



International Robotic Sailing Conference Program 2015

Date: August 31st 2015

Location: Auditorium, Åland's Hotel and Restaurant School, Strandgatan 1, Mariehamn

08.30-09.00 Registration

09.00-09.20 Welcome

Anna Friebe WRSC 2015 General Chair, Florian Haug IRSC 2015 Program Chair,
Edvard Johansson, rector, Åland University of Applied Sciences,
Johan Ehn, Education Minister, Government of Åland

09.20-09.50 Keynote speech: "A vision of future unmanned ships"

Oskar Levander, VP Innovation, Engineering & Technology - Marine Rolls-Royce

09.50-10.20 Coffee

10.20 **Mission planning, collision avoidance and localization**

Session chair: Andy Ruina, Cornell University

10.20-10.45 *AIS-Enabled Collision Avoidance Strategies for Autonomous Sailboats*

José C. Alves, Universidade do Porto, Faculdade Engenharia

10.45-11.10 *Consideration of State Representation for Semi-autonomous Reinforcement*

Learning of Sailing Within a Navigable Area

Hideaki Manabe, Kogakuin University

11.10-11.35 *AEOLUS, the ETH Autonomous Model Sailboat*

Jonas Wirz, Automatic Control Laboratory ETH Zürich

11.35-12.00 *SWARMON—Real-Time Localization System*

Quentin Descours and Benoit Bourdon, École nationale supérieure de techniques
avancées (ENSTA) Bretagne

12.00-13.15 NAPA lunch

- 13.15 **Sailboat platforms and applications**
Session chair: Colin Sauze, Aberystwyth University
- 13.15-13.40 *A-TIRMA G2: An Oceanic Autonomous Sailboat*
Jorge Cabrera-Gamez, Universidad de Las Palmas de Gran Canaria
- 13.40-14.05 *Integration of Wind Propulsion in an Electric ASV*
Nuno A. Cruz, INESC TEC, FEUP-DEEC
- 14.05-14.30 *Mobile Autonomous Platforms for Passive-Acoustic Monitoring of High-frequency Cetaceans*
Holger Klinck, Cornell University
- 14.30-14.55 *Design and Development of a Self-Stabilizing, Autonomous Sailboat with Zero-Net Stored-Energy Use*
Andy Ruina, Cornell University
- 14.55-15.20 *Kite Sailing Platform Mathematical Model and Stabilization*
Konstantin Aprosin, Ural Federal University
- 15.20-15.50 Coffee
- 15.50 **Controllers and sensors**
Session Chair: Luc Jaulin, École nationale supérieure de techniques avancées (ENSTA) Bretagne
- 15.50-16.15 *Autonomous Sailboat Track Following Control*
Mengqi Kang, Shanghai Jiao Tong University
- 16.15-16.40 *Modeling and Control for an Autonomous Sailboat: A Case Study*
Jon Melin, Uppsala University
- 16.40-17.05 *Quantitative Analysis of Various Sail Luffing Sensing Methods*
Halie Murray-Davis, Franklin W. Olin College of Engineering
- 17.05-17.25 Closure - Best paper award
Florian Haug



HÖGSKOLAN PÅ ÅLAND
ÅLAND UNIVERSITY OF APPLIED SCIENCES