Level Group on the future of the European automobile industry as well as a member of the C-ITS Platform. He is a participant in the meetings of UNECE in the area of automation and a member of the Informal Group of Experts on Automated Driving (IGEAD) under UNECE WP.1. He is editor-in-chief of the academic journal Cognition, Technology and Work.

Alexander Eriksson, Senior Design Engineer (AD Human Factors/UX), Volvo Car Corporation, Sweden

Alexander a passionate and curious traffic safety researcher and Human Factors engineer with extensive experience in Automotive Automation, Advanced Driver Assistance Systems and Active Safety. Alexander thrives when faced with challenging problems and do his best work when working cross disciplinary tying Safety, Design, Engineering, User Experience and Policy together through the Human Factors eyeglass. At Volvo Cars Alexander leads the development of how future, self-driving Volvo cars interact with the passenger(s) in a human centered way. This work entails balancing safety requirements with passenger comfort and usability through state-of-science knowledge, working with cross disciplinary teams, carrying out applied research studies using a plethora of tools (through human-in-the-loop simulation, test track, or public road testing using advanced experimental rigs). In addition, to ensure design freedom and secure space for innovation. Alexander actively supports policy and standardization efforts on an international level, through policy experts at Volvo, and through the Swedish Institute for Standardization (a part of ISO) as a subject matter expert.

Marieke Martens, Director of Science TNO Traffic & Transport and Professor Automated Driving & Human Interaction at the Eindhoven University of Technology, the Netherlands.

Prof Dr. Marieke Martens is a professor in Eindhoven in the area of how humans interact with automated vehicles, both from the perspective of the the driver/passenger inside, as well as other road users who are being confronted with (partially) automated vehicles. For almost 25 years, she has been working in the area of traffic psychology, driver attention and distraction, human factors and human state, always with a link to traffic safety. At TNO, as a Director of Science, she is responsible for setting up the research programmes in the area of traffic, transport and logistics. She has been a member of several national Scientific Advisory Boards, international ISO working groups on automated driving and is linked to Human Factors issues of ADAS and AD in EuroNCAP and UNECE. She is also part of the EU group on Ethics of Connected and Automated Driving.

Fabio Tango, Senior Researcher, Centro Ricerche Fiat, AD/ADAS Innovation, Italy

Graduated in Physics in 1995 from University of Turin and PhD in Computer Science in 2008 from University of Turin. His experience is on driver modelling and driver states classification, human-automation interaction, data-fusion techniques, arbitration and sharing control strategies. His main research interest is focused on using AI techniques in highly autonomous vehicles and their interaction with humans. He has been Technical Manager of HOLIDES and AUTOMATE projects; currently working on interACT, PRYSTINE and L3-Pilot projects. He is author/co-author of several journal and conference papers.

Dominique Gruyer, Research Director, University Gustave Eiffel, Deputy Director, COSYS department for CAV researches, Research Director, PICS-L lab, France

Dominique Gruyer received respectively his PhD in 1999 from UTC (France) in the "systems control" specialty, and his HDR in 2014 from UEVE in "Automatic control". In 2001 and 2011, he was a researcher at INRETS in the LIVIC's Perception team and in 2010, the lead of this team. In 2014, he obtains the position of Research Director at IFSTTAR. From 2015 to 2019, he was the head of LIVIC. He is now a Research Director in the PICS-L lab (merge of LIVIC and LEPSIS laboratories). In June 2018 and January 2019, he obtained the management of the IFSTTAR's "Autonomous and Connected Vehicle" program and the position of Deputy Director of COSYS department for "Autonomous and Connected Vehicle" researches. His research work concerns the study and development of embedded perception and multi-source and multi-sensor data fusion using theories of uncertainty. He is author and co-author of more than 200 journal and conference papers, book chapters, patents, software license agreements. He was involved in more than 20 projects and expertise. He has several long term international collaborations with CARR-Q (Australia), LIV and ACIS(Canada), Univ. of Tongji (China). From 2009 to 2015, he was co-founder and scientific expert for the company CIVITEC which markets pro-SiVIC software. Since April 2015, CIVITEC is become a subsidiary of ESI group and he is now a Scientific Director ("Perception systems and data fusion") for this company (in cumulative activity).

