

AIRBORNE 2013 WIND ENERGY

CONFERENCE

SCHEDULE

Tuesday, Sept 10th

Foyer at Grashof Building

8:30 - 9:30 Registration & Morning Coffee

Auditorium Beuthsaal, (Grashof Building)

9:30 - 10:00 Welcome, Greetings:

Guido Lütsch

President German Airborne Wind Energy Association

Prof. Dr. Monika Gross

President Beuth University of Applied Sciences Technology

10:00 - 10:20 AWE Movie

10:20 - 10:45 Coffee

Auditorium Beuthsaal (Grashof Building)

10:45 - 12:30 Session: Enterprises

Guido Lütsch (BHWE): Moderator

Stephan Brabeck (Skysails): Enterprises and Prototypes

Richard Ruiterkamp (Ampyx): Ampyx Power: Preparing for Commercialization

Alexander Bormann (Enerkite): EnerKite. Portrait of the Company

Adrian Gambier (Fraunhofer IWES): Airborne Wind Energy: An Approach to Broaden the Horizon of Conventional Wind Energy

Auditorium H2 (Bauwesen Building)

12:30 - 13:30 Lunch (Foyer Grashof Building) Bookshop / Simulation corner

13:30 - 15:30 Session Enterprises

Stephan Brabeck (Skysails): Moderator

Rigo Bosman (DSM Dyneema): Engineering Guidelines for Airborne Wind Energy Tethers with HMPE Fibers

Mario Milanese (Kiteenergy):

Design and Testing of the KE60 Yoyo AWE Generator

Corey Houle (FH Nordwestschweiz):

SwissKitePower – A Collaborative R&D Project

Chris Vermillion (Altaeros Energies): Altaeros Energies

Development Process for Buoyant Airborne Wind Turbines

Clemens Töpfer (NTS): Design of a Power Plant Based on the X-Wind Technology

13:30 - 15:30 Session Finance

Alois Flatz (Zouk Capital): Moderator & Speaker

Investing in Cleantech-Innovations – The Investors Perspective

Carlo Perassi (WOW):

5 years Financing Airborne Wind Energy Projects

Udo Zillmann (Daidalos Capital):

AWE Financing Strategies. Obstacles – Strategies – Outlook

Jürgen Daamen (KfW):

Financial Support by KfW: Optimize your Opportunities!

Simon Bolten (TU München): What are the Success Factors for Profiting from Innovation in the Emerging Airborne Wind Energy Industry? A Competition Analysis in the Face of Innovation

15:30 - 15:45 Coffee (Foyer Grashof Building)

15:45 - 17:30 Session Storage

Werner Diwald (Enertrag): Moderator & Speaker

Power to Gas: Hydrogen Production by Wind Power Plants - The Worldwide First Hybrid Power Plant

Chul Park (KAIST):

Economy of Hydrogen Production by Parafoil-Pulled Ships

Nicolas Lewkowicz (Beuth University): Discussion on Electro-chemical Energy Storage Devices to Cope with the Alternating Energy Flow in YoYo-AWEC Fed Off-Grid Systems

Mariam S. Ahmed (G2ELAB):

Kite-based Wind System Grid Integration and Stand-alone Operation

15:45 - 17:30 Session Technology

Damon Vander Lind (Makani Power): Moderator

Rolf van der Vlugt (TU Delft):

Validation of a Quasi Steady Kite Power System Model

Aldo Zraggen (ETH Zürich): On Real-Time Optimization and Adaptation of Airborne Wind Energy Generators

Joseph Coleman (University of Limerick):

Experimental Developments of a Pumping Mode Kite Power Demonstrator with Non-reversing Generator

Moritz Diehl (KU Leuven): Automatic Control and

Rotation Start of a Rigid-Wing AWE System in Pumping Mode

17:30 - 19:30 Expert Sightseeing Tour

19:30 - 23:00 Dinner Beuth Hall (Old Machine Hall)

AIRBORNE 2013 WIND ENERGY

CONFERENCE SCHEDULE

Wednesday, Sept 11th

Auditorium Beuth-Saal (Grashof Building)

9:00 - 10:30 Session Wind

- Cristina Archer** (University of Delaware): Moderator & Speaker
Ioannis Lymeropoulos (Automatic Control Laboratory, EPFL): Optimal Altitude Estimation for Power Generating Kites in an Uncertain Wind-Field
Klaus Thiele (TU Braunschweig): 20 Years of Wind Measurements in Germany. Results and Future Developments

Auditorium H2 (Bauwesen Building)

9:00 - 10.30 Session Technology / Kite Control

- Moritz Diehl** (KU Leuven): Moderator
Rolf Luchsinger (EMPA): From Surf-Kites and Sailplanes to Twings
Lorenzo Fagiano (ETH Zürich): Automatic Crosswind Flight of Tethered Wings: 2-step and Direct Approaches
Tiago Pardal (Omnidea): Harnessing High Altitude Wind Energy Employing a Hybrid Lighter-than-air Platform with Aerodynamic Lift from the Magnus Effect

