

## 1st DAY, 21.03.18

8:30-9:00 Meeting WINERCOST MC

9:30-9:45 **OPENING**

Chair: C.C. Baniotopoulos

9:45-10:15 **KEYNOTE LECTURE 1**

Laura Serri, RSE Milano

**Offshore Wind Energy Harvesting in Mediterranean Area: Turning Challenges into Opportunities**

10:15-10:30 **Coffee break**

Chair: B. Blocken

10:30-12:10 **Technical session 1.1 - Wind Characteristics and Loads**

10:30-10:50	1	<b>M. Ratkovic, R. Höffer, T. Andrianne</b> <i>Vibration monitoring of an HAWT in wind tunnel</i>
10:50-11:10	2	<b>M. Paraschivoiu, A. Dilimulati, T. Stathopoulos</b> <i>CFD based energy output estimation of roof mounted wind turbines in urban environments</i>
11:10-11:30	3	<b>O. Hubova, M. Macak</b> <i>Numerical and experimental investigation of energy potential of high-rise building using IRWES system</i>
11:30-11:50	4	<b>T. Bakon, A. Kozlikowska, P. Obstawski</b> <i>Impact of the environmental conditions on operation of Wind Turbines</i>
11:50-12:10	5	<b>F. Szlivka, I. Molnar, G. Sándor</b> <i>Flow simulation around multi wind turbines using in cities</i>

Chair: T. Morbiato

10:30-12:10 **Technical session 1.2 - Dynamics, Structures and Materials**

10:30-10:50	1	<b>P.M. Vazquez, M. Gkantou, C.C. Baniotopoulos</b> <i>Assessing the impact of earthquake and wind load in the performance-based design of wind turbine towers</i>
10:50-11:10	2	<b>I. Jakovljević, N. Gluhović, M. Spemić, Z. Marković</b> <i>The influence of a roof mounted small-scale HAWT on headed studs fatigue resistance</i>
11:10-11:30	3	<b>A.M. Avossa, C. Demartino, M. Vardaroğlu, F. Ricciardelli</b> <i>Probabilistic assessment of the peak response of horizontal axis wind turbine to wind and seismic actions</i>
11:30-11:50	4	<b>I. Abdallah, V.K. Dertimanis, E.N. Chatzi</b> <i>An autonomous real-time decision tree framework for monitoring &amp; diagnostics on wind turbines</i>
11:50-12:10	5	<b>S. Tewolde, R. Höffer, H. Haardt, J. Krieger</b> <i>Lessons learned from practical structural health monitoring of offshore wind turbine support structures in North Sea</i>

12:10-12:30 **WORKING GROUP 2 (WG2) REPORT**

Tommaso Morbiato, Windcity srl

**From on-shore & off-shore to built environment wind energy projects**

Chair: C. Borri

12:30-13:00 **KEYNOTE LECTURE 2**

Luigi Severini, Studio Severini

**Getting achieved the first offshore wind farm in the Mediterranean seas**

13:00-14:30 **Lunch & Group photo**

Chair: E. Marino

14:30-15:00 **KEYNOTE LECTURE 3**

Giovanni Bosco, University of L'Aquila

**Foundation design issues of inshore high power turbines in complex geological sites of Calabria**

Chair: E. Efthymiou

15:00-15:30 **KEYNOTE LECTURE 4**

Dan Van der Horst, Edinburgh University

**City regions as energy prosumers**

15:30-16:30 **Technical session 2.1 - Markets, Strategies, Policies and Socio-economics**

15:30-15:50	1	<b>R. Borg, N. Hamza</b> <i>Urban wind energy: social, environmental and planning considerations</i>
15:50-16:10	2	<b>N. Hamza, I. Abohela, D. Van Der Horst</b> <i>Pictures or a thousand words: the influence of social media and film on the public perception and acceptance debate of urban Wind Turbine.</i>
16:10-16:30	3	<b>E. Efthymiou</b> <i>Disseminating WINERCOST activities</i>

16:30-16:50 **Coffee break**

Chair: N. Hamza

16:50-18:10 **Technical session 3.1 - Smart Cities and Environmental Aspects**

16:50-17:10	1	<b>E. Avolio, C.R. Calidonna, T. Lo Feudo, D. Gulli, A.M. Sempreviva</b> <i>Impact of the breeze on offshore wind development: preliminary study in a southern Italy coastal site</i>
17:10-17:30	2	<b>K. Starosta, A. Wyszogrodzki</b> <i>Evaluation of the wind resources in Warsaw based on the onsite measurements and numerical model</i>
17:30-17:50	3	<b>M.Gkantou, C.C. Baniotopoulos</b> <i>Life cycle analysis of onshore wind turbine towers</i>
17:50-18:10	4	<b>M. Ratkovic, R. Höffer</b> <i>Experiment-based model verification for the wind load identification at existing wind turbines</i>

