Day 0: Monday 29 July 2024

16.30-18.30	**Welcome Reception** School of Engineering Building, Y8 on the campus map
19.00	**International Wind Engineering Association Executive Board meeting** Edgbaston Park Hotel and Conference Centre, G23 on the campus map. Details of the room will be posted later (Only members of the Executive Bord are invited).

Day 1: Tuesday 30 July 2024

08:00-09:00	Registration, Exhibition Viewing and Refreshments					
09:00-09.20	**Opening Ceremony**					
09:20-10:20	**Keynote Lecture – Main Hall** *(Chair - Hassan Hemida)* **Wake bi-stability in vehicle aerodynamics, Professor Sinisa Krajnovic**					
10:20-10:50	Refreshments Break, Exhibition and Poster Viewing					
Parallel sessions 1						
	Room 1 **Bridge Aerodynamics** *(Chair - Jasna Jakobsen)*	Room 2 **Wind Energy Systems** *(Chair - Grzegorz Litak)*	Room 3 **Mini-Symposium—CFD Best Practice** *(Chair - Bert Blocken & Ted Stathopoulos)*	Room 4 **Vehicles Aerodynamics** *(Chair - David Soper)*	Room 5 **Fluid Structure Interaction** *(Chair - Partha Sarkar)*	Room 6 **Environmental Wind Engineering** *(Chair - Mahbub Alam)*
10:50-11:05	**1.1 Surrogate models of aerodynamic derivatives based on Bayesian regression and rational functions** *Øyvind Wiig Petersen, Ole Øiseth*	**1.5 Wind tunnel experimental study on wake characteristics of wind turbine located on two-dimensional hill under different turbulent inflow conditions** *Shuangchen Tang, Bowen Yan, Guowei Qian, Meng Yu, Xuhong Zhou, Qingshan Yang*	**1.9 Designing a guiding online tool for best practices in urban CFD simulations** *Maren Hengelmolen, Ivan Pađen, Hugo Ledoux, Clara García-Sánchez*	**1.13 The aerodynamic flow interaction of platooning vehicles** *David Soper, Samuel Marshall, Simon Wiggins*	**1.17 Flow over surface-mounted square blocks of very low aspect ratio fully immersed in a boundary layer** *B. Petreny, B.L. da Silva, D.J. Bergstrom, D. Sumner*	**1.21 Slenderness Effects on the Flow Over an Array of Tall Buildings with Random Heights** *Donnchadh MacGarry, Zheng-Tong Xie, Christina Vanderwel*
11:05-11:20	**1.2 Investigation on aerodynamic countermeasures for VIV mitigation of a Π-shaped deck** *Lin Huang, Haili Liao, Qi Wang*	**1.6 Vibration mitigation of offshore wind turbines using pre-stressed nonlinear energy sinks under multiple load combinations** *Jinyu Li, Haoshuai Qiao, Peng Huang*	**1.10 Recommended CFD best practice guidelines for components and cladding wind loads** *Tsinuel N. Geleta, Girma Bitsuamlak*	**1.14 On the Suitability of the Ahmed Body as a Wake Source for Platooning Investigations** *Brian R. McAuliffe and Hali Barber*	**1.18 Strong suction events during reformation of leading edge vortices on building side walls** *Peter Richards, Roger Hoxey*	**1.22 Vortex Shedding Frequency of Tall Building Arrays** *Saad Inam, Zheng-Tong Xie, Davide Lasagna, Marco Placidi, Alan Robins, Cung H. Nguyen*
11:20-11:35	**1.3 Vortex-induced vibration performances of double-layer girder with slenderness of 1:12** *Wenhan Yang, Xiangcheng Kong, Wenli Chen*	**1.7 Upstream effects on flutter responses in flexible photovoltaic bracket systems** *Zhuo-yi Zou, Feng Wang, Jia-wu Li, Jia-ying Wang*	**1.11 Simplification of geometries for CFD in the built environment: a key strategy to simulate complex wind flows** *Alessio Ricci, Massimiliano Burlando, Bert Blocken*	**1.15 Boundary layer development and flow features of sets of rectangular blocks in tandem** *Ariq Quazi, Mark C. Thompson, David Burton*	**1.19 Fluctuating surface pressure measurements on the 6 m cube** *Roger Hoxey, Peter Richards, Adam Robertson*	**1.23 A Closed-Form Solution for Annual Exceedance Probability of Limit States** *Ruiqing Han, Teng Wu*
11:35-11:50	**1.4 Reliability based design optimization of twin box girder section of suspension bridges under flutter constraint** *Ibuki Kusano, José Ángel Jurado, Aitor Baldomir, Arturo Fontán, Santiago Hernández*	**1.8 Ambient small-scale wind energy harvesting using a rectangular bluff body** *P. Poozesh, F. Nieto, A.J. Alvarez*	**1.12 Peak Pressure Evaluation on High-Rise Buildings: Insights from Experimental and LES Analyses** *Kristina Kostadinović Vranešević, Anina Šarkić Glumac*	**1.16 Effects of External Shape Parameters on the Drag Reduction of a 2-vehicle Platoon** *Dehua Wang, Qing Jia, Chao Xia, Zhigang Yang*	**1.20 Mapping of flow separation and attachment on a 3:2 rectangular cylinder** *Cung H. Nguyen, John S. Owen*	**1.24 Evaluation of the cool roof scenario's impact on temperature and wind characteristics** *Berk Adali, Yigit Can Altan*

