

# International Conference on Electric Airships

Wednesday September 27 to Friday September 29, 2023,

Fürther Str. 250, Nuremberg, Germany

Register online at: <https://www.encn.de/conference-airships>



## Wednesday, September 27 – Arrival of Participants

## DAY 1

**7:00 p.m. Casual Welcoming Meeting** – Hotel Bruderherz (Luitpoldstr. 15)  
Sponsored by Avealto Ltd.

## Thursday, September 28 – Low Altitude Airships

**8:00 a.m. Registration**

**8:30 a.m. Opening Remarks – Welcome**  
Christoph Pflaum, Riccarda Scherner - FAU

**8:35 a.m. Airship Applications - Chair: Christoph Pflaum**

**Cargo Airships: Economics and Potential Applications**  
Barry E. Prentice - ISO Polar Airship Assoc.

**Discussing use Cases for Airships in Fresh Produce Agri-food Chains**  
Florian Cramer - Kühne Logistics University

**Research and Innovation Agenda for the LTA Sector, based on a European and International Survey**  
Frank Neumann - IMIEU

**10:00 a.m. Coffee Break**

**10:20 a.m. Cargo Transportation - Chair: Christoph Brabec**

**Hybrid Electric Multi-lobed Airships**  
Rajkumar S. Pant - Aerospace Engineering Department, India

**Atlas Electric Airships**  
Gennadiy Verba - ATLAS

**Northern Canadian Housing Demand - CMHC Project**  
Ross Prentice - BASI

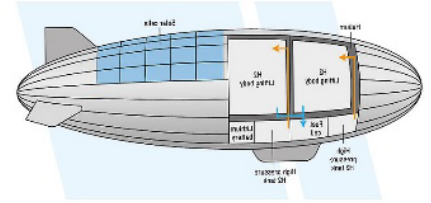
**11:45 a.m. Lunch**  
Virtual Reality of Rigid Airship Hindenburg, Gerd Hirzinger, vr-dynamix

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## 1:10 p.m. **Technology and Design of Airships** - Chair: Frank Neumann

### **Design and Performance of Transport Airships**

Johannes Eißing - DLR

### **Processing Cybernetic IoT Systems in the State of Suspension**

Csaba Singer - Hybrid-Airplane Technologies GmbH

## 2:10 p.m. **Coffee Break**

## 2:30 p.m. **Airship Drones** - Chair: Christoph Pflaum

### **Enabling technology for the next generation of electric airships**

Andreas Burkart - Windreiter

### **Lift and Power for Unmanned All Season Fleet of Kelluu Airships**

Jouni Lintu - Keluu

### **Small unmanned hydrogen airships for long range monitoring**

Martin Bocken - HyLight

## 4 p.m. - 6 p.m. **Poster session and evening snack**

### **Jonas Motyl (FAU):**

Global Route Optimization of Solar Powered Airships

### **Lukas Schröder (FAU):**

Numeric Simulation of the Gas Temperature inside Solar Airships

### **Fraunhofer Institute IISB (Erlangen): (Martin März)**

Power Electronics

### **Shashwat Trivedi (Department of Aerospace Engineering, IIT Bombay, Mumbai, India):**

Sizing Methodology and Environmental Impact Assessment of Tri-lobed Electric Cargo Airship

### **Rong Wang (SAOT):**

Photo-physical properties of donor and acceptor interfaces of organic solar cells

### **Hans-Joachim Egelhaaf (HIERN):**

Printed organic solar modules with high power-to-weight ratio for application in aviation

### **Daniel Wibbing (Company roboloon):**

roboloon - Never Landing Drones

### **Siva Chennupati (SunPlower Propeller GmbH):**

World's 1st Compact 360° Radial Thrust Electric Propeller

### **John Wilms (University of Manitoba): Cold Weather Testing Facility for Airships in Manitoba,**

Canada creating control circuits for correcting these environmental factors

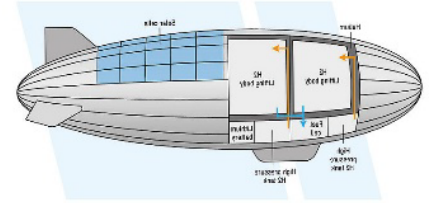
## 7 p.m. **Reception** - Old Town Hall of Nuremberg

Location: Rathausplatz 2, Ehrenhalle des Rathauses Wolffscher Bau

With: Julia Lehner, (Second mayor of Nürnberg)

Joachim Hornegger (President of FAU)

Barry E. Prentice (University of Manitoba)



## Friday, September 29 – Airship Technology and High Altitude Airships

# DAY 2

**8:00 a.m. Networking**

**8:30 a.m. Large Airships and Testing - Chair: Barry Prentice**

### Challenges and Prospective Solutions for Propulsion of a Zero-Emission Cargo Airship

Sylvain Allano, Flying Whales

### Airlander 10 – A Future of Zero Emissions Aviation

Nathanael West, Hybrid Air Vehicles Ltd

### Airship Design and Testing: Experience as a Key

Bastien Lefrancois, First Solar Powered Airship Pilot

**10:00 a.m. Coffee Break**

**10:20 a.m. Technology of Airships I - Chair: Rajkumar S. Pant**

### From Science Fiction Dreams to Reality - Partial Vacuum Lift

Diana Little, Anumá Aerospace, LLC

### From piston engines to hybrid electrical drivetrains: a feasibility study to evaluate re-engineering options for the Zeppelin NT airship

Eckhard Breuer, ZLT Zeppelin Luftschifftechnik

### Design and sizing of a hybrid electric powertrain for an airship

Andreas Bender, University of Stuttgart, Institute of Aircraft Design (IFB)

**11:50 a.m. Lunch**

**1:10 p.m. High Altitude Airships - Chair: Martin März**

### Optimizing a High Altitude Electric Airship to Support a Wireless Infrastructure Communication Payload

Thomas Olson, Avealto Ltd.

### Using Stratospheric LTA for real-time wide-area detection

Kristian Ullum Vind, Sceye Ltd.

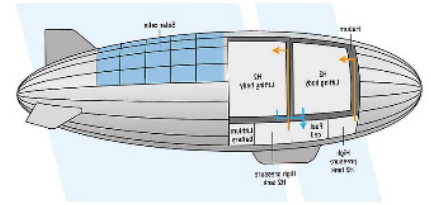
**2:10 p.m. Coffee Break**

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## 2:30 p.m. **Technology of Solar Powered Airships II** - Chair: Barry Prentice

### **Ultralight Weight PV Modules – Where are the Limitations**

Christoph Brabec, Helmholtz-Institute Erlangen-Nürnberg

### **Power Electronics for Aircraft and Airship Applications**

Martin März, Fraunhofer-Institute IISB

### **Solar Powered Airships**

Christoph Pflaum, FAU

## 4:00 p.m. **Planning Further Projects** - Chair: Martin März

### **7:00 p.m. Conference Dinner and Concluding Remarks**

Christoph Pflaum

Location: Heilig-Geist-Spital, Spitalgasse 16

## **Saturday, September 30 – Sightseeing of Nuremberg**

# DAY 3

### **10:00 a.m. Sightseeing of Nürnberg**

Sabine Gentner, Christoph Pflaum

#### Meeting places:

10:00 am: In front of restaurant "Hexenhäusla",  
Vestnertorgraben 4

**or**

9:40 am: Beautiful fountain (Schöner Brunnen), Hauptmarkt