

Press release  
24 July 2019

## **BMW Summer School 2019 shines the spotlight on “Artificial Intelligence and Urban Living”.**

The potential of artificial intelligence (AI) for shaping mobility in tomorrow’s world and its impact on urban living took centre stage at the BMW Summer School 2019. The interdisciplinary programme for the event gave 35 up-and-coming scientists from 15 countries the chance to present their visions of AI-enhanced mobility – and to discuss the challenges that lie in wait with renowned experts from science and industry.

**Munich.** As an initiative from the BMW Group Research division, the BMW Summer School provides junior scientists from all over the world with a regular opportunity to discuss their research with top-class experts from both theoretical and practical backgrounds. This year’s get-together took place in Lenggries-Fall, Bavaria on 15 – 20 July 2019 under the auspices of the French consul general, and was staged in collaboration with [EURECOM](#), the [Technical University of Munich \(TUM\)](#) and [BayFrance](#) with the support of the [Franco-German University](#), the [Digitalist Group](#) and the German-French Academy for the Industry of the Future. The platform the BMW Summer School provides for dialogue with established professionals from academia and industry combines with the participants’ multidisciplinary backgrounds to give the event its distinct identity. This year, young researchers from the fields of computer science, mechanical engineering, electrical engineering, civil engineering, psychology, law and industrial design got together. “We see the BMW Summer School as a benchmark for cooperation between industry and universities“, said Hannemor Keidel, TUM representative for scientific relations with France.

### **Artificial intelligence is transforming mobility and urban living.**

“Advances in the field of artificial intelligence have a major role to play in shaping the future of mobility,” commented Michael Würtenberger, Head of the Excellence Cluster for AI at the BMW Group. “The BMW Group identified AI as a vital research area at an early stage and set up the requisite development expertise.” The influence of AI extends far beyond mobility into day-to-day life, future production methods and business processes; AI therefore affects society as a whole. The interdisciplinary nature of the BMW

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Summer School 2019 made it the ideal forum for highlighting to participants the social relevance of their research topics.

**BMW Summer School: the sharing of scientific knowledge between the worlds of theory and practice across three main areas.**

To facilitate an intense exchange between the junior researchers and the experts from science and industry, the programme for the BMW Summer School 2019 was organised into three main areas.

Highlights from the **keynote track**, for example, included a talk by Carlo Ratti, who heads the [Senseable City Lab](#) at the Massachusetts Institute of Technology (MIT). Ratti: “Large cities worldwide are facing enormous challenges. Big Data and AI can give us better knowledge of the urban environment, and thus their potential beneficial applications are countless. This requires a new generation of researchers to think and collaborate across disciplines and it is great to see this kind of thinking fostered by the BMW Summer School”. There were also breakout sessions that gave the participants the chance to discuss specialised topics in small groups with academics and industry representatives. The issues up for debate included the use of AI for mobility services, design thinking methodology, quantum computer technology and ethical considerations relating to the interaction between human and artificial intelligence. “The successful development of smart cities relies on the harmonization between people, mobility solutions and infrastructure and their mutual cooperation. We are expecting artificial intelligence and 5G to be catalysts for smart cities”, said Weiyun Jiao from the Chinese National Center for Intelligent Transport Systems in one of the sessions.

The **poster track** centred on the fields of research pursued by the up-and-coming scientists. The participants presented the ideas behind their current research and its objective to the multidisciplinary audience in a competition format. This year’s awards for the best research posters and most engaging presentations went to Matthias Zöhrer ([Graz University of Technology](#)), Dantong Ge ([Beijing Institute of Technology](#)) and Felix Batsch ([Coventry University](#)).

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The third key element was the **lean startup machine**. The participants were split into mixed groups, asked to develop innovative product and service ideas based on their research topics under the guidance of agile design coaches and eventually present them to the audience in a short pitch. This competition gave the young researchers a realistic impression of what putting technological innovations into practice entails, be it in the form of a business idea or company startup. This year’s winning team of the startup pitch award created the concept for „APPetite“ – an AI empowered meal planner that helps its users to reduce the ecological impact of food waste.

In addition to the three main elements of the BMW Summer School 2019 programme, the PhD students also seized the opportunity to share ideas informally among themselves and with the assembled science and business experts. This allowed them to gain some inspirational insights into the research work carried out in various disciplines and its practical application in the industrial sector. A pair of evening events involving Prof. Jörg Ott and Prof. Constantinos Antoniou from TUM and Dr. Markus Grüneisl, Head of Production Systems, Digitalisation and Operative Excellence at the BMW Group, helped maximise this exchange of knowledge.

## **Experts at the BMW Summer School 2019.**

### Industry and business:

Pang Heng Soon, SGInnovate, Singapore

Markus Grueneisl, BMW Group

Toni Cheng, Alibaba

Ulrich Fastenrath, BMW Group

Jane Vita, Digitalist Group

Oliver Oberst, IBM

Jakub Marecek, IBM

Tom Hubregtsen, BMW Group

Irina Benkert, BMW Group

Kyle Hounslow, Digitalist Group

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Research:

Prof. Carlo Ratti, MIT

Weiyun Jiao, ITSC, Ministry of Transport, People’s Republic of China

Prof. Arnaud de la Fortelle, Mine ParisTech

Prof. Jean-François Bruneau, IVADO

Prof. Jörg Ott, TUM

Prof. Constantinos Antoniou, TUM

Susanne Müller, Munich School of Philosophy

**Research committee at the BMW Summer School 2019.**

Committee chairpersons:

Prof. Ulrich Finger, Director of EURECOM

Prof. Andreas Herkersdorf, Head of the Chair for Integrated Systems, TUM

Michael Würtenberger, Head of Research E/E Architecture and Technologies, BMW Group

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**The BMW Group**

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2018, the BMW Group sold over 2,490,000 passenger vehicles and more than 165,000 motorcycles worldwide. The profit before tax in the financial year 2018 was € 9.815 billion on revenues amounting to € 97.480 billion. As of 31 December 2018, the BMW Group had a workforce of 134,682 employees.

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The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

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