11:50-12:05	Transition Break					
Parallel sessions 2						
	Room 1 **Bridge Aerodynamics** *(Chair - Santiago Hernández Ibáñez)*	Room 2 **Fluid Structure Interaction** *(Chair - Anastasia Athanasiou)*	Room 3 **Mini-Symposium—CFD Best Practice** *(Chair - Bert Blocken & Ted Stathopoulos)*	Room 4 **Environmental Wind Engineering** *(Chair - Amal Elawady)*	Room 5 **Mini-Symposium—Tornadoes** *(Chair - Guirong Yan--Grace)*	Room 6 **Vehicles Aerodynamics** *(Chair - Daniel Butcher)*
12:05-12:20	**2.1 Closed-form solutions to multi-mode coupled bridge flutter** *Jiade Zhu, Shaopeng Yang, Qi Wang, Haili Liao, Qiang Zhou*	**2.5 Fluid-structure interaction analysis of parked horizontal axis wind turbines under typhoon via a coupled CFD-FEM approach** *Huayi Peng, Qibang Lin, Hongjun Liu*	**2.9 Droplet phase, droplet-air interaction, and droplet-releasing techniques for CFD simulation of droplet dispersion** *Xuelin Zhang, Xiaodan Fan, A. U. Weerasuriya*	**2.13 Balancing Protection and Risk: Understanding the Dual Impact of Trees on Low-Rise Buildings During Extreme Wind Events** *Haitham A. Ibrahim, Fahim Ahmed, Amal Elawady, Jean-Paul Pinelli*	**2.17 Effect of different tornado chambers on vortex structure and vortex parameters** *R. Panneer Selvam, Sagar Gharti*	**2.21 Numerical Study on a Railway Vehicle Model Moving on an Embankment Subject to Crosswinds** *Yuhei Noguchi, Minoru Suzuki*
12:20-12:35	**2.2 Analysis of galloping in vertical and lateral bending in full bridge aeroelastic model testing** *Yizhe Lan, Xiaonong Hu, Yaojun Ge*	**2.6 Engineering recommendations for the dynamic mode decomposition (DMD) in wind engineering** *Cruz Y. Li, Yunfei Fu, Xisheng Lin, Daniel Ziyue Peng, Yixiang Wang, Zengshun Chen, Tim K.T. Tse, Xuelin Zhang*	**2.10 Some suggestions concerning terrain roughness modelling in CFD simulations** *Bert Blocken*	**2.14 Analysis of the mean pressure field on a sphere under an uniform incoming flow at high Reynolds numbers** *Carolina Hernández-Badillo, Raul Manzanares-Bercial, Omar Gómez-Ortega, Mikel Ogueta-Gutiérrez, José Luis Ruiz-Moral*	**2.18 Surface pressures exerted by tornado-like vortices on a realistic community of low-rise buildings** *Ruijia Yang, Djordje Romanic, Horia Hangan*	**2.22 Transient pressure, inferred forces and moments on a freight train in real-world operation** *James R. Bell, Arne Henning*
12:35-12:50	**2.3 Vortex-induced vibration control of long span bridges with nonlinear shape memory alloy damper** *Sizhe Wu, Genshen Fang, Yaojun Ge*	**2.7 The use of spectral subtraction method to reduce ambient sensors noise in wind tunnel tests** *Tuan-Kiet La and Soon-Duck Kwon*	**2.11 AIJ activity on LES application to pedestrian wind environment: Validation benchmarks and guidelines** *Tsubasa Okaze, Hideki Kikumoto, Naoki Ikegaya, Keisuke Nakao Keigo Nakajima, Hiroki Ono, Ryuichiro Yoshie, Yoshihide Tominaga*	**2.15 Investigating building geometry details in a large-scale LES study with realistic inflow conditions** *Ivan Pađen, Domingo Muñoz-Esparza, Jeremy A. Sauer, Hugo Ledoux, Clara García-Sánchez*	**2.19 Multi-stage typhoon-induced effects of floating offshore wind turbine: enhanced analysis model** *Hao Wang, Shitang Ke, Tongguang Wang*	**2.23 A wind-tunnel study of the effect of sheared wind profiles on the aerodynamic drag of passenger vehicle models** *F. de Souza, B. McAuliffe, H. Barber, B. Tanguay*
12:50-13:05	**2.4 Reliability analysis of a long-span suspension bridge considering buffeting phenomenon** *J. Quintela, J.Á. Jurado, S. Hernández*	**2.8 Wind tunnel test on vibration control of a high-rise building with a negative stiffness with tuned viscous mass damper** *Weiwei Zhao, Yong Quan*	**2.12 LES workflow and benchmark validation for wind loads on ground-mounted solar panel/tracker** *T.G. Eshete, T.N. Geleta, G.T. Bitsuamlak*	**2.16 Experimental Investigation of Influence of Dune Geometry on Sand Migration** *Sumaja Kolli, Hassan Hemida, Pradeep Kumar Dammala*	**2.20 Exploring Transcritical Reynolds Number Effects: Flow Around an Ultra-Smooth Tower** *Ika Kurniawati, Francesca Lupi, Rüdiger Höffer*	**2.24 Slipstream Effects of a Bi-Level Passenger Train on Platform Gust Conditions** *T.I. Saeed, H. Sallandt, M. Burton*
13:05-13:50	Lunch, Exhibition and Poster Viewing					
13:50-14:00	**Dantec Dynamics Ltd**					
14:00-14:50	**Keynote Lecture – Main Hall** *(Chair - Ted Stathopoulos)* **Water tunnel models of urban aerodynamics and air pollution, Dr Christina Vanderwel**					
14:50-15:00	Transition Break					
Parallel sessions 3						
	Room 1 **Bridge Aerodynamics** *(Chair - Miguel Cid Montoya)*	Room 2 **Mini-Symposium—FSI** *(Chair - Chandan Bose and Grigorios Dimitriadis)*	Room 3 **Mini Symposium—BBB** *(Chair - Sophie Breitkopf)*	Room 4 **Cables Aerodynamics** *(Chair - Xugang Hua)*	Room 5 **Computational Fluid Dynamics** *(Chair - Giulio Vita)*	Room 6 **Environmental Wind Engineering** *(Chair - Chris Geurts)*
15:00-15:15	**3.1 Flutter stability of a single-box deck: effect of geometry details and external**	**3.5 A benchmark on the aeroelastic response of a bluff body?** *Thomas Andrianne,*	**3.9 Initial results of international wind tunnel and CFD study for structural design**	**3.13 Determination of major timescales of measured vortex-induced vibrations of**	**3.17 Numerical modelling of a louvered balustrade with angled slats as porous media to**	**3.21 On the Impact of Hedgerows in Urban Street Canyons on Traffic Pollutant Dispersion**