10:30 - 10:45 Coffee (Foyer Grashof Building)

10:45 - 12:45 Session Enterprises

- Guido Lütsch** (BHWE): Moderator
Uwe Ahrens (NTS): Future Prospects of Airborne Wind Energy (AWE)
Garrett Smith (Sky WindPower): Commercial Scale Design of the Sky WindPower Flying Electric Generator
Nykolai Bilaniuk (LTA Windpower): High Altitude Wind Turbines using a Hybrid System of Bernoulli and Buoyant Lift
Michael Sterner (TH Regensburg): Sail Energy: Generating Renewable Fuels by Wind-driven Energy Ships and Power-to-gas
Michael Kroll (Autodesk): Sustainable Design and Innovation in Clean Tech
Jürgen Goetz (Fraunhofer IPA): Development of the Kite Control Chassis

10:45 - 12.45 Session Technology / Kite Control

- Roland Schmehl** (TU Delft): Moderator & Speaker
Flight Dynamic Modelling of Inflatable Membrane Kites Including Aeroelasticity Effects
Michael Erhard (SkySails): Design Challenges Towards Automated Flight Control for Tethered Kites
Kazuo Arakawa (Kyushu University): Performance Characterisation of Airborne Wind Rotor
Milan Vukov (KU Leuven): Fast Solvers for Nonlinear Optimal Control and Estimation with Applications to Tethered Kites
Richard Leloup (Lei Kites Research at ENSTA Bretagne): Application to Vessels Auxiliary Propulsion by Lift-To-Drag Ratio Estimation and Velocity Prediction Program

12:45 – 14:00 Lunch (Foyer Grashof Building) Bookshop / Simulation corner Poster Presentation

14:00 - 16:00 Session Enterprises/Legislation/Other

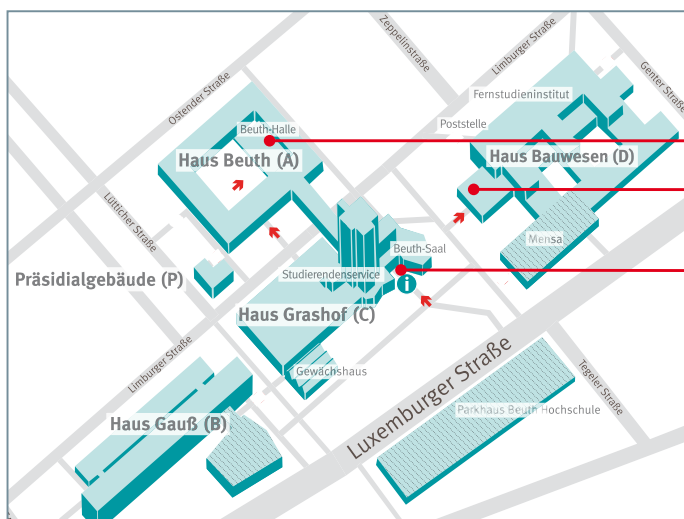
- Guido Lütsch** (BHWE): Moderator
Bernd Lau: Towerless Radio Station with Airborne Wind Energy Technology
Christoph Haucke (EnerKite): Innovative Approaches for Certification, Permission and Safety (Functions) of ABWE
Tommi Berg (Alula Energy Oy): Automated Landing and Take-off System for Rigid Wing AWES
David Janke (Beuth University): Experimental Investigation and Modeling of Noise of Airborne Wind Energy Converters
Christoph Beaupoil: The Big AWE Picture

14:00 - 16.00 Session Technology / Other

- Jürgen Thorbeck** (TU Berlin): Moderator
Uwe Fechner (TU Delft): Dynamic Kite-Power System Modelling
David J. Olinger (WPI): Modeling and Testing of a Kite-Powered Water Pump
Franz Stuber (Münster University): Airborne Wind Energy in Teacher Education
Roderick Read (Windswept and Interesting): Cooperative Kite Networks: Scaling Open Source Hardware
Bachtijar Ashari (TU Delft): Aerodynamic Performance Prediction of a Tetrahedral Kite

16:00 - 16:30 Coffee Foyer Grashof Building AWE Movie Auditorium Beuth-Saal (Grashof Building)

16:30 Discussion & Farewell



Beuth-Hall = (Old Machine Hall)
Dinner

Auditorium H2, First Floor

Auditorium Beuth-Saal
Foyer Grashof Building
Registration,
Coffee and Lunch Buffet

Organization:
BHWE

Bundesverband Höhenwindenergie e.V.
German Airborne Wind Energy Association
www.bhwe.org

www.awec2013.de