Mehrdad Dianati, Head of Cooperative Autonomy Research, Warwick Manufacturing Group, University of Warwick, UK

Prof Mehrdad Dianati leads Cooperative Autonomy Research Group within Intelligent Vehicle Directorate at Warwick Manufacturing Group, University of Warwick. He also leads Applied AI Research for Intelligent Vehicles at WMG. The focus of Cooperative Autonomy Research Group is on System Engineering for Cooperative Intelligent Systems, particularly, AI-Driven perception and Autonomous Decision-Making Systems for Cooperative Autonomous Systems, with particular focus on Connected and Autonomous Vehicles (CAV). He has over 28 years of combined industrial and academic experience, with 20 years in leadership roles. He has spent the past 12 years in leading multi-disciplinary collaborative R&D projects. Prof Dianati has established extensive collaboration links to the Automotive and ICT industries. He is also Co-Director of Warwick's Centre for Doctoral Training on Future Mobility Technologies. As a senior member of IEEE VTS, he developed an extensive network of international collaborators and has served as the associate editor for the IEEE Transactions on Vehicular Technology and the Field Chief Editor of Frontiers in Future Transportation. Prof Dianati's research interest includes, Connected Autonomous Vehicles, Applied Machine Learning and AI for Intelligent Vehicles, Intelligent Communication Systems and Networks, Mobile Edge Computing for Cooperative Intelligent Systems, Cyber Physical Systems and IoT.

Marc-Michael Meinecke, Senior Researcher, Volkswagen Group Innovation, Lecturer, Ostfalia University Wolfsburg, Germany

Dr. Marc-Michael Meinecke did his PhD in the field of automotive radar. Since he joint Volkswagen Group Research in 2001 he has focused in his work on perception topics especially appropriate for automated cars as well as automation of heavy duty vehicles. He is writer of several peer reviewed journal articles, book chapters and more than 150 conference papers. He supports several international conferences and journals in their program committees.

Jesus Diaz Vico, Postdoctoral Researcher, IBM Research Division, Switzerland

Jesus Diaz is a postdoctoral researcher at IBM Research Zurich, where he focuses on applied cryptography and privacy. Previously, he held industry research and innovation positions in companies such as BBVA and the Spanish National Cybersecurity Institute, and collaborated with academic research labs in the University of Columbia, the Universidad Autonoma de Madrid (UAM) and the Universidad Politecnica de Madrid (UPM). He holds an MSc in Computer Science by the UAM, and MSc in Information Technologies by the UPM, and a PhD in Computer Science by the UAM.

Jonathan Petit, Director, Qualcomm, USA

Dr. Jonathan Petit is Director Engineering at Qualcomm Technologies, Inc., where he leads research in security of connected and automated vehicles (CAV). His team works on designing security solutions, but also develops tools for automotive pentesting and builds prototypes. His recent work on misbehavior protection for V2X has been demo'ed at CES2020 and integrated in US DOT Connected Vehicle Pilot Deployment. He was the first to demonstrate attacks on LIDAR and camera system for automated vehicles. His research also covers privacy of CAV, where he demonstrated real-world eavesdropping and its effect on location privacy.

Adrian Zlocki, Senior Manager Driver Assistance, Forschungsgesellschaft Kraftfahrwesen mbH Aachen, Germany

Dr.-Ing. Adrian Zlocki studied automotive engineering at the RWTH-Aachen University (Technical University Aachen). During his studies he stayed abroad for one research semester at the POSTECH University in Pohang, South-Korea. Since 2004 he has been employed as a Scientific Engineer at the ADAS department of the "Institut für Kraftfahrzeuge der RWTH Aachen University" (ika), the Institute for Automotive Engineering. Between 2007 and 2010 he leads a research group in the field of ADAS development and assessment at ika. He is currently head of fka's Automated Driving department.

