EUROTECH UNIVERSITIES ALLIANCE

INTRODUCTION

EUROTECH UNIVERSITIES ALLIANCE
PARTNERS

EINDHOVEN UNIVERSITY OF TECHNOLOGY

COPENHAGEN TECHNICAL UNIVERSITY OF DENMARK

MUNICH TECHNICAL UNIVERSITY

LAUSANNE ÉCOLE POLYTECHNIQUE FÉDÉRALE

MISSION
STATEMENT

> *The EuroTech Universities Alliance is a **strategic partnership** of leading European universities of science and technology committed to excellence in research and **jointly developing solutions** to the **grand challenges of society**. The Alliance combines the complementary strengths of its partner universities to jointly achieve multi-scale initiatives of high impact to society and to industry. The Alliance openly engages with all **societal actors** to raise awareness on the opportunities offered by science and technology.*

4 FOCUS
AREAS

1 ENTREPRENEURSHIP & INNOVATION

2 SMART & URBAN MOBILITY

3 HEALTH & BIO ENGINEERING

4 DATA SCIENCE & ENGINEERING

Selected on the basis of complementary strengths exercise carried out across the EuroTech Universities and EU opportunities mapping

SMART & URBAN MOBILITY

Autonomous driving research,
Eindhoven University of Technology

EuroTech Universities *5 years of* Excellence in Science and Technology

STRONG EXPERTISE IN TECHNOLOGIES ADDRESSING URBAN MOBILITY CHALLENGES

- Green Vehicles
- Intelligent Transport Systems
- Logistics and Planning Systems
- ICT for Automotive and Urban Planning

Electric bicycle,
Student tearns STORM Eindhoven

EuroTech Universities *5 years of* Excellence in Science and Technology

INTEGRATED APPROACH TO DEVELOPING TECHNOLOGICAL SOLUTIONS FOR URBAN MOBILITY

- User needs
- Urban space requirements
- Implications of technological innovations
- Design and implementation of policies

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EuroTech Universities *5 years of* Excellence in Science and Technology

BRINGING TOGETHER ALL KEY PARTNERS IN THE URBAN MOBILITY FIELD

- Leading automotive players
- High-tech industries
- Technology and service providers
- Public authorities