	factors on the critical wind speed *Tommaso Argentini, Filippo Calamelli, Alberto Zasso, Jungao Wang*	*Tommaso Massai, Claudio Mannini*	*SC Breitkopf, A Sander, C Hartz*	**suspension bridge hangers** *G. Bacci, Ø.W. Petersen, V. Denoël, O. Øiseth*	**improve windiness on small balconies** *P. Riedel, R. Ramponi, J. Druere, A. Allsop, G. Pomaranzi, P. Schito*	*C. Gromke*
15:15-15:30	**3.2 Vortex induced vibrations and aerodynamic stability of multi-span twinned steel bridges – wind tunnel testing** *S. Poulin, V. Maina*	**3.6 A novel wake-oscillator model for predicting VIV of 4:1 rectangular cylinder** *Yi Hui, Yuanyan Tang*	**3.10 Bluff Body Benchmark from a CFD perspective: past and present experiences in the computational simulation of aerodynamic responses of bluff bodies** *Felix Nieto, Poorya Poozesh, Antonio J. Álvarez, Santiago Hernández*	**3.14 Impact of Attack Angle on Low-Frequency Aerodynamic Response of a Ridged Circular Cylinder** *Ran Wang, Shaohong Cheng, David S-K. Ting*	**3.18 Deep Neural Networks for Reconstruction of Turbulent Wake behind a Bluff Body from Randomly Distributed Sparse Data** *Sifat R. Khan, Pedro L. Fernández-Cabán*	**3.22 Effects of sound on bluff body aerodynamics in separating and reattaching flows** *Lixuan Zhao, Qiusheng Li*
15:30-15:45	**3.3 Aerodynamic properties and flow mechanism of the foot plank blown over on the railway bridges** *Yage Wu, Huan Li, Jing Zhu, Xuhui He*	**3.7 Transverse vortex-induced vibrations of a circular cylinder under stochastic flow** *Kumar Sourav, Dipanjan Majumdar, Sunetra Sarkar*	**3.11 Transient buffeting analysis with URANS and unsteady inflow** *Casimir Katz, Henk Krus*	**3.15 Operational mechanical environment analysis for stay cable's dampers considering the joint effects of vehicle loads and wind loads** *Yafei Wang, Zhouquan Feng, Xugang Hua, Zhengqing Chen*	**3.19 CFD assessment of the effects of pedestrian bridge configurations between the high-rise buildings for wind energy-based** *Yu-Hsuan Juan, Wan-Yi Chen*	**3.23 Effectiveness of chamfered corners in reducing aerodynamic interference of tall buildings: An LBM-based LES CFD study** *Saiful Naim Sulaiman, Thomas Indinger, Christian F. Janssen*
15:45-16:00	**3.4 A surrogate model for predicting buffeting induced stresses at bridge decks for fatigue life estimation** *Zubair Zahoor Banday, Aksel Fenerci, Tor Martin Lystad, Ole Andre Øiseth*	**3.8 Aeroelastic Response of a Chord-Wise Flexible Foil in a Bluff-Body Wake** *Paras Singh, Samiksha Dhakal, Chandan Bose*	**3.12 The Impact of ABL Simulation on a High-Rise Building Wind Tunnel Testing** *Omar Gómez-Ortega, Alejandro Martinez-Cava, Sergio Marín-Coca, Carolina Hernández-Badillo, Carlos Carbajosa*	**3.16 Photometric Scanning and Reproduction of Ice Accretion on a Bridge Cable Section** *Holger H. Koss*	**3.20 Flow around six in-line square cylinders** *Hamidreza Eizadi, Tongming Zhou, Hongwei An, Hongjun Zhub and Liang Cheng*	**3.24 The influence of hill's shape on internal flow field of the tunnel under crosswind** *R. Xue, X. Xiong, G. Chen*
16:00-16:30	Refreshments Break, Exhibition and Poster Viewing					
Parallel sessions 4						
	Room 1 **Environmental Wind Engineering** *(Chair - Claudio Borri)*	Room 2 **Mini-Symposium (sport)** (*Chair* - Bert Blocken & Thomas Andrianne)	Room 3 **Mini-Symposium (FSI)** (Chair - Chandan Bose and Grigorios Dimitriadis)	Room 4 **Performance Based Wind Engineering** (*Chair* - Ahmed Elshaer)	Room 5 **Non-Synoptic Winds** *(Chair - Mike Jesson)*	Room 6 **Computational Fluid Dynamics** *(Chair - Casimir Katz)*
16:30-16:45	**4.1 Validation of urban airflow measurements through a combined field test and wind tunnel study** *S. McTavish, H. Barber, A. Wall*	**4.6 Aerodynamic performances of a fairing for paragliding** *Simon Dehareng, Thomas Andrianne*	**4.11 VIV of a twin-box deck: time-frequency analysis and relationship between local and global aerodynamic forces** *A. J. Álvarez, F. Nieto, S. Hernández*	**4.16 Mode shape correction for HFFB technology of high-rise buildings with different side ratios** *Kanghui Han, Guohui Shen, Yonghan Jiang, Shixiong Zheng, Linghui Que, Xinyuan Bao*	**4.21 Investigation of transient aerodynamic forces on a hemispherical dome under ramp-up flows** *Yuan-Lung Lo, Matthew S. Mason, Yang Li, Yuhui Zhang, Yu-Chia You*	**4.26 Turbulent flow past 3:2 rectangular cylinder: A 3D LES study using synthetic generation method** *P. Laws, A.J. Álvarez, F. Nieto, L. Patruno*
16:45-17:00	**4.2 Uncertainty quantification using Gaussian processes for topographic speed-up factors from CFD simulations** *Yunjae Hwang, Adam Pintar, DongHun Yeo*	**4.7 Different assessments of aerodynamic performances of cycling helmets** *L. Foguenne, C. Schwartz, J. Wiggins, T. Andrianne*	**4.12 Passive Self-adaptive Flaps For 3d Blunt Body Drag Reduction** *J. M. Camacho-Sánchez, M. Lorite-Díezb, c, O. Cadot, J. I. Jiménez-González*	**4.17 Experimental investigation on wind loads of planar porous façades** *Bao xinyuan, Guohui Shen, Kanghui Han, Yonghan Jiang, Lingui Que, Shixiong Zheng*	**4.22 Structural performance of multi-span transmission line system under tornado-like wind field** *Dahai Wang, Tao Chen, Lin Yang*	**4.27 On the three-dimensional coherent structures in the wake of flatback airfoils** *Konstantinos Kellaris, George Papadakis, Marinos Manolesos*
17:00-17:15	**4.3 On using variable turbulent Schmidt number (Sct) for near-field air pollutant dispersion modelling**	**4.8 Some insights in the aerodynamic impact of the chest fairing in time trial cycling**	**4.13 Aerodynamic forces on arrangements of rough cylinders in post-critical flow** *Gershom Easanesan, Daniel Tudball Smith,*	**4.18 Spectral analysis of cladding pressures on a high-rise tower subjected to wind interference based on in-situ data analysis**	**4.23 Wind loads on a tall building model behind non-uniform passive grid screens** *Yuhui Zhang, and Matthew Mason*	**4.28 Numerical Analysis of Aerodynamic Properties of Tapered Square Cylinder with Eccentricity**

	A. U. Weerasuriya, R. Longo, X. Zhang, L. Cotteleer b A. Parente	*Bert Blocken, Fabio Malizia, Thijs van Druenen*	*Christopher Brown, Anil Pasam, Mark C. Thompson and David Burton*	*Kemper, F., Bronkhorst, A.J., Geurts, C.P.W*		*Yuki Nagao, Tetsuro Tamura, Hidenori Kawai, Yusuke Maruyama*
17:15-17:30	**4.4 Spatiotemporal assessment of offshore wind resources in the Guangdong-Hong Kong-Macau Greater Bay Area under climate change** *J.Y. He, Q.S. Li, P.W. Chan*	**4.9 A Generic Cycling Model** *Christopher Brown, Wouter Terra, Andrea Sciacchitano, Max van der Waals, Toon Huysmans, Mark C. Thompson and David Burton*	**4.14 Optimization of the equivalent oscillator for VIV modelling** *Alessandro Galimberti, Federico Zanelli, Tommaso Argentini, Sara Muggiasca*	**4.19 Experimental study on wind-induced interference effects between two square-section high-rise buildings in polar coordinates** *Linghui Que, Guohui Shen, Shixiong Zheng, Kanghui Han, Yonghan Jiang, Xinyuan Bao*	**4.24 Nonlinear dynamic response of structures under stochastically simulated downburst wind loads** *Matiyas A Bezabeh, Nahom K. Berile, Djordje Romanic*	**4.29 CFD-aided Wind Tunnel Simulation of Wind Field over Complex Mountainous Terrain** *Yingzhu Meng, Bowen Yan, Xu Zhou, Xiao Li, Xuhong Zhou, Qingshan Yang*
17:30-17:45	**4.5 Contributions of typhoon key parameters on predicted wind speed in Hong Kong considering climate change impacts** *Jiayao Wang, You Dong, Sunwei Li*	**4.10 Influence of turbulence on fabric configurations on a circular cylinder** *Christopher Brown, James Hackett-Smith, Daniel Tudball Smith, Mark C. Thompson, David Burton*	**4.15 Experimental study on fatigue performance of standing seam metal roof with anti-wind clips** *Z. Wang, Q. S. Yang, M. Liu, Q. S. Liang, Y. Y. Qian, Y. L. Guo*	**4.20 Layout Optimization of Tall Buildings Using Surrogate Models: A Performance-Based Wind Design Approach** *Magdy Alanani, Ahmed Elshaer*	**4.25 Experimental analysis of the three-dimensional aeroelastic instability modes of a flat-plate solar tracker** *José Luis Ruiz-Moral, Omar Gómez-Ortega, Raúl Manzanares-Bercial, Sergio Marín-Coca, Adriana Carolina Hernández-Badillo, Carlos Rodríguez-Casado*	**4.30 Designing a Venturi-shaped roof to maximize wind energy harvesting by building integrated wind turbines** *Xiaodan Fan, Xiulan Ye, Xuelin Zhang, A. U. Weerasuriya*

