



# Third National Conference on Wind Engineering

## Program

September 11-13, 2024 · Bucharest, Romania



**Venue:** NOVOTEL BUCHAREST CITY CENTER hotel, Paris Auditorium

**Address:** Calea Victoriei 37B Sector 1, 010061 Bucharest, Romania

**Organized by:**

Romanian Association for Wind Engineering (ARIV), Romania

Technical University of Civil Engineering Bucharest (UTCB) Bucharest, Romania

University of Bucharest (UB), Romania

**Organizing Committee:**

Ileana Calotescu, President – Romanian Association for Wind Engineering (ARIV) – Chair

Radu Văcăreanu, Rector – Technical University of Civil Engineering Bucharest (UTCB) – Co-chair

Alexandru Nedelea, Dean – Faculty of Geography, University of Bucharest (UB) – Co-chair

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Adriana Chitez, Cardiff University, UK

Costin Coșoiu, Technical University of Civil Engineering Bucharest, Romania

Andrei Georgescu, Technical University of Civil Engineering Bucharest, Romania

Mihail Iancovici, Technical University of Civil Engineering Bucharest, Romania

Eduard Luca, University of Bucharest, Romania

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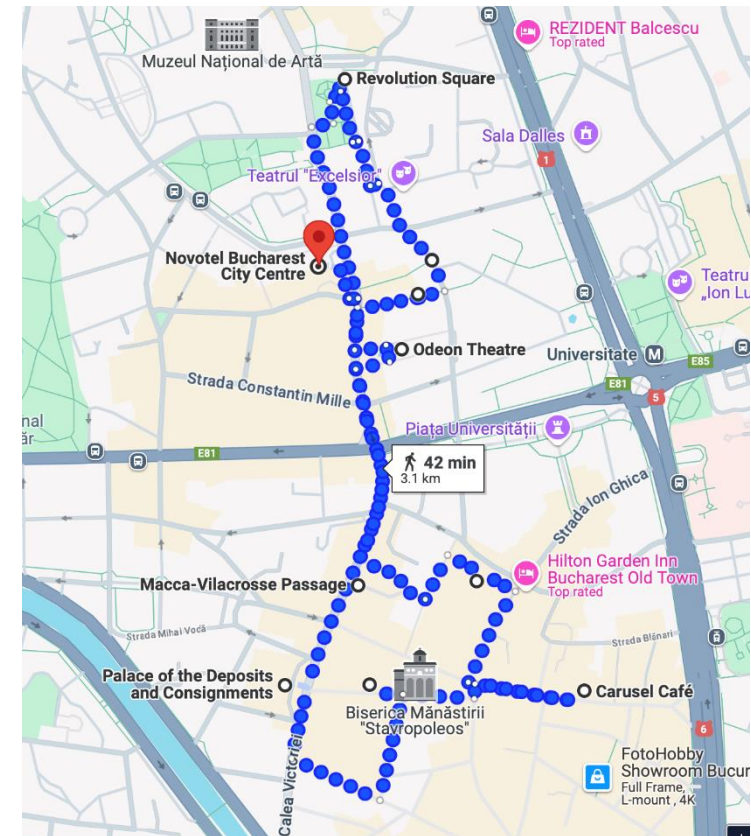
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## Bucharest City Center sightseeing:

All attendees are welcome to join the sightseeing tour organized on September 12<sup>th</sup> starting at 17:00 o'clock from NOVOTEL BUCHAREST CITY CENTER hotel, Paris Auditorium.

This brief Bucharest walking tour will offer you a nice blend of history, architecture and vibrant culture. From its contested identities (related to the communist period and the 1989 Revolution) to its contemporary artistic manifestations, Bucharest will charm you with its diversity and hidden treasures.

We will explore the meaning of Revolution Square and the surrounding historical landmarks and stroll down Calea Victoriei, one of the oldest and most famous streets in the capital. We will get a glimpse at the famous Lipscani street, with its boutique shops and lively cafes and stop in Cărturești Carusel, a library hosted by the spectacular Chrissoveloni Palace. Stavropoleos Church, Caru cu Bere and The CEC Palace are also landmarks we will get to see on our route, the tour being covered in legends and captivating stories.



