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## Welcome to the Airborne Wind Energy Conference 2015

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Dear conference participants,

It is a pleasure to welcome you to the Airborne Wind Energy Conference 2015 here at the TU Delft. As chair of the programme committee I was impressed by the number and quality of the abstracts submitted and I am curious to experience the undoubtedly interesting scientific event that takes place the coming two days.

My own background is in “conventional” wind power and I have been working in this field already since 1976. At that time TU Delft was one of the pioneers researching novel concepts in modern wind power technology. And, as you may know, TU Delft is also one of the pioneers in Airborne Wind Energy – most notably connected to the work of my former colleague Wubbo Ockels. The emergence of Airborne Wind Energy or Kite Power, as we called it initially, reminds me on the early days of “conventional” wind power. Various intriguing concepts, novel technologies and new use of materials, advanced control strategies to adapt to the fluctuating wind resource, are similarities. But there are also clear differences such as the ability to fly crosswind on a tether at high altitudes. These properties as well as the further reduction of material use are clear advantages compared to “towered” wind turbines. On the other hand, reliability and robustness are crucial for a safe and economically viable operation of any wind energy conversion system. And particularly these aspects are a serious challenge for flying wind power systems in continuous operation exposed to varying wind conditions. Just as even more advanced intelligent control technologies with a high reliability level.

The Airborne Wind Energy R&D community is systematically addressing these challenges and has progressed substantially over the past years. I am convinced that we will soon see the first test installations operating uninterrupted over longer and longer periods – some of the presentations in this conference will address this.

It is also clear that more investments are needed in the development of existing and novel renewable energy technologies to abate climate change. Of course we should continue developing existing renewable energy technologies, but also invest in novel promising technologies. This obviously comes at a high risk but I am convinced that we are able to make some good and educated choices. And Airborne Wind Energy is such a novel technology – high risk and high potential – that we have adopted here at the TU Delft. In our new DUWIND (Delft University Wind Energy Institute) R&D programme Airborne Wind Energy has become a new line of research.

I will also strongly support and facilitate the process to stimulate and integrate Airborne Wind Energy R&D in existing European organisations, such as the EWEA (European Wind Energy Association) and the EAWE (European Academy of Wind Energy). The European Wind Energy Master (EWEM), a two year master course coordinated by TU Delft, is another effective means to disseminate R&D results by means of MSc education and research in an international context.

I wish you all a fruitful and stimulating conference, as well as a joyful stay in Delft.

Gerard van Bussel