Day 2: Wednesday 31 July 2024

08:30-09:00	Registration, Exhibition, Poster Viewing and Refreshments					
09:00-09:50	**Keynote Lecture – Main Hall** (*Chair* - Bert Blocken) **Exploring the Potential of Joint Field Measurements and Numerical Simulations For Wind Engineering, Professor Catherine Gorlé**					
09:50-10:05	**Plenary session – Main Hall** (*Chair* - Gianni Bartoli) **On the Analogous Role of Damping Turbulence and Noise in Taming Dynamic Systems, Professor Ahsan Kareem**					
10:05-10:30	Refreshments Break, Exhibition and Poster Viewing					
Parallel Sessions 5						
	Room 1 **Bridge Aerodynamics** *(Chair - Aksel Fenerci)*	Room 2 **Mini-Symposium—FSI** *(Chair - Chandan Bose and Grigorios Dimitriadis)*	Room 3 **Computational Fluid Dynamics** *(Chair - Jennifer Keenahan)*	Room 4 **Vehicles Aerodynamics** *(Chair - Masahiro Suzuki)*	Room 5 **Wind Energy Systems** *(Chair - Luca Caracoglia)*	Room 6 **Mini-Symposium—Tornados** *(Chair - Guirong Yan--Grace)*
10:30-10:45	**5.1 Characteristic analysis and occurrence probability prediction of vortex-induced vibration of prototype bridge based on long-term health monitoring data** *Liutian Zhang, Wei Cui, and Lin Zhao*	**5.5 Wavelength effects on wavy elliptic cylinder wake** *Xiaoyu Shi, Md. Mahbub Alam*	**5.9 On the performance of SRANS, URANS and SAS in the prediction of the wind characteristics around high-rise buildings** *Jose Romero, Bert Blocken, Hassan Hemida, Mark Sterling*	**5.13 Experimental investigation into the Reynolds sensitivity of square back automotive bodies in close proximity** *J. Upton, A. Garmory, D. Butcher*	**5.17 Design optimization of flat roof mounted solar panels: A full-scale study and geometric scaling challenges** *Stefanie Gillmeier, Alessio Ricci, Bert Blocken*	**5.21 A Numerical Study on Effects of Terrain and Land Cover on Tornadic Characteristics in Lower Boundary Layer** *Jiamin Dang, Jana Houser, Yi, Zhao, Guirong Yan*
10:45-11:00	**5.2 Study on the Flutter Performance and Flutter Analysis Path of Long-Span Stress-Ribbon Bridges** *Shengqi Wang, Xugang Hua, Bei Chen, Zhengqing Chen*	**5.6 Effect of aspect ratio and chordwise pitching axis location on aerodynamic forces of flapping wings** *Raj Kiran Sangoju, Nipun Arora*	**5.10 Transient buffeting analysis with URANS and unsteady inflow** *Casimir Katz, Henk Krus*	**5.14 Experimental investigation of the aerodynamics of a squareback Ahmed body in sidewind and turbulent flow condition** *Yujing Li, Chao Xia, Lei Yu, Zhigang Yang*	**5.18 Flutter of wind turbine blades under load perturbations and rotationally sampled turbulence: parametric studies** *Luca Caracoglia*	**5.22 Determination of Tornado Wind Loads on Low-Rise Buildings** *O. Hernandez, Gregory. A. Kopp*
11:00-11:15	**5.3 Buffeting performance of long-span bridges with 1500 m-2500 m main**	**5.7 Some observations on the flow field and aerodynamic noise**	**5.11 Investigation of the wind loads and flow pattern of high-rise buildings under**	**5.15 The aerodynamical impact of overtaking**	**5.19 Surrogate based blade optimization of a 2MW airborne**	**5.23 Wind pressure characteristics on multi-span sawtooth-roofed**

	span under parametric typhoon wind fields *Lin Zhao, Zhilong Wang*	**of flow past an elliptic cylinder at high Reynolds number** *H.D. Lim, Guanjiang Chen, Bin Zang, Mahdi Azarpeyvand*	**twisted wind flows based on continuous-scale distribution synthetic eddy** *Longfei Tang, Hongjun Liu, Chaorong Zheng*	**manoeuvres on platooning vehicles** *Samuel Marshall, David Soper, Karl Snape, Mark Sterling and Stefanie Gillmeier*	**wind turbine concept design** *A. J. Álvarez, T. Sapsis, F. Nieto*	**buildings under tornado-like vortices** *Zheng Li, Jinxin Cao, Shuyang Cao*
11:15-11:30	**5.4 The Mechanism of Multi-mode Flutter Analysis during Girder Construction Stage of Suspension Bridge** *Jinjie Zhang, Jinbo Zhu, Yongxin Yang*	**5.8 Effects of the flexible films on the vortex-induced vibration of two tandem 4:1 rectangular cylinders** *Jing Zhu, Hanfeng Wang, Hongyu Zhu*	**5.12 Aerodynamic bidirectional prediction between wake velocity and surface pressure using a deep learning technique** *Junle Liu, Kihing Shum, K.T. Tse, Gang Hu*	***5.16 Full-scale assessment of vehicle wind loading on the Great Belt East Bridge*** *A Larsen, M B Eriksen, F R Gottfredsen*	**5.20 Aerodynamic characteristics of wind turbine blades under extreme wind considering gust wind parameters** *Yue Cheng, Lin Zhao*	**5.24 A comparative study on the treefall pattern generated by two different vortex models** *Sung Min Moon, Franklin T Lombardo, Leigh Orf, David Roueche*
11:30-11:45	Transition Break					
11:45-12:45	**Keynote Lecture – Main Hall** *(Chair - Greg Kopp)* **Large-scale turbulence parametric effects on the aeroelastic behaviour of bluff bodies: from a rectangular cylinder to long-span bridges, Professor Claudio Mannini**					
12:45-13:30	Lunch, Exhibition and Poster Viewing					
13:30-22:00	**Trip to Stratford Upon Avon** Please note this is for those who purchased tickets during registration only					

