

High-level speakers from worldwide



# 4<sup>th</sup> International UAV World Conference & Exhibition

UAS Technologies and Missions

**November 3 – 4, 2010**

Exhibition Centre Frankfurt / Main, Germany



**Conference Programme**

Early Bird: Until September 15, 2010

# 4<sup>th</sup> International Conference UAV World

November 3 – 4, 2010, Frankfurt/Main, Germany

DAY 1, November 3, 2010 – Session A – UAS Technologies and Sensor Systems

Status August 27, 2010

09.00 **Check-in and Coffee**

09.30 **Welcome Address of the Organizer**

Diana Schnabel / Volker Schulze  
Exhibition Management, AIRTEC 2010

**Welcome Address of the Conference Chairman**

Prof. Dr.-Ing. Peter Vörsmann, Technical University Braunschweig

## UAS Technologies

09.40 **Enhancing UAV Survivability through Damage Tolerant Control**

Dr. David Vos, Rockwell Collins, USA

10.00 **New Design Methodology for the Development and Optimization of Payload and System Architectures for Unmanned Aircraft Systems**

Frank Ehlermann, Pace Aerospace Engineering & Information Technology GmbH, Germany

10.20 **Certification Process for VTOL-UAS Experimental System**

Dr. René Knorr, ESG Elektroniksystem- und Logistik-GmbH, Germany

10.40 **Design and Numerical Optimization of Winglets and Assessment of Optimization Algorithms**

Ubaldo Cella, Piaggio Aero Industries S.P.A., Italy

Diego Giuseppe Romano, University of Naples, Italy

Francesco Franchini, EnginSoft S.P.A., Italy

11.00 **Coffee break in the Exhibition Area**

11.30 **Steering MAV'S with Neural Networks**

Prof. Dr.-Ing. Peter Vörsmann, Dipl.-Ing. Thomas Krüger, Institut of Aerospace Systems,  
Braunschweig Technical University, Germany

11.50 **Solar Cells and Fuel Cell Power System for Long Endurance Autonomous Flight of Solar Powered UAS**

Giulio Romeo, M. Pacino, F. Borello, Politecnico di Torino (Turin Polytechnic University)  
– Dept. of Aerospace Eng., Italy

12.10 **Improving the Helicopters' Flight Efficiency by using the Coanda Effect**

Ionica Cîrciu, Mircea Boscoianu, Air Force Academy, Brasov, Romania

Florin Nedelcut, Romania Dunarea de Jos" University, Galati, Romania

- 12.30 Optimal Wing Twist Distribution for Roll Control of MAVs**  
Mostafa Ramadan Ahmed, Aerospace Engineering Department, Cairo University, Egypt
- 12.50 Lunch in the Exhibition Area**
- 13.50 Modular Power Supply System for UAV Application**  
Dr. Jan Wenske, JENOPTIK Defense and Civil Systems, ESW GmbH, Germany
- 14.10 UAV Propulsions and Indication Systems**  
Dipl.-Ing. Michael Lieser, Evionic Technology Consulting, Germany
- 14.30 Elwira: Flying Robot Platform for Control, Guidance and Mission Experiments**  
Andreas Klöckner, DLR, Germany
- 14.50 UAS Technology for Mission Control – Autopilot and Cognitive Pilot**  
Tor Olav Steine, Alfatroll AS, Norway

## UAS Sensor Systems

- 15.10 Sensor Systems and Intelligent Technologies**  
Dr. Bravo Delauré, VIPO – Flemish Institut for Technological Research, TAP – Centre for Remote Sensing and Earth Observation Processes, Belgium
- 15.30 Coffee break in the Exhibition Area**
- 16.00 UAV SAR Sensors: Technology Base and Status Review**  
Dr. Michael Edrich, EADS Deutschland GmbH, Germany
- 16.20 Light Weight, High Performance EOIR for New Generation Small UAV**  
George DeCock, L3 – WESCAM, Canada
- 16.40 Self Optimizing Search and Characterization of Gaseous Hazardous Substance Sources using a Micro-Drone**  
Dipl.-Ing. Patrick Neumann, BAM Bundesanstalt für Materialforschung und -prüfung, Fachgruppe VIII.1 Mess- und Prüftechnik, Sensorik, Germany

## UAS Operations

- 09.00 Check-in and Coffee**
- 09.30 Selection and Operation of an UAS**  
Frederico Novaes de Almeida, Eduardo de Castro Pereira,  
Federal Police Department of Brazil, Brazil
- 09.50 A Vision-based Landing Station for Micro UAVs**  
Luigi Freda, Tiziano Fiorenzani, Andrea Beltrame Pomè, Marco Ballerini,  
U.T.R.I. S.P.A. Aerospace Services, Italy
- 10.10 JAPCC Strategic Concept of Employment for UAS in NATO**  
Javier Fernandez, Spanish Air Force, Spain
- 10.30 High Data-Rate Laser Communications for UAV Applications**  
Markus Knapek, Dr. Dirk Giggenbach, DLR, Institute of Communications and  
Navigation, Germany
- 10.50 Coffee break in the Exhibition Area**
- 11.20 Effects of Human Factors Engineering on UAS Operator Performance**  
Qaisar Waraich (Raza), The George Washington University - Engineering Management  
and Systems Engineering, USA