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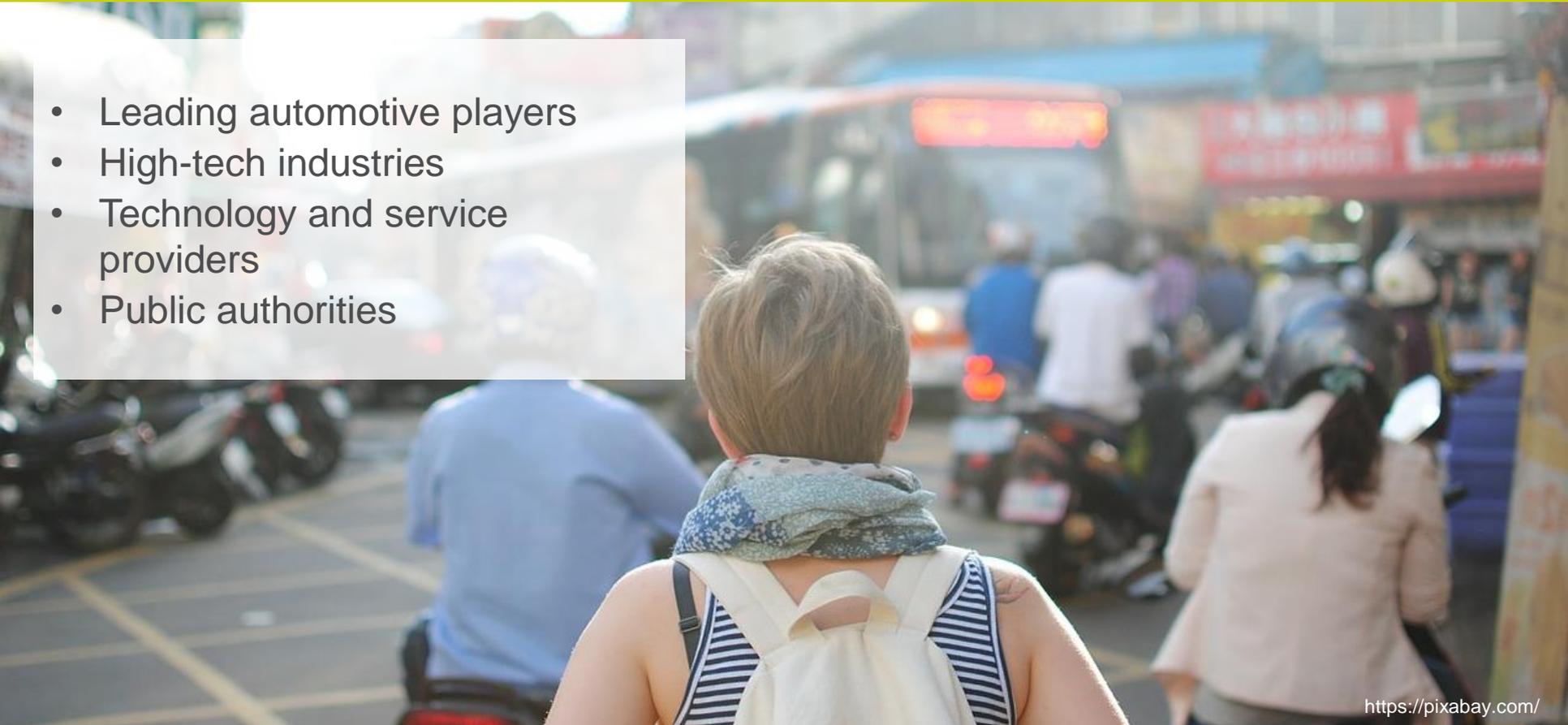
EUROTECH UNIVERSITIES SYMPOSIUM

AAAS ANNUAL MEETING 2017

URBAN MOBILITY AS AN ENGINE FOR CHANGE: EUROPEAN INNOVATION FOR SUSTAINABLE CITIES

When: Saturday, February 18, 2017, 1:00 pm-2:30 pm

Where: Room 204 (Hynes Convention Center)

EUROTECH UNIVERSITIES SESSION: URBAN MOBILITY

Urban centers are bearing the brunt of 21st century population growth and serving as laboratories for how people will live in the future. What kind of mix of technological, business, and policy innovation will keep the city of the future liveable? Universities, companies, and cities in Europe are jointly pioneering approaches that could help shape the answer. While the dynamic life of a city intensifies environmental, economic, and social pressures, it can also catalyze smart solutions. Growth that could make city life less attractive – through more air pollution and traffic jams, for example – could instead spur a transformation that improves local living conditions and benefits the global environment. Copenhagen metropolitan region in Denmark anticipates 20 percent population growth by 2025, and plans to become carbon-neutral by that time.

This session covers trends in urban mobility and shows how technological research, innovative policies, and cooperation can turn this challenge into a leverage point for constructive, locally appropriate change. In addition to highlighting the Copenhagen experience, speakers focus on trailblazing urban mobility initiatives of the EuroTech Universities Alliance, a strategic partnership of leading technical universities in Denmark, Germany, the Netherlands, and Switzerland.

Session moderated by **MARIA KAMARGIANNI, University College London (UCL)**

More about UCL:

- https://www.ucl.ac.uk/

- https://www.ucl.ac.uk/bartlett/energy/

EUROTECH ALLIANCE: COLLABORATION IS THE ROAD TO THE FUTURE

DISRUPTIVE MOBILITY: HOW EXPONENTIAL TECHNOLOGY WILL SAFEGUARD MOBILITY

CARLO VAN DE WEIJER, Eindhoven University of Technology, The Netherlands

ICT and the Internet have reached mobility arena. Vehicles have become computers on wheels and start sharing their information to further improve traffic. As a consequence, the changes within and around the vehicle will happen exponentially, as is common in every industry where ICT enters. And just as in other industries the service will become better at a much lower price. "Fuelled by CASE" (Connected, Automated, Shared and Electric). Inherently safe and clean mobility will lead to a situation where the usage of scarce urban space is the main leftover mobility problem to solve, but new services and other modalities such as bikes will deliver solutions for that as well. And they will put classical public transport under pressure to change and become more flexible much sooner than scenario's are prepared for.

