MUNICH AEROSPACE SUMMER SCHOOL

URBAN AIR MOBILITY

8–9 July 2019

Day 1: Lectures & Discussions
Day 2: Research Group Meetings & Pitches

Georg-von-Vollmar-Akademie
Kochel am See
Bavaria, Germany
Munich Aerospace Summer School 2019
URBAN AIR MOBILITY

DAY 1

8 JULY

09:00 AM  Arrival
            Check-in / Registration

09:30 AM  Welcome
            Professor Mirko Hornung
            Munich Aerospace Executive Board
            VOLLMAR SAAL

09:45 AM  Welcome
            Professor Wolfgang Koschel
            Munich Aerospace Scientific Advisory Board
            VOLLMAR SAAL
10:00 AM  Introduction  
Professor Mirko Hornung  
Executive Director Bauhaus Luftfahrt  
VOLLMAR SAAL

10:30 AM  Urban Air Mobility Initiative Ingolstadt  
Dr Reinhard Brandl  
Member of the Bundestag  
VOLLMAR SAAL

11:00 AM  The Local Character of Urban Air Mobility - Opportunities and Challenges  
Professor Brian German  
Georgia Institute of Technology  
VOLLMAR SAAL
12:00 PM  Lunch

01:00 PM  Urban Air Mobility and Urban Planning - Integrating a Disruptive Transport Technology with Conventional Land Use and Transport Planning
Professor Rolf Moeckel
Technical University Munich
VOLLMAR SAAL

02:00 PM  Silent Air Taxi - The Future of Intercity Mobility
Professor Eike Stumpf
RWTH Aachen
VOLLMAR SAAL
03:00 PM  Coffee Break

03:30 PM  Urban Air Mobility - Creating an Industry from Scratch
Dr Markus May
Airbus Urban Mobility GmbH
VOLLMAR SAAL

04:30 PM  Over 150 Teams are Building Aerial Taxis - so What's the Problem?
Dr Matthias Bittner
AutoFlightX
VOLLMAR SAAL
05:15 PM  Electric Flight - Opportunities and Challenges  
Dr Andreas Klöckner  
German Aerospace Center  
VOLLMAR SAAL

06:15 PM  Dinner

08:00 PM  Fireside Chat: Magnetic Fields Measured in Space - New Insights  
Professor Hermann Lühr  
GFZ Potsdam  
TONI PFÜLF SAAL
Munich Aerospace Summer School 2019
URBAN AIR MOBILITY
DAY 2
9 JULY

07:30 AM  Breakfast

08:30 AM  Research Group Meeting

Coffee Break
VOLLMAR SAAL

- Group Reißig
  TAGUNGSRAUM 2

- Group Knopp
  KAPELLE

- Group Moll
  Speiseesaal

- Group Haidn
  TURMZIMMER

- Group Kramer
  KNOERINGEN SAAL

- Group Zhu
  TAGUNGSRAUM 5

- Group Mundt
  TONI PFÜLF SAAL

- Group Plötner
  VOLLMAR SAAL
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DAY 2
9 JULY

10:30 AM  
**On-board Digital Predistortion for Next-Generation High Throughput Satellites**  
VOLLMAR SAAL

11:00 AM  
**Efficient Coding and Modulation for Satellite Links with Severe Delay Constraints**  
VOLLMAR SAAL

11:30 AM  
**Certifiable Autonomy in Unmanned Aerial Vehicles**  
VOLLMAR SAAL

12:00 PM  
**Lunch**
01:00 PM  Re-entry Optimisation to Minimise Heating of Infrared Signature  
VOLLMAR SAAL

01:30 PM  Eco-efficient Airport - Framework and Development Perspectives for Ecologically and Economically Sustainable Air Traffic  
VOLLMAR SAAL

02:00 PM  Fusion of Remote Sensing and Social Media Data  
VOLLMAR SAAL

02:30 PM  Coffee Break
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DAY 2

9 JULY

03:00 PM

**Propulsion Technologies for Green In-Orbit Spacecrafts**

VOLLMAR SAAL

03:30 PM

**Modelling, Simulation and Concepts of Urban Air Mobility Transport Systems**

VOLLMAR SAAL

04:00 PM

**Summary**

Professor Wolfgang Koschel

Munich Aerospace Scientific Advisory Board

VOLLMAR SAAL
04:30 PM  Information Exchange
  • Research Group Leaders
  • Munich Aerospace Executive Board
  • Munich Aerospace Scientific Advisory Board
  VOLLMAR SAAL

04:30 PM  Team Event
  for Scholarship Recipients Only
  TONI PFÜLF SAAL

07:00 PM  End of Event
Munich Aerospace Summer School 2019

URBAN AIR MOBILITY

SPEAKERS

Matthias Bittner studied mechanical engineering at Technical University of Munich, and received his Diploma in 2010. Beginning of 2011 he joined the Institute of Flight System Dynamics at TUM, where he finished his PhD on aircraft trajectory optimization in 2017. Since 2018 he is working for AutoFlightX – a startup company developing an aerial taxi – and is taking care for all organizational issues there.