## UAS Missions

- 11.40 Military and Civil Missions of UAS**  
Steve May, General Atomics Aeronautical Systems, Inc., USA
- 12.00 UAV Based Surveillance of Wide Areas in Security and Defence, Missions: Spanish Roadmap for Border Control against Illegal Immigration and Trafficking**  
David Rios Morentin, ISDEFE, Spain
- 12.20 Carolo P360, the new Versatile Surveillance Drone**  
Dipl.-Ing. Andreas Scholtz, TU Braunschweig, Institut für Luft- und Raumfahrtssysteme,  
Germany
- 12.40 Lunch in the Exhibition Area**
- 13.40 Use of Unmanned Air Surveillance for Counter Insurgency Operation in Sri Lanka**  
Captain Dilshan Wasage, Sri Lanka Air Force (SLAF), Directorate of Air Operations,  
Sri Lanka

## UAS Simulation

- 14.00 Simulation Methods for MAVs in Urban Operations**  
D. Langkamp, W.J. Crowther, University of Manchester, United Kingdom
- 14.20 Unmanned Aerial System - Training Simulation (UAS-TS)**  
Dr. Frank Deppisch, eurosimte GmbH, Germany
- 14.40 Coffee break in the Exhibition Area**
- 15.10 CAE's UAS Training Concept – Focusing on Mission Crew Management**  
Dr.-Ing. Hans-Werner Lindert, CAE Elektronik GmbH, Germany

## Integration of UAS into the Civil Aerospace

- 15.30 Integration of UAS in the Airspace and lowering General Aviation Accident rate: Two Converging Objectives**  
Claude Le Tallec, ONERA - The French Aerospace Lab, France
- 15.50 UAV DACH Association - an Update and what is to be done, to fly UAS in Non-Segregated Airspace**  
Bernhard Freiherr von Bothmer, UAV Dach, Germany

# Registration Form

Return by fax: + 49 (0) 69 27 40 03 44

# „UAV World“

4<sup>th</sup> International Conference | November 03 – 04, 2010

airtec GmbH & Co. KG, P.O. BOX 70 01 64, 60551 Frankfurt / Main, Germany



## Please register the following delegate:

_____	
Title, First name	
_____	_____
Surname	Job Title
_____	
Company/Organisation	
_____	
Department/Division	
_____	_____
Email	Web Site
_____	
Address	
_____	
Town	
_____	_____
Post Code	Country
_____	_____
Direct Telephone	Direct Fax
_____	
Mobile	

## Registration Fees Conference

	Early Bird* Non-Exhibitors	Early Bird* Exhibitors**	Standard Non-Exhibitors	Standard Exhibitors**	Speakers
<b>2 Days</b> Registration	<input type="checkbox"/> € 450,-	<input type="checkbox"/> € 400,-	<input type="checkbox"/> € 600,-	<input type="checkbox"/> € 450,-	<input type="checkbox"/> € 400,-

Students and governmental institutions €100,-

All prices include VAT

### Delegate information:

The registration includes admission to the conference and to the exhibition, conference documentation, CD and refreshments and lunch for the 2 days conference. Please ask for sponsoring possibilities.

\*Registration until September 15, 2010

\*\*Your company must be an exhibitor at AIRTEC 2010 to qualify for the exhibitor registration rate.

Full registration fee is due prior to the start of the conference.

Cancellations: All cancellations must be made in writing to the above mentioned address. Cancellations received 4 weeks prior to the start of the event will be refunded in full. For cancellations received after this time or for failure to attend, no refunds will be given. The organizers reserve the right to change the programme. I agree to be bound to the General Terms and Conditions of airtec GmbH & Co. KG

_____	
Signature:	Date:

## Sponsorship Order Form

There are many opportunities to present your company at the conference as sponsor. We would be pleased to discuss additional individual sponsorship opportunities with you. Please call us at +49 (0) 69 27 40 03-15 or send an E-Mail: [conferences.airtec2010@demat.com](mailto:conferences.airtec2010@demat.com)

### Overview sponsorship opportunities (Please tick as appropriate)

**Conference Lunch:** including company name or logo in the session rooms, in the conference programme and our website.  
 € 3,700

**Conference Coffee Breaks:** including company name or logo in the session rooms, in the conference programme and our website.  
 Per day: € 2,500

**Delegate pack:** including company name or logo in the session rooms, in the conference programme and our website.  
 € 4,000

### For sponsorship please contact:

**airtec GmbH | Co. kg**  
Frankfurt/Main, Germany  
[airtec@demat.com](mailto:airtec@demat.com)  
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Requirements on the Conference Folders: The conference folders should be suitable for DIN A4 print material. The sponsor logo as well as the AIRTEC logo will be placed on the cover.

All prices are stated plus VAT (19%).

More branding opportunities are possible in agreement with the organiser. All additional costs for logo presentation and advertising material will be assumed by the sponsor.

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Sponsorship offerings and prices are subject to change. airtec GmbH & Co. KG reserves the right to develop additional sponsorship opportunities. No cancellation of refunds once sponsorship has been confirmed. Same sponsorship opportunity request: First-come first-served rules apply (submissions will be dated upon receipt). I agree to be bound to the General Terms and Conditions of airtec GmbH & Co. KG

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Please charge my credit card  Visa  Mastercard

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**AIRTEC**  
**INTERNATIONAL AEROSPACE  
SUPPLY FAIR**

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