Álvaro Arrúe, Project Manager Connected and Automated Driving, Applus IDIADA, Spain

Mr Álvaro Arrúe is Project manager at the Electronics department in Applus IDIADA. He holds an MSc in Telecommunications Engineering and an MSc in ICT in mobile networks by University of Zaragoza. Álvaro Arrúe has developed his career close to R&D projects and Innovation activities. He is responsible in IDIADA for ITS and automated driving European projects and is actively involved in several European working groups and task forces (Chairman of EARPA's Electronics and Communications Systems, Chairman Discussion Group Roadworthiness Testing from the Trilateral EU-US-Japan, leader of Safety Validation and Roadworthiness testing in CARTRE).

James McCallion, Senior Engineer, Connected Autonomous Vehicles, Horiba Mira (VeriCAV project), UK

James McCallion is a Senior Connected and Autonomous Vehicles Engineer at HORIBA MIRA. He has been involved with several collaborative research projects investigating the Verification and Validation of autonomous vehicles. He is currently work package lead and technical specialist for the VeriCAV project, leading the software team developing HORIBA MIRA's innovative test framework.

Thomas Streubel, Postdoctoral Researcher, Division of Vehicle Safety, Chalmers University of Technology, Sweden

Dr. Thomas Streubel received the PhD in computational science from the Chemnitz University of Technology, Germany, in 2016. His thesis on situation assessment for driver assistance and automated vehicles was completed in cooperation with the Adam Opel AG in Ruesselsheim, Germany. Subsequently, he worked in the RITS (Robotics and Intelligent Transportation Systems) research team at Inria Paris. Since 2017, he is with the division of Vehicle Safety at Chalmers University in Gothenburg, Sweden. His research focus is driver behavior modeling, driver distraction, driving maneuver prediction and safety impact assessment of automated driving.

Heikki Laine, VP of Product and Marketing, Cognata, Israel, Cognata, Israel

Heikki Laine is VP Product at Cognata, a company that brings the disruptive power of artificial intelligence, deep learning, and computer vision to simulated testing for automated driving. Heikki is responsible for driving Cognata's vision for the future of safe autonomous driving through product definition, advancement of regulation and standards, and global marketing strategy. Prior to joining Cognata, Heikki worked in corporate technology strategy at Honeywell, a diversified Fortune 100 aerospace, controls, and industrial technology company. Before Honeywell, Heikki held senior managerial roles in product and strategy with HARMAN International, a Samsung company and global leader in connected car technology.

Dr. Marcos Nieto, Principal Investigator on ITS and Engineering, Vicomtech, Spain

Dr. Marcos Nieto received the Ph.D. degree in electrical engineering from Universidad Politécnica de Madrid (UPM), Spain, in 2010. He then Joined the Intelligent Transport Systems and Engineering Area of Vicomtech (San Sebastian, Spain), where is Principal Researcher since 2014. His current research interests include the use of semantic metadata languages, multi-sensor calibration and projection, and large-scale computation. He has been technical and scientific coordinator of FP7 and H2020 projects, specialized in ADAS and Automated Driving, and is author of more than 60 peer reviewed international publications. Awarded by the Basque Government as one of the twenty-one most relevant applied researchers of the Red Vasca de Ciencia, Tecnología e Innovación (RVCTi) in 2018.

Dr. Alexandru Forrai, Alexandru Forrai, Fellow Engineer and Consultant, Siemens Digital Industries Software, The Netherlands

Dr. Alexandru Forrai is Fellow Engineer and Consultant at Siemens Digital Industries Software and senior member of IEEE. He holds a M.Sc. degree in electrical engineering and Ph.D. degree in applied computer science as well as a certificate in machine learning. He was involved in the development and validation of one of the first AEB systems acting at low speeds in urban areas. Furthermore, he was part of the development and certification team of different safety related (safety critical) systems, certified SIL 3 according to IEC61508. Currently he is involved in verification and validation of the automated driving systems, including an automated valet parking system, with a strong focus on scenario-based validation in accordance with SOTIF.