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Editors

# Wind Energy Exploitation in Urban Environment

TUrbWind 2017 Colloquium

 Springer

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# Preface

The volume contains the written versions of most of the contributions presented during the *TURbWind Colloquium—Research and innovation on wind energy exploitation in urban environment* organized by the University of Trento (IT) that took place in Riva del Garda, Italy, from June 15 to 16, 2017.

The purpose of this colloquium was to discuss the state-of-the-art and the recent developments on wind energy exploitation in urban and suburban area. The urban environment offers a peculiar wind resource, highly variable and extremely turbulent. In order to harvest wind energy in an efficient and durable manner, urban wind turbines have to be properly designed. At the same time, this environment is where the human energy demand is mostly concentrated. Integration of wind turbines on existing or dedicated buildings or, where possible, as free-standing installation in public areas, requires a different design approach compared to open areas. Such issues drive opportunities for innovation and development.

The TURbWind Colloquium was intended to provide a forum for experts on wind energy exploitation in urban areas to present and discuss the state of the art of the technology, exchange ideas and get informed about the latest research trends in the domain. In particular, this colloquium aimed to bring the research community together for the first time under a dedicated event on the urban wind turbines and their integration in the anthropic areas.

We would like to thank all participants for their contributions to the colloquium program and for their contributions to these proceedings. We also acknowledge the important contributions of Prof. Gerard van Bussel and Dr. Josè Alfredo Ramirez in opening the colloquium program. Our special thanks go to colleagues Dr. Ignacio Cruz and Dr. David Wood, for their assistance during the colloquium, and to the members of the Scientific Board. It is our pleasant duty to acknowledge the support of the InVento promoters in the overall organization of the colloquium.

Trento, Italy  
November 2017

Lorenzo Battisti  
Mosè Ricci

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