Day 3: Thursday 1 August 2024

08:30-09:00	Registration, Exhibition, Poster Viewing and Refreshments					
09:00-10:00	**Keynote Lecture – Main Hall** *(Chair - Mark Sterling)* **How studying tornadoes fundamentally changes how we should study bluff-bodies, Professor Fred Haan**					
10:00-10:30	Refreshments Break, Exhibition and Poster Viewing					
Parallel sessions 6						
	Room 1 **Computational Fluid Dynamics** *(Chair - Zhong-Nan Wang)*	Room 2 **Mini-symposium Wind on Structure** *(Chair - Qingshan Yang)*	Room 3 **Energy Harvesting** *(Chair - Chandan Bose and Grzegorz Litak)*	Room 4 **Vehicles Aerodynamics** *(Chair - Fenella de Souza)*	Room 5 **Non-Synoptic Winds** *(Chair - Matthew Mason)*	Room 6 **Bridge Aerodynamics** *(Chair - Xinzhong Chen)*
10:30-10:45	**6.1 3D LES simulation of rod-induced small-scale turbulent flow around a 3:2 rectangular prism** *A. J. Álvarez, F. Nieto, K.C.S. Kwok, L. Patruno*	**6.5 Insight on unsteady lift of an airfoil under streamwise turbulence** *Shaopeng Li, Zhaoyu Yang, Qingshan Yang, Zhiyang Li, Xin Li*	**6.9 Laminar flows over finite rotating cylinders** *Kai Zhang, Yong Cao, Hongbo Zhu, Yan Bao, Dai Zhou*	**6.13 Experimental and numerical evaluation of the aerodynamic drag for different configuration of a conventional train** *Francesco Moro, Claudio Somaschini, Daniele Rocchi, Stefano Raiti, Gianluca Zanetti*	**6.17 Testing the Capabilities of Wind Tunnel Fans as large-scale velocity fluctuation generators** *Marcello Catania, Lars Neuhaus, Michael Hölling, Alberto Zasso*	**6.21 Analysis of two-dimensional translational galloping phenomena on streamlined bridge deck** *Wei Cui, Teng Ma, and Lin Zhao*
10:45-11:00	**6.2 Surrogate Model Updating-based Aerodynamic Shape Optimization of a Triangular Cylinder with Corner Recession Modification** *J A Mulyanto a, Z Wang, C Zheng*	**6.6 Peak wind force coefficients on permeable panels installed around the rooftop perimeter of high-rise building** *T. Aihara, Y. Uematsu*	**6.10 Experimental and numerical investigation on the effect of bluff body shapes and its surface roughness on the performance of a Vortex Induced Vibration Energy Harvester system (VIVEHS)** *Dineshkumar Ravi and Grzegorz Litak*	**6.14 Experimental-numerical analysis of train slipstream in confined spaces** *S. Negri, G. Tomasini, P. Schito, D. Rocchi*	**6.18 Detecting non-stationary wind events at the Hålogaland Bridge** *S.K. Hansen, O.A. Øiseth a, A. Fenerci, Ø.W. Petersen*	**6.22 Crosswind characteristics around bridge main tower with wind barrier** *Haeyoung Kim, Shuya Konno, Takumi Yasuda, Kichiro Kimura, Hiroshi Katsuchi, Jiaqi Wang*
11:00-11:15	**6.3 Evaluation of wind flow and structural loads by the Dynamic Terrain approach** *Theodore Potsis, Ted Stathopoulos*	**6.7 Influence of freestream turbulence on aerodynamics drag forces on rectangular cylinders in accelerating wind flow**	**6.11 Control of Wake induced Vibration of an elastically mounted sphere** *Sachin S B, Abhishek Thakur, Atul Sharma*	**6.15 Aerodynamic characteristics of enclosed noise barriers induced by the high-speed trains** *Xiaoyu Ji, Haiquan Jing, Xuhui He*	**6.19 LES simulation on the CAARC standard tall building under thunderstorm downbursts** *Josip Žužul, Alessio Ricci, Massimiliano Burlando, Jubayer*	**6.23 Long-term aerodynamic performance of bridge decks under uncertain wind and turbulence conditions** *Aksel Fenerci, Tor Martin Lystad,*

		Matthew Mason, Ting Yang			*Chowdhury, Djordje Romanic, Horia Hangan*	*Zubair Zahoor Banday, Ole Øiseth*
11:15-11:30	**6.4 Numerical simulation study on forced vibration of a super high-rise building based on LES** *Chao Tan, Yong Quan, Guoqiang Fu*	**6.8 Lyapunov analyses of bridge stability in turbulent flow** *Niccolò Barni, Gianni Bartoli, Claudio Mannini*	**6.12 Pressure distribution at the interior part of a small ducted wind turbine casing** *Costin Ioan Coșoiu, Ovidiu Popescu, Elena Alexandra Chiulan, Andrei Mugur Georgescu*	**6.16 Large-eddy simulation of fluctuating aerodynamic force on train with meandering airflow beneath the underbody** *Takumi Abe, Koji Nakade*	**6.20 Aerodynamic and multi-degree of freedom aero-elastic testing of high-rise buildings under downburst-like outflows** *Omar Metwally, Haitham A.Ibrahim, Amal Elawady*	**6.24 Effect of nonlinear structural damping on post-flutter of a bridge girder** *Chaoqun Wang, Xugang Hua, Yu Tang, Zhengqing Chen*
11:30-11:45	Transition Break					
Parallel sessions 7						
	Room 1 **Computational Fluid Dynamics** *(Chair - Stefane Gillmeier)*	Room 2 **Mini-Symposium Wind on Structure** *(Chair - Qingshan Yang)*	Room 3 **Environmental Wind Engineering** *(Chair - Christof Gromke)*	Room 4 **Vehicles Aerodynamics** *(Chair - Sungmoon Jung)*	Room 5 **Fluid Structure Interaction** *(Chair - Zengshun Chen)*	Room 6 **Performance Based Wind Engineering** *(Chair - Tariq Saeed)*
11:45-12:00	**7.1 Assessment of aerodynamic force coefficients on different solar panels by LES simulations** *Anjali Radhakrishnan Jayakumari, Alessio Ricci, Stefanie Gillmeier*	**7.5 Aerodynamic loading and operation safety for a high-speed train under tornado-like vortices** *Jinxin Cao, Shuyang Cao, Yaojun Ge*	**7.9 Machine-Learning-based Tropical Cyclone Wind Field Modelling Incorporating Multiple Meteorological Parameters** *Miaomiao Wei, Nikolaos Nikitas, Genshen Fang, Yaojun Ge*	**7.13 CFD analysis of exhaust flow for reducing soot stains on railcar body surfaces** *Natsuki Harada, Yuhei Noguchi, Yuto Araki, Tokuzo Miyachi*	**7.17 Mitigation of Wind Load on Low-rise Buildings Using Roof Parapets: A Numerical and Experimental Study** *Raghdah Al-Chalabi, Ahmed Elshaer*	**7.21 Experimental Study of Wind Load on Tall Buildings** *Deepshikha Shukla, Ashutosh Sharma, Ajay Gairola*
12:00-12:15	**7.2 Flow around a circular cylinder in oscillatory flow with non-zero-mean velocity and its drag force modelling** *Yayang Huang, Shuyang Cao, Yuxin Zhang, Jinxin Cao, Qingshan Yang*	**7.6 Eigenvalue-based method for simulating multi-dimensional homogeneous non-Gaussian stochastic vector fields** *Yan Jiang, Liuliu Peng, Yuying Xia, Beilong Luo*	**7.10 Dispersion Characteristics in the wake of tall building clusters** *Dianfang Bi, Abhishek Mishra, Matteo Carpentieri, Marco Placidi, Alan Robins*	**7.14 Assessment of driving safety and comfort during vortex-induced vibrations in long-span bridges** *Yiheng Fu, Wei Cui, Lin Zhao*	**7.18 Pressure and wind load characteristics of a tall building aeroelastic model under laboratory simulated tornado** *Nayan Deep, Partha Sarkar*	**7.22 Compensation of extreme wind pressure on saddle roof by partial turbulence simulation method for missing of low-frequency turbulence in wind tunnel test** *L. P. Hou, M. Liu, Q. S. Yang*
12:15-12:30	**7.3 Effect of side recirculation zones on the aerodynamic load characteristics of a 2:1 rectangular cylinder** *Mengmeng Liu, Jinxin Cao, Shuyang Cao*	**7.7 Transient linear galloping in a square cross-section exposed to time-varying mean wind angles of attack** *Hao-Yu Bin, Stefano Brusco, Giuseppe Piccardo*	**7.11 Impact of Upstream Mountain Terrain and Urban Exposure on Approaching Wind Characteristics** *Jianhan Yu, Jia Tang, Mingshui Li*	**7.15 Wind Flow Management Over Helipads Toward Stable Helicopter Landing and Take-Off** *Kamran Shirzadeh, Rose Babaei, Saba Saneinejad, Daniel Hackett*	**7.19 A study on across-wind power spectra of tall buildings** *Cini Anoop, P.S. Rahul, G. Sindhu, K. Suresh Kumar*	**7.23 Scaling wind loads for Incremental Dynamic Analysis Applications** *Anastasia Athanasiou, Lucia Tirca, Theodore Stathopoulos*
12:30-12:45	**7.4 Aerodynamic Characteristics and Flow State Variations of Oscillating Tandem Cylinders** *Zhaohui Luo, Wei Cui, Lin Zhao*	**7.8 Experimental investigation in nonlinear aerodynamic characteristics of a double-layer truss girder** *Jiankun Li, Cunming Ma, Bo Wu*	**7.12 A self-adaptive evolutionary algorithm to enhance RANS wind pressure predictions in flow separated regions** *Sifat R. Khan, Pedro L. Fernández-Cabán*	**7.16 On the use of rotary flaps on a simplified model of a heavy vehicle** *M. Lorite-Díeza, J. M. Camacho-Sánchez, J. I. Jiménez-González, C. Martínez-Bazán*	**7.20 Numerical wind dynamic assessment of tall mass timber building using fluid-structure interaction method** *Chi ZHANG, Yuxin PAN*	**7.24 A method for stationary non-Gaussian wind pressure simulation based on IFFT and phase modulation** *N. Nie, L. Da a, Q. Yang, J. Zhou, J. Yang*
12:45-13:30	Lunch, Exhibition and Poster Viewing					
13:30-14:30	**Keynote Lecture – Main Hall** *(Chair - Shuyang Cao)* **Incorporating trees in high-fidelity wind and microclimate simulations, Professor Maarten van Reeuwijk**					
Parallel sessions 8						
	Room 1 **Bridge Aerodynamics** *(Chair - Jianhan Yu)*	Room 2 **Environmental Wind Engineering** *(Chair - Yoshihide Tominaga)*	Room 3 **Fluid Structure Interaction** *(Chair - Ileana Calotescu)*	Room 4 **Computational Wind Engineering** *(Chair - Clara Garcia-Sanchez)*	Room 5 **Vehicles Aerodynamics** *(Chair - Zhenxu Sun)*	Room 6 **Environmental Wind Engineering**
14:30-14:45	**8.1 Study on the influence of a Tesla-type wind barrier and its effects on the vortex-induced**	**8.5 Twin wind tunnel tests of flow past a building with openings and façade and rooftop greening**	**8.9 Wind-induced dynamic response of a self-supported antennae lattice tower**	**8.13 The control mechanism of owl-inspired trailing fringe on the flow**	**8.17 Investigation of the link between vehicle underbody and base unsteady wake aerodynamics**	**8.21 Wind pressure distribution on a rectangular building exposed in vicinity**

