



RENEWABLE AND SUSTAINABLE ENERGY INSTITUTE

BIG energy seminar series

Addressing global energy challenges in scale and complexity.

Wind of Innovation

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Date: Friday, January 22, 2021, 9am – 10am

Please join by Zoom: Join Zoom Meeting

<https://cuboulder.zoom.us/j/98020689997>

Abstract:

There is an ever-increasing demand for low or zero carbon electricity generation, spurred by such coupled megatrends as population increase, climate change, and the electrification of heating, cooling and transportation. Wind energy is playing a crucial role in the Energy Transition, and it is expected to provide between one quarter to one third of the global electricity demand by 2050. Notwithstanding the great progress of wind energy in the last decades, and the widespread perception that wind is an already mature technology, its future development cannot be seen as “business as usual”. In fact, there are still many scientific and technological challenges that need to be overcome to improve the turbine, the wind plant, the integration of wind in the future energy mix, and the lifecycle, circularity, impacts and acceptance of wind energy. In this talk we will present our view on some of the main scientific questions facing the field. We will take the opportunity offered by a few of these questions to present some of the work developed by the Wind Energy Institute at TUM, spanning from lifecycle design, to digital technologies for smart operation of turbines and farms, to validation and testing.

Bio:

Prof. Bottasso holds the Chair of Wind Energy at the Technical University of Munich (TUM), where he is also the founding director of the Wind Energy Institute. Prof. Bottasso received a Ph.D. in Aerospace Engineering from Politecnico di Milano in Italy, where he also started his academic career, raising to the rank of full professor before moving to TUM in 2013. He has held visiting positions in the USA (including NREL, NASA, Georgia Tech) and Denmark, and taught short courses at several locations in Europe, Asia and the USA.

Prof. Bottasso has over 30 years of experience in research, teaching and consulting, including more than 20 years in the field of wind energy. He has published more than 500 papers, including about 140 journal papers, and given 30 plenary and invited keynote addresses at international conferences. Among his professional activities, Prof. Bottasso has been the president and vice-president of the European Academy of Wind Energy (EAWE), he is one of the founding Chief Editors of the Wind Energy Science journal, and he has served on the editorial board of several journals and on many academic and industrial executive committees.

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