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Welcome and Introduction to the Airborne Wind Energy Conference 2019

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Welcome and Introduction to the Airborne Wind Energy Conference 2019

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Dear conference participants,

Welcome to Glasgow and welcome to the 8th international airborne wind energy conference AWEC 2019! We are excited to present to you an inspiring program in a beautiful location for the two conference days.

The scientific program of AWEC 2019 includes:

- An invited keynote presentation of 40 minutes, by
 - Lorenzo Fagiano, Professor of Controls at the Politecnico di Milano
- An introductory presentation of 20 minutes, by
 - Giles Dickson, Chief Executive Officer at Wind Europe
- Three plenary presentations of 20 minutes, by
 - Sören Sieberling, AP-3 Project Manager at Ampyx Power,
 - Doug McLeod, Technical Program Manager at Makani and
 - Cédric Philibert, Senior Analyst at the International Energy Agency
- Eleven contributed talk sessions in three parallel tracks with altogether 42 presentations
- Two poster sessions, each preceded by plenary spotlight presentations, with altogether 21 poster presentations
- Five panel discussions covering all aspects of airborne wind energy which include a further 10 presentations

All abstracts presented in this book have undergone a peer review process, and we want to thank all authors and all reviewers at this place for having contributed to a high quality scientific program, as we believe.

In order to make orientation easier, we decided to rename the four main conference auditoria after renowned researchers in airborne wind energy:

- “Blyth Auditorium” (Auditorium B) honoring James Blyth (1839–1906), a Scottish electrical engineer and academic at Anderson’s College, now the University of Strathclyde. He built the first known structure by which electricity was generated from wind power (1887). This turbine powered his holiday cottage in Marykirk;
- “Cayley Auditorium” (Auditorium C) honoring Sir George Cayley (1773–1857), an English engineer, inventor and aviator. He designed the first glider to carry a human aloft and discovered the four aerodynamic forces of flight: weight, lift, drag and thrust;
- “Wilson” (Conference Room 6&7) honoring Alexander Wilson (1714–1786), a Scottish meteorologist, astronomer and academic at Glasgow University. He conducted the first kite-based measurements in the atmosphere (1749); and
- “Melville” (Level 3 Foyer) honoring Thomas Melville (1726–1753), a Scottish natural philosopher. As a student at Glasgow University he conducted the atmospheric measurements with Alexander Wilson. Together they measured air temperature at various levels above the ground simultaneously with a train of kites.



Kitepower B.V. 40 m² kite (24 August 2018)

The side program of AWEC 2019 includes:

- a welcome reception on October 14 in the Glasgow City Chambers;
- two lunches and four coffee breaks in the conference premises, free for all conference participants;
- a dinner aboard the Tall Ship ‘Glenlee’ on October 15.

The city of Glasgow is named by National Geographic as one of its “Best of the World” destinations, while voted by Rough Guide readers the world’s friendliest city! Glasgow is a city with a very strong, indeed a globally renowned, knowledge base sector and vibrant wind energy sector. UK’s largest onshore wind farm, Whitelee, is just 20 minutes from the city centre.

Founded in 1796 as the Andersonian Institute to be a “place of useful learning”, the University of Strathclyde received its royal charter in 1964 as the UK’s first technological university. Based right in the very heart of Glasgow, the University of Strathclyde was awarded Scottish University of the Year 2020 by the Times and Sunday Times Good University Guide.

The Wind Energy and Control Centre (WECC), in the Department of Electronic & Electrical Engineering at the University of Strathclyde, is one of the largest wind energy research groups in the world with over 80 research assistants and PhD students. WECC has expertise in turbine and powertrain design; fault diagnosis, failure rate analysis, O&M and asset management; offshore networks, connection-to-shore and grid integration; power production forecasting, turbine and array dynamics, modelling and simulation; turbine and wind farm control.

WECC leads the UK’s pre-eminent doctoral training programme in offshore renewable energy, the EPSRC Centre for Doctoral Training in Wind & Marine Energy Systems & Structures (CDT-WAMSS). The centre was first established in 2009 and over the past decade it has trained more than 100 doctoral students, working with over 40 industrial partners and with graduates providing expertise across all areas of wind and marine energy engineering. As of October 2019, the CDT brings together the leading UK research groups in Wind Energy at Strathclyde, Marine Energy at the University of Edinburgh and Offshore Structures at the University of Oxford.

The conference would not have been possible without the support of its sponsors, who are listed on pages 8–9 and, to which we want to express our sincere gratitude. We are also grateful to the City of Glasgow and the Lord Provost for hosting the Welcome Reception in the Glasgow City Chambers. A special thanks also goes to the Glasgow Convention Bureau and the TIC conference staff for providing exceptional support to this event.

We also want to thank all members of the programme committee and organising committee – listed on page 10 – for their efforts in making the conference a success. And within the organising committee, we want in particular

to thank, Stefanie Thoms for her outstanding contributions that have not only made this conference possible but have greatly enhanced the conference experience for all participants.

Last but not least, we are grateful to you, the participants of AWEC 2019, not only for coming to the conference, but also for your various contributions and your hopefully active participation in the discussions during panel sessions, after talks, at lunches, dinners and coffee breaks. We very much look forward to an inspiring and exciting conference together with you!

Sincerely,



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