	vibration of bridge deck *Jianming Hao, Tong Zhang, Bo Su, Jiuliang Li, Jiawu Li*	*Vasiliki Pappa, Christof Gromke, Demetri Bouris*	*Ileana Calotescu, Daniel Bîtcă, Ioana Claudia Tomescu*	**properties of an airfoil** *Zhi Deng, Wen-Li Chen, Zifeng Yang*	*C. Wallace, A. Garmory, A. Gaylard, D. Butcher*	**of a cliff escarpment** *Abdul Haseeb Wani, Rajendra K. Varma, Ashok K. Ahuja*
14:45-15:00	**8.2 Bayesian modelling-based metamodel by different Markov Chain sampling techniques for critical flutter velocity prediction with uncertainty quantification** *Sévérin Tinmitond, Ledong Zhu*	**8.6 ANN-based physio-chemical prediction of the photochemical cycle and the reactive air pollutant dispersion in an urban environment** *Xisheng Lin, Yunfei Fu, Daniel Ziyue Peng, Cruz Y. Li, Tim K.T.Tse, Yixiang Wang, Xinxin Feng*	**8.10 Wind pressures on non-curved and non-rectangular roofs** *Murad Aldoum, Ted Stathopoulos*	**8.14 Investigation on the effects of wind barrier on the aerodynamic performance of B/D = 5 rectangular cylinder** *Jiaqi Wang, Hiroshi Katsuchi*	**8.18 Aerodynamic drag reduction of vehicles based on vertical axis wind turbine** *Bo Liu, Gang Hu, Kenny Kwok*	**8.22 Aerodynamic characteristics of transient pressures on a 3:2 rectangular prism exposed to accelerating flows** *Zhong-Xu Tan, Le-Dong Zhu, Xiu-Yu Chen*
15:00-15:15	**8.3 Local and Global Optimum Design in Aero-Structural Optimization of Long-Span Bridges Considering Flutter** *Miguel Cid Montoya, Santiago Hernández, José Ángel Jurado*	**8.7 Interstitial Blinds - assessing the risk of flutter and measurement of flow velocities within the cavity** *Jurgens Badenhorst, Jennifer Keenahan, Rubina Ramponi, Reamonn MacReamoinn, Kevin Nolan*	**8.11 Aerodynamic Considerations for the Revision of the Main Wind Force Provisions in ASCE7** *Yitian Guo, Jin Wang, Timothy Acosta, Stefano Brusco, Gregory A. Kopp*	**8.15 The application of a three-dimensional vortex-in-cell approach to simulate the heads-on collision of two vortex rings** *Chieh-Hsun Wu*	**8.19 Optimised drag configurations of an Ahmed body in crossflow with top and bottom rear morphing spoilers allowing twisted deformations** *Yajun Fan and Olivier Cadot*	**8.23 Wind-induced vibration behavior of interconnected cable- supported photovoltaic arrays based on scaled aeroelastic test** *C. Zhou, M. Liu, S. Nie*
15:15-15:30	**8.4 Aero-structural design of bridge decks under non-synoptic winds using an aeroelastic surrogate comprising shape, reduced velocity, and mean angle of attack** *Sumit Verma, Miguel Cid Montoya, Ashutosh Mishra*	**8.8 Spectral proper orthogonal decomposition-driven insights into pollutant dispersion in a single street canyon** *Xisheng Lin, Bingchao Zhang, Cruz Y. Li, Tim K.T. Tse, Yunfei Fu*	**8.12 Performance of a blockage tolerant open test section boundary layer wind tunnel** *K. Suresh Kumar, P.S. Rahul, Cini Anoop, N. Shafeek*	**8.16 Quantification of turbulence effects using non-dimensional energy contributions** *Timothy John Acosta, Jin Wang, Gregory A. Kopp*	**8.20 Database-Assisted Design Facilitating Performance-Based Tall Building Design** *Daniel M. Rhee, Sophie Sisson, Brian Carman, Mehedy Mashnad, DongHun Yeo*	**8.24 Offshore Wind Energy in the Face of Climate Change: Risk Assessment and Opportunity Exploration** *Susmita Bhowmik, Michael Stoner, Weichiang Pang, David V. Rosowsky, Andrew Myers, Sanjay Arwade*
15:30-16:00	Refreshments Break, Exhibition and Poster Viewing					
Parallel sessions 9						
	Room 1 **Bridge Aerodynamics** *(Chair - Ole Øiseth)*	Room 2 **Mini-Symposium** *(Chair - Frank Lamardo)*	Room 3 **Mini-Symposium (Vegetation)** *(Chair - Maarten van Reeuwijk)*	Room 4 **Environmental Wind Engineering** *(Chair - Mohammadreza Mohammadi)*	Room 5 **Fluid Structure Interaction** *(Chair - Cung Nguyen)*	Room 6 **Environmental Wind Engineering**
16:00-16:15	**9.1 The influence of gantry rails on twin-box deck aerodynamics** *Maja Rønne, Allan Larsen, Jens H. Walther, Tommaso Argentini, Daniele Rocchi*	**9.6 Generating vortices in straight-line wind simulators** *Faiaz Khaled, Franklin Lombardo*	**9.11 Mapping volumetric tree modelling parameters to the aerodynamic characteristics of wind tunnel tree models** *Dipanjan Majumdar, Maarten van Reeuwijk*	**9.16 A topographic study for Julsundet Bridge Project** *Giulia Pomaranzi, Tommaso Argentini, Jungao Wang, Alberto Zasso*	**9.20 Prediction of nonlinear flutter responses through forced vibration tests via complexification-averaging method** *Wei Cui, Teng Ma, and Lin Zhao*	**9.25 Study on wind load of torsional buildings under twisted wind fields based on wind tunnel tests** Bin He, Yong Quan, Ming Gu
16:15-16:30	**9.2 Modality of 3-DOF flutter across various frequencies: explicit solutions for amplitude ratio and phase difference** *Zuopeng Wen, Genshen Fang, Yaojun Ge*	**9.7 Assessment of Tornado loading on A Building Considering Transient Internal Pressure** *Xinyang Wu, Qiang Chen, Delong Zuo*	**9.12 Wind Microclimate Guidelines for UK Urban Environmental Quality. Lessons learnt on vegetation** *Giulio Vita, Stefano Capra*	**9.17 The minimum range value of upstream fetch area for urban exposure** *Shixiong Zheng, Guohui Shen, Kanghui Han, Yonghan Jiang, Linhui Que, Xinyuan Bao*	**9.21 Investigation of the elliptical motion trajectory induced by the downstream interference effects** *Cheng-Wei Chen, Yuan-Lung Lo, Cheng-Hsin Chang*	**9.26 Modulation effects of double synthetic jets on circular cylinder wake** *Donglai Gao, Haiyang Yu, Wen-Li Chen, Hui Li*
16:30-16:45	**9.3 Flow characteristics downstream of a yawed bridge model**	**9.8 Framework for Scaling and Analyzing Downburst-like Outflows in Wind Tunnels—**	**9.13 Urban flow predictions around trees: does the level of detail matter?**	**9.18 A canopy drag model for large eddy simulation of the neutral atmospheric boundary layer over**	**9.22 Realization of the Koopman linear-time-invariance notion: decoupling and**	**9.27 Comparative investigation of mass and damping effects**