Chair: R. Borg

16:50-18:10 **Technical session 3.2 - Grid Integration, Operations and Control**

16:50-17:10	1	<b>C.G. Castillo, V.A. Riziotis, A. Cuerva, D.I. Manolas, O. Lopez</b> <i>Model predictive control for Floating Offshore Wind Turbines. What do we need to know about the future wind</i>
17:10-17:30	2	<b>J. Todorović</b> <i>Integration of wind power into power distribution grid</i>
17:30-17:50	3	<b>A. Başkaya, O. Keysan</b> <i>Modular axial-flux direct drive permanent magnet generator for wind turbine applications</i>
17:50-18:10	4	<b>G.K. Tairidis, P. Koutsianitis, K. Marakakis, G. Foutsitzi, G.E. Stavroulakis</b> <i>Energy harvesting for a shunt piezoelectric vibration suppression system</i>

**END OF THE 1st DAY**

## 2nd DAY, 22.03.18

08:30-18:30

Technical excursions by bus to neighbouring wind farms in Ciro', Scandale (Fortino and S. Domenica), Isola Capo Rizzuto

08:30 Departure from the "Hotel Perla del Porto"  
11:00 Arrival to Ciro' Wind Farm for technical visit. The mayor of Ciro', Francesco Paletta, will receive the group.  
12:00 Departure to "Service Center for Businesses" of the Municipality of Ciro' (Località Toscano)  
12:30 "Filottete" Room:  
- Greeting of the Mayor of Ciro', Francesco Paletta  
- Presentation by Antemina del Vecchio : NOVENERGIA wind energy policies and developments around the Mediterranean sea (mainly: Southern Italy).  
13:30 Lunch buffet at the "Service Center for Businesses"  
14:30 Departure to "Cantine Russo & Longo" for Wine tour  
15:30 Departure to Scandale ( 40 minutes) for technical visit of Wind Farm  
17:00 Departure from Scandale to Isola Caporizzuto for a short visit from the bus of the wind farm and after return to the Hotel Perla del Porto

20:00 Conference dinner at the "Olimpo Restaurant" Hotel Perla del Porto

END OF THE 2nd DAY

## 3rd DAY, 23.03.18

Chair: G. Bartoli

### KEYNOTE LECTURE 5

9:00-9:30 Rüdiger Höffer, Ruhr Universität Bochum

**Measurement-based optimization of structures for renewable energy production**

9:30-16:00

AEOLUS4FUTURE Final Conference

Chair: R. Höffer

9:30-11:10

### Technical session 4.1 - Work Packages 1 and 5 - Aerodynamic Performance of Wind Turbines

**A. Rezaeiha**, H. Montazeri, B. Blocken - *Influence of airfoil maximum thickness on aerodynamic performance of vertical axis wind turbines*

**A.H. Kadar**, S. Le Bras, W. Desmet - *Airfoil trailing-edge noise prediction using a stochastic sound source generation technique*

**Y.C. Küçükosman**, J. Christophe, C. Schram - *Trailing edge noise prediction based on wall pressure spectrum models*

**G. Vita**, A. Chaudhari, H. Hemida, C. C. Baniotopoulos - *Turbulent inlet boundary conditions for large eddy simulation: a urban wind energy test-case*

**Z.S. Moghadam**, H. Montazeri, **B. Blocken** - *Numerical analysis of urban wind energy potential using actuator disk models: a case study for the bahrain world trade center*

11:10-11:30

Coffee break

Chair: C. Rebelo

11:30-13:10

### Technical session 5.1 - Work Packages 2 and 3 - Wind Turbine substructure

**A. Glišić**, Ngoc-Do Nguyen, P. Schaumann - *Fatigue analysis on innovative 10 MW offshore jacket structure using integrated design approach*

**S. Jovašević**, C. Rebelo, M. Pavlović - *High strength steel connections between polygonal built-up members: numerical investigation and comparison with normal strength steel connections*

**M. R. S. Mohammadi**, C. Rebelo, M. Veljković, L. S. da Silva - *The hybrid highrise wind turbine tower: the transition piece design*

**N. Stavridou**, E. Koltsakis, C.C. Baniotopoulos - *Structural investigation of lattice and tubular steel wind turbine towers. A comparative study*

**G. Sabău**, O. Lagerqvist - *Influence of residual stresses on the flexural buckling resistance of high-strength steel hollow sections*

13:10-14:30

Lunch

Chair: C. Borri

### KEYNOTE LECTURE 6

14:30-15:00 Gianni Bartoli, CRIACIV & University of Florence

**Harvesting energy from fluttering structures**

Chair: P. Schaumann

15:00-16:00

### Technical session 6.1 - Work Packages 4 and 6 - Wind Turbines Loading and Monitoring

**R. Moeini**, P. Weston, H. Hemida and C. Baniotopoulos - *Early failure detection of bond wire lift-off in a semiconductive component of an operational three-phase converter*

**A.C. Molina**, T. Massai, G. Bartoli, T. De Troyer - *Experimental study of the effect of turbulence on the near wake of a small VAWT*

**A. Mockutė**, E. Marino, C. Lugni, C. Borri - *Comparison of hydrodynamic loading models for slender monopiles in steep regular waves*

16:00-16:30

Coffee break

16:30-17:00

Closing session

END OF THE CONFERENCE