Reinhard Brandl is a member of the German Bundestag, representing Ingolstadt. He is a member of the Defence Committee and the Budget Committee, where serves as his parliamentary group’s rapporteur on the budget of the Federal Ministry of Defence. Brandl is Vice-President of the parliamentary group “Aerospace” and a founding-member of Ingolstadt’s Urban-Air-Mobility-Initiative.

Brian German is the Langley Associate Professor in the Daniel Guggenheim School of Aerospace Engineering at the Georgia Institute of Technology and Director of the Center for Urban and Regional Air Mobility (CURAM). His work is focused on aircraft design and operations for electric flight.
Mirko Hornung is Professor for Aircraft Design at the Technical University of Munich and received his doctorate in aeronautical engineering from Bundeswehr University. In a joint effort he acts as the executive director research and technology of Bauhaus Luftfahrt, an international think tank on the long term developments in aviation. He is member of the Munich Aerospace Executive Board.

Andreas Klöckner coordinates DLR’s activities in electric flight since 2017. In the Programme Strategy Aeronautics, he steers DLR’s research and cooperations in the field on behalf of the executive board. Andreas received his PhD in engineering for his work on autonomous high-altitude platforms at the DLR Institute of System Dynamics and Control. He holds an engineering degree from RWTH Aachen University.

Wolfgang Koschel is University Professor at the University of Technology of Aachen (RWTH Aachen), chair for “Jet Propulsion”. In 1994 he was delegated to the German Aerospace Center (DLR) and was until Dec. 2007 director of the Institute for Space Propulsion in Lampoldshausen. He is member of the Scientific Advisory Board of Munich Aerospace.
Hermann Lühr is Senior Scientist at Deutsches GeoForschungsZentrum, GFZ Potsdam (since 2017 Guest Status) and faculty member at TU Braunschweig (now emeritus). He has been deeply involved in satellite missions like AMPTE (1984), CHAMP (2000), and ESA’s mission Swarm (2013), devoted to plasma physics and Earth observation. He received several awards, e.g. Wernher-von-Braun Medal, Fellow of the American Geophysical Union, Julius-Bartels Medal of the EGU.

Markus May is Managing Director at Airbus Urban Mobility GmbH. In this role he is responsible for the setup of this Airbus subsidiary that is focusing on the future market of Urban Air Mobility. Markus started his career at the German Aerospace Center DLR after having completed a Franco-German double degree in engineering and management. He joined Airbus in 2012 and has been working in Future Projects & Strategy, Corporate Innovation as well as the Cabin Program before his current assignment.
Rolf Moeckel is an Assistant Professor in the Department of Civil, Geo and Environmental Engineering at the Technical University of Munich in Germany. He leads a research group called Modeling Spatial Mobility that focuses on travel behavior research and transport modeling. He conducted research as a PostDoc at the National Center for Smart Growth at the University of Maryland and worked as a consultant with Parsons Brinckerhoff in New York and Albuquerque. He holds a doctorate in spatial planning from the University of Dortmund in Germany.

Eike Stumpf is full professor and head of the Aerospace Systems Institute of RWTH Aachen University. Professor Stumpf received his Diploma in Aerospace Engineering from the Technical University of Berlin and his Ph.D. from RWTH Aachen University. His primary research interests are conceptual and preliminary aircraft design, vortex dynamics and system analysis.
Georg-Vollmar-Akademie e.V.
Am Aspensteinbichl 9-11
82431 Kochel am See

**FROM MUNICH BY TRAIN**
- hourly from Munich main station to Kochel train station
- 10-15 min walk to the guest house
- **ALTERNATIVELY:** Taxi from Kochel station to guest house
tel: 0049 8851-1315 (reservation needed)

**FROM MUNICH BY CAR**
- follow A95 until Großweil, exit 10 Murnau/Kochel
- follow Kocheler Str. until Schlehdorfer Str. in Kochel am See
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DIRECTIONS