	Nicolò Daniotti, Jasna B. Jakobsen, Jonas T. Snæbjörnsson	**methodology and case study** *Mohamed Eissa, Amal Elawady*	*Runnan Fu, Ivan Pađen, Clara García-Sánchez*	**heterogeneous terrain** *Yi Lu, Yong Quan*	**quantification of cause-effect relationships in fluid-structure interactions** *Cruz Y. Li, Yunfei Fu, Xisheng Lin, Daniel Ziyue Peng, Yixiang Wang, Zengshun Chen, Tim K.T. Tse, Xuelin Zhang*	**on aerodynamic responses for rectangular prisms** *Shuai Zhou, Lihua Chen*
16:45-17:00	**9.4 Experimental investigation on the nonlinear torsional flutter motion of a typical truss bridge deck** *Haohong Li, Qingshan Yang, Liangliang Zhang, Kunpeng Guo*	**9.9 Investigation of full-scale wind loading from naturally occurring vortices** *Franklin T. Lombardo*	**9.14 Using small green spaces to cool urban neighbourhoods: modelling optimal size, shape and distribution** *Yehan Wu, Andy Acred, Agnès Patuano, Bardia Mashhoodi, Laura Narvaez Zertuche, Sanda Lenzholzer*	**9.19 Wind tunnel experiment of sand surface deformation around obstacle with simple shape** *Yoshihide Tominaga, Xin Zhang*	**9.23 A formula of the quantile of the extreme wind pressure coefficient to estimate the extreme wind pressure with a target mean recurrence interval** *L. Da, Q. S. Yang ab, M. Liu, B. L. Cheng, J. J. Zhou*	**9.28 Sensitivity-aided active control of flow past twin cylinders** *Lei Zhou, Qingchi Zhu*
17:00-17:15	**9.5 Vortex shedding in the wake of a full-scale bridge deck** *Nicolò Daniotti, Jonas T. Snæbjörnsson, Jasna B. Jakobsen, Etienne Cheynet*	**9.10 Full-scale Measurements of Dust Devils: An Avenue towards a Better Understanding of Tornadoes** *Wesam Mohamed, Franklin T. Lombardo, Ryan Croce*	**9.15 How does neighbourhood layout affect urban meteorology and the local microclimate?** *Christopher Wilson, Athanasios Paschalis, Sylvia Bohnenstengel, Jon Shonk and Maarten van Reeuwijk*		**9.24 Large-amplitude aeroelastic sectional-model flutter tests on the Tacoma Bridge deck** *Qing Zhu, Bi-Shang Zhang, Le-Dong Zhu*	**9.29 Aerodynamic Testing of Buildings: Insights from Large Experiments in an Open-Jet Facility** *Aly Mousaad Aly, Md. F. Khaled , R. Clancy*
19:00 – 22:00	**Conference dinner – including a special talk by Chris Baker, The oldest world record – throwing the cricket ball.** *(Chair - David Soper)* Council House, Birmingham City Centre Please note this is for those who purchased tickets during registration only					

