Preface

On behalf of the European Academy of Wind Energy (EAWE\textsuperscript{1}) and WindEurope (formerly the European Wind Energy Association, EWEA, until April 2016), we have the pleasure of presenting the Scientific Proceedings of the WindEurope Summit 2016.

WindEurope Summit 2016 took place in Hamburg from 27-29 September 2016 and was one of the largest and most important meeting places of the wind energy industry, featuring 50 thematic sessions with more than 300 oral and 200 poster presentations. Known previously as EWEA’s Annual Conference and as the European Wind Energy Conference before that, it has included a Science & Research component since 2007. The event is a well-known meeting place that allows engineers and scientists to present their latest findings to a mixed audience consisting of both researchers and industry experts. The industry involvement helps to focus the research, while the scientists often demonstrate relevant, novel ideas and solutions to problems of current industrial interest. This often leads to interesting comments and discussions that have an impact well beyond the conference boundaries.

In the course of continuously improving the conference experience, in 2015 the organisers decided to combine scientific and general content in all conference sessions, rather than reserving the presentation of the Science & Research contributions in a separate track as was done at previous editions. Sessions at EWEA Annual Event 2015 were therefore combinations of general and of scientific presentations, which allowed for a more flexible choice of topics. In particular small research topics could also be accommodated in the context of a wider session. This successful setup of the conference has been carried over to this year’s event in Hamburg.

The improvements continue this year, with an agreement between WindEurope and IOP Publishing, which allows for the scientific contributions to be published in the Journal of Physics: Conference Series, an Open Access journal managed by the Institute of Physics (IOP). The European Academy of Wind Energy has for some time recommended such an arrangement, and we are very happy to see this happen. The most important advantage is that conference papers will be much more visible, being fully indexed and online available free of charge to anyone, while the authors retain their copyright under the permissive IOP Proceedings License. The IOP also provides long-term archival and access.

All papers published in this volume originate from scientific contributions presented in the oral sessions of WindEurope Summit 2016, and have been peer-reviewed in order to ensure strict, international research standards. Selected papers, suitably extended and rewritten, will additionally be invited and considered for the new Wind Energy Science journal of the EAWE.

The proceedings in this volume consist of 21 papers covering a wide spectrum of wind energy research. The topics include aerodynamic investigations and blade design, controller design for load mitigation, forecasting of power production, investigations related to wind turbine wakes, atmospheric stability and monitoring of turbines, as well as contributions concerned with floating support

\textsuperscript{1} http://www.eawe.eu/
structures, optimal strategies for bidding on the energy market and mathematical failure modeling for offshore wind turbines, among others.

As with previous events, the European Academy of Wind Energy is responsible for organizing the review process for scientific contributions, has contributed to develop the sessions, and provides scientific chairs for all sessions. All papers were peer-reviewed by a Scientific Committee, consisting of scientists from EAWE member institutes and their associates. We thank all authors for their willingness to take part in this procedure, including the strict deadlines imposed by the tight publication schedule, and the reviewers for their hard work alongside their daily business. WindEurope is responsible for the organisation and logistics of the conference, and we thank their highly professional staff and their associates for the excellent collaboration.

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