More about the Eindhoven University of Technology:

- https://www.tue.nl/en/

- www.tue.nl/smartmobility

A LIVING LAB FOR LIVEABLE CITIES: POLICY IN PRACTICE IN COPENHAGEN

A LIVING LAB FOR LIVEABLE CITIES: POLICY IN PRACTICE IN GREATER COPENHAGEN

NIELS CARSTEN BLUHME, Municipality of Albertslund, Greater Copenhagen, Denmark

Public and private innovation on multidisciplinary platforms operating large scale living laboratories for development and testing of smarter urban services and solutions for more green and liveable cities has proven to be an effective way of creating strong ecosystems, competencies and black bottom lines within the industries. The photonic based technologies providing possibilities for strong digital infrastructures, various ways of communication devices, mobiles, sensors, city data platforms and cloud solutions for collected and aggregated open data for further analytic tools and smart solutions has become an unbelievable strong accelerator for fully digitized communities with a true disrupting impact on our future live conditions. Case studies on various living labs for smart and green mobility, silent cities, energy efficiency, and climate adaption will be presented.

More about the Municipality of Albertslund:

- http://albertslund.dk/servicemenu/english/

WHAT CITIES WANT: SUSTAINABLE URBAN MOBILITY AND HOW TO GET THERE

WHAT CITIES WANT: TOWARDS MORE LIVEABLE URBAN SPACES BY TRANSFORMING URBAN MOBILITY

GEBHARD WULFHORST, Technical University of Munich, Germany

Every city is unique, even in terms of mobility behavior and priorities for transportation planning and urban development. Yet research on cities worldwide reveals commonalities that can be exploited in developing local strategies. Tools such as joint modeling of dynamic interactions between spatial patterns and transport systems are applicable anywhere. Successful examples of transdisciplinary, public-private cooperation to achieve sustainable urban mobility could set a pattern for the future urban mobility as a complex system (multi-stakeholder approach: private sector, user perspective).

More about the Technical University of Munich:

- https://www.tum.de/en/homepage/

SPEAKERS

Moderator: Maria Kamargianni, Scientist, Head of the Urban Transport & Energy Group, UCL Energy Institute, University College London

Maria Kamargianni holds a PhD in Travel Behavior Modeling and Decision Sciences awarded by the Department of Shipping, Trade and Transport of the University of the Aegean (Greece). Her areas of research include travel behavior modeling, transportation systems analysis, mobility as a service, new mobility services and business models, active transportation (walking and cycling) modelling, social networking and traveling, demand analysis, market research and econometrics. In 2010, Maria Kamargianni was awarded with the Bronze Medal in YEAR2010 (Young European Arena of Research 2010, organized by Transport Research Arena-TRA) for her research "Exploring Teenagers' Travel and Driving Behavior in Rural Areas".

Intervention by Skype: Shadi Sharif Azadeh, Scientist, Transportation and Mobility Laboratory, Ecole Polytechnique Fédérale de Lausanne and Assistant Professor, Erasmus University Rotterdam

Shadi Sharif Azadeh completed her Master's as well as her PhD at Polytechnique Montreal in 2013. She worked as a postdoc and Marie Curie fellow at Ecole Polytechnique Fédérale de Lausanne (EPFL), where her research is focused on integrating choice models with optimization methods. Shadi Sharif Azadeh has initiated and conducted several industrial as well as research projects at the Transportation and Mobility Laboratory at EPFL. She was appointed Assistant Professor in the Econometrics Department of the Erasmus School of Economics, Erasmus University Rotterdam where she will be starting in October 2016.