Day 4: Friday 2 August 2024

08:30-09:00	Registration, Exhibition, Poster Viewing and Refreshments				
09:00-10:00	**Keynote Lecture – Main Hall** *(Chair - Yukio Tamura)* **Advances in computational and experimental wind engineering for resilient and sustainable built environment, Professor Girma Bitsuamlak**				
10:00-10:30	Refreshments Break, Exhibition and Poster Viewing				
Parallel sessions 10					
	Room 1 **Computational Fluid Dynamics** *(Chair - Yuan-Lung Lo)*	Room 2 **Bridge Aerodynamics** *(Chair - Soon-Duck Kwon)*	Room 3 **Fluid Structure Interaction** *(Chair - Jónas Snæbjörnsson)*	Room 4 **Performance Based Wind Engineering** *(Chair - David Sumner)*	Room 5 **Wind Energy Systems** *(Chair - Felix Nieto)*
10:30-10:45	**10.1 CFD simulation on wind loading of trees in high-rise buildings with vertical forest** *Shu-Yi Liu, Jaycie Wu, Zheng-Wei Zhang*	**10.5 Critical wind speed formula for coupled flutter** *Tibebu H. Birhane, Girma T. Bitsuamlak*	**10.9 Experimental and numerical investigation on the effect of bluff body shapes and its surface roughness on the performance of a Vortex Induced Vibration Energy Harvester system (VIVEHS)** *Dineshkumar Ravi and Grzegorz Litak*	**10.12 Wind vibration response of substation pillar switchgear based on wind tunnel test** *J. Wang, M. Liu, S. Nie, S. Liu, P. Li*	**10.16 Aeroelastic tests on solar tracker models built with different techniques** *Arturo Carboné, Mikel Ogueta-Gutiérrez, Sebastián Franchini, Jose Luis Ruiz Moral, Carlos Carbajosa*
10:45-11:00	**10.2 Characteristics on fluctuation of sectional wind forces for high-rise building in building cluster** *Hidenori Kawai, Tetsuro Tamura*	**10.6 Average parametric effect of turbulence on bridge deck aerodynamics** *Niccolò Barni, Claudio Mannini*	**10.10 Analysis of Vortex-Induced Vibration Mechanisms of a 5:1 Bluff Body Based on Flow Characteristics** *Geng Xue, Yanmei Tang, Laima Shujin*	**10.13 Aerodynamic characteristics of airfoils equipped with vortex generators and Gurney flaps in dynamic stall conditions** *Marin Ivanković, Marvin Jentzsch, Anna Friederike Rahel Großmann, Vladimir Zimmermann, Marinos Manolesos, Christian Navid Nayeri, Hrvoje Kozmar*	**10.17 Analysis of single-axis solar tracker response to vertical wind gusts in two-dimensional conditions** *Sergio Marín-Coca, Eduardo Blanco-Marigorta, Juan A. Cárdenas-Rondón, Alejandro Martínez-Cava, Raúl Manzanares-Bercial*
11:00-11:15	**10.3 Numerical study of buoyancy effects of flow in an urban canyon** *Ximeng Kang, Alistair Revell, Saleh Rezaeiravesh*	**10.7 Interaction of VIV excitation mechanisms promoted by traffic barriers for a non-streamlined bridge section** *Bernardo Nicese, Antonino Maria Marra, Gianni Bartoli, Claudio Mannini*	**10.11 Flow-induced oscillations of a tapered circular cylinder** *Mayank Verma, Ashoke De*	**10.14 Vertical distribution of air pollutants concentration around road-facing buildings based on field measurement and CFD simulation** *Tingting Hu, Guoyi Jiang, Qi Wang, Mengge Zhou, Guanghui Li*	**10.18 Critical wind speeds in self-excited instability of single-axis flat solar trackers: comparison between sectional and full aeroelastic tests** *Juan A. Cárdenas-Rondón, Antonio Navarro-Manso, Carlos Carbajosa, Carlos Rodríguez-Casado, Sebastián Franchini*
11:15-11:30	**10.4 Large eddy simulations of complex shaped high-rise buildings** *Alan Lugarini, Rodrigo S. Romanus, Waine Oliveira Jr*	**10.8 Buffeting Analysis of Line-like Structures using Gaussian Processes with Semi-analytical Priors** *Igor Kavrakov*		**10.15 Experimental analysis of the internal pressure of naturally ventilated rooms at the centre of an urban street canyon** *Murtaza Mohammadi, Christof Gromke, John Calautit, John Owen*	**10.19 Tropical Cyclone-induced Fragility Analysis of Wind Turbine using Physics-informed Data-driven Wind Field Model** *Genshen Fang, Yue Cheng, Lin Zhao, Yaojun Ge*
11:30-11:45	Transition Break				
Parallel sessions 11					
	Room 1 **Bridge aerodynamics** *(Chair - Igor Kavrakov)*	Room 2 **Computational Fluid Dynamics** *(Chair - Anina Glumac)*	Room 3 **Fluid Structure Interaction** *(Chair - Shaohong Cheng)*	Room 4 **Performance Based Wind Engineering** *(Chair - Uematsu Uematsu)*	Room 5 **Wind Energy System** *(Chair - Gang HU)*
11:45-12:00	**11.1 Investigation of the sudden-change flow on aerodynamic forces of a railway viaduct** *Simin Zou, Xuhui He*	**11.5 Investigation of three-dimensional instability behind a circular cylinder via low-dimensional space spanned by optimal proper orthogonal decomposition modes** *Yuto Nakamuraa, Shintaro Sato, Naofumi Ohnishi*	**11.9 Experimental study on aeroelastic instability across-wind response characteristics of tall-square towers in urban flow** *Wenshan Shan, Qingshan Yang, Kunpeng Guo, Cong Chen, Yong Chul Kim, Yukio Tamura*	**11.13 Experimental study on the influence of terrain complexity on wind pressure characteristics of mid-rise buildings** *Lee-Sak An, Sungmoon Jung*	**11.17 Numerical simulation study on aerodynamic characterisation of wind turbine under forced vibration** *Jiachen Ma, Yong Quan*
12:00-12:15	**11.2 Deep learning for high spatial resolution**	**11.6 Prediction of the wind flow patterns above**	**11.10 Aerodynamic characteristics of gable**	**11.14 Investigation of model peak pressure**	**11.18 Study on the Shape coefficient and the effect**

	reconstruction of flow field around a circular cylinder *Xuxi Zhou, Xiaowei Jin, Shujin Laima, Hui Li*	**different building roof shapes using machine learning techniques** *Anina Šarkić Glumac, Onkar Jadhav, Miloš Jočković, Kristina Kostadinović Vranešević, Stephane Bordas, Bert Blocken*	**roof shaped buildings for different aspect ratios** *Stefano Brusco, Timothy Acosta, Yitian Guo, Jin Wang, Gregory A. Kopp*	**coefficients and equivalent turbulence profiles resulting from randomized terrain in a large boundary layer wind tunnel** *Mariel Ojeda-Tuz, Mohit Chauhan, Ryan Catarelli, Michael D. Shields, Kurtis Gurley*	**of Reynolds number of lattice structure by wind tunnel test** *Ye Junchen, Niu Huawei, Chen Zhengqing*
12:15-12:30	**11.3 Investigation and Vibration Control of Coupled Vortex-Induced Vibration Response in Composite Arch Bridges** *Cao Nankui, Niu Huawei, Ye Junchen, Hou Hongtao*	**11.7 Wind loading of a high-rise building in real urban settings** *Giulio Vita, Kristina Kostadinović Vranešević, Marie Skytte Thordal, Anina Šarkić Glumac*	**11.11 Structural response of a high-rise tower subjected to wind interference based on in-situ data analysis** *Kemper, F., Bronkhorst, A.J., Geurts, C.P.W*	**11.15 Wind pressures and wind forces on a building with surrounding roughness blocks** *Yuki Takadate, Hitomitsu Kikitsu, Yasuo Okuda*	**11.19 Experimental investigation on self-excited vibration and wake interference effects of flexible photovoltaic systems** *Zhang haicheng, Li mingshui, Yang yang*
12:30-12:45	**11.4 Roof responses of a gable-roofed steel factory building under tornado-like vortices** *Shien Zhang, Jinxin Cao, Shuyang Cao*	**11.8 Correlation research of wind field and wind pressures on the low-rise building roof: non-stationarity and non-Gaussian** *Bingchang Cui, Peng Huang*	**11.12 Designing green walls to mitigate fine particulate pollution in an idealized urban environment** *Xingyu Qian, Xuelin Zhang, A. U. Weerasuriya*	**11.16 Performance-based design selection of buildings under uncertain wind loads** *Anoop Kodakkal, Roland Wüchner, Kai-Uwe Bletzinger*	**11.20 Complex Fluid-Structure Interactions of Vortex-Induced Vibration for a Separated Triple-Box Girder** *Donglai Gao, Hao Meng, Wen-li Chen, Hui Li*
12:45-12:50	Transition Break				
12:50-13:00	**Closing Ceremony**				
13:00-14:00	Lunch and close				

EVOLUTION MEASUREMENT
DANTEC DYNAMICS
LAVISION FOCUS ON IMAGING