Carlo van de Weijer, Director of Strategic Area Smart Mobility, Eindhoven University of Technology and Vice-President for Traffic solutions, TomTom

Since 2011, Carlo van de Weijer has led the 'Smart Mobility' strategic area of Eindhoven University of Technology (TU/e), where the university clusters the strengths of its research groups that excel in relevant fields for the automotive and logistics sectors.Carlo van de Weijer graduated from TU/e in mechanical engineering in 1990. In that year he joined TNO Automotive in Delft, where he was responsible for setting up the Electrical and Hybrid Powertrains research programme. After gaining his PhD in 1997 at Graz University of Technology in Austria, he became responsible for the Business Unit Power Trains at TNO in 1998. In 2001, Carlo van de Weijer moved to Siemens VDO to lead the research unit for navigation systems in Eindhoven. In June 2007, he moved together with this research unit to TomTom, where he has worked since then. Other functions held by Van de Weijer include committee memberships of the Federation Holland Automotive, Connekt/ITS Nederland, the High Tech Automotive Campus and the High Tech Automotive Systems innovation programme.

SPEAKERS

Gebhard Wulfhorst, Chair of Urban Structure and Transport Planning, Technical University of Munich

Gebhard Wulfhorst has led the Chair of Urban Structure and Transport Planning at the Technical University of Munich since July 2006. As a spatial and transport planner, he specializes in the interactions between spatial structures and mobility behavior. The focus areas of his teaching, research and consulting are the development of integrated transport and settlement concepts, model-based impact assessment and the design of planning and implementation processes for urban regions. Gebhard Wulfhorst graduated with a PhD in Engineering from RWTH in 2003.

Niels Carsten Bluhme, Area Director City, Culture, Environment and Employment, Municipality of Albertslund, Greater Copenhagen

Niels Carsten Bluhme has worked for the Municipality of Albertslund (Greater Copenhagen) since 2003. He is currently Area Director for regional coordination, overall city planning, environmental management, building authorities, risk management and fire protection, public utilities, assets and facility management of public buildings, roads, parks and other outdoor areas. Between 1979 and 2003, Niels Carsten Bluhme was consulting engineer and project manager for development, planning, design, procurement and sit management for a large number of building projects. In 1979, he graduated with a master's degree in civil engineering from the Technical University of Denmark.

TECHNOLOGIST

Technologist issues covering urban mobility

Along with its sister website, technologist.eu, this award-winning initiative of the EuroTech Universities Alliance showcases the best and most exciting research and innovation from Europe and beyond.

A science magazine out of the ordinary, the magazine features the latest news on cutting-edge science and technology, portraits of European R&D hotspots and Europe's potential next unicorns, extensive background articles, opinion pieces and much more – packaged in detachable pages, unconventional design, captivating infographics and paper gadgets.

http://www.technologist.eu/
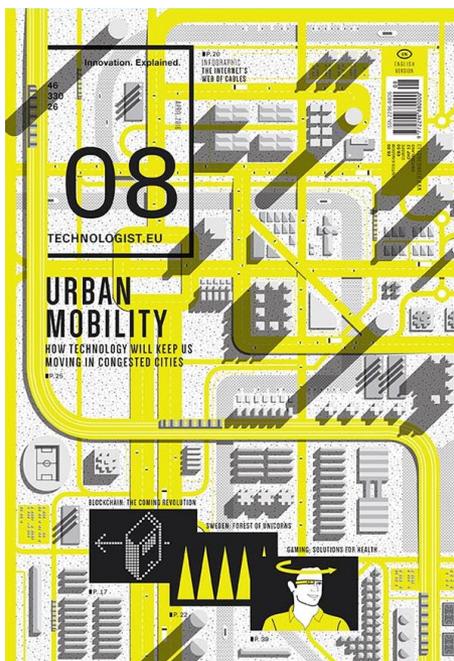
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Excellence in Science and Technology

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University
of Munich   TUM