### Day 0: September 11<sup>th</sup> 2024

18:00 – 18:30	Registration
18:30 - 20:00	Ice Breaking Party

# Day 1: September 12<sup>th</sup> 2024

8:00 - 9:00	Registration					
9:00 - 9:15	Opening Ceremony					
9:15 - 10:00	<b>Keynote Lecture (Chair Mihail Iancovici)</b> <b>Damping in buildings for wind resistant design, Professor Yukio Tamura</b>					
10:00 - 10:30	1	Estimation of wind-induced fatigue damage to beam-column welded joints of low-rise steel buildings Yasushi Uematsu, Kosuke Sato and Taku Matsumoto	21	Damping estimation of a telecommunication lattice tower form full-scale ambient vibration measurements Ileana Calotescu, Ioana-Claudia Tomescu and Daniel Bîtcă		
10:30 - 11:00	Coffee break					
	Session 1 (Chair Florin Pavel)					
11:00 - 12:00	29	The role of TS winds in the proposal of a new basic wind speed map for the Brazilian wind code Acir Loredo-Souza, Michèle Pfeil, Ernani Nascimento, Jorge Riera and Gilberto Fisch	33	Mapping of thunderstorm-induced damage in Romania Adriana Chitez and Ileana Calotescu	18	Extreme wind-induced damage and loss estimates for buildings Mihail Iancovici and George Bogdan Nica
					32	Nonlinear performance of a 20-Story Steel Building under Recurring Seismic and Wind Loads Shairin Islam, Asad Ullah and Anastasia Athanasiou
12:00 - 12:10	Transition break					
	Session 2 (Chair Adriana Chitez)					
12:10 - 13:10	24	Sea breeze occurrence of the Romanian Black Sea coast Crina Radu and Georgeta Bandoc	25	The evolution of the atmospheric boundary layer during convective storms in the area of the Municipality of Bucharest using SODAR data Iris Țițineanu, Georgeta Bandoc, Mircea Degeratu and Eduard Luca	20	On the feasibility of large-scale experimental impinging jets to reconstruct transient vertical profiles of thunderstorm outflows Federico Canepa, Massimiliano Burlando and Horia Hangan
					26	Active-controlled multi-blade system for wind tunnel simulation of downburst outflow Yangjin Yuan, Bowen Yan, Qiaowen Ran and Xiao Li
13:10 - 14:00	Lunch					
14:00 - 14:45	<b>Keynote Lecture (Chair Claudio Borri)</b> <b>Modelling of non-synoptic winds, Professor Horia Hangan</b>					
14:45 - 15:15	30	The Thunderstorm Response Spectrum revised from Italian and Romanian outflows wind records Mekdes T. Mengistu, Maria Pia Repetto and Ileana Calotescu	2	Torsional-flutter-based harvester: output power in nonstationary, thunderstorm-like winds Luca Caracoglia		
15:15 - 15:30	Coffee break					
15:30 - 17:00	IAWE WG meeting: "Realistic wind loads modelling of non-synoptic winds on large structures and infrastructures for safety and serviceability"					
17:00 - 18:00	IAWE Executive Board meeting			Bucharest City Center sightseeing		
19:30	Gala dinner: Novotel Hotel (Conference venue)					



## Day 2: September 13<sup>th</sup> 2024

8:00 - 9:00	Registration							
9:00 - 9:45	<b>Keynote Lecture (Chair Costin Coşoiu)</b> <b>Urban physics research to tackle the grand societal challenges, Professor Bert Blocken</b>							
9:45 - 10:30	28	Evaluating the impact of chamfer corners on building aerodynamics under interference effects using LBM-LES CFD simulation Saiful Naim Sulaiman, Thomas Indinger and Christian F. Janssen	10	Enhancing indoor air quality and thermal comfort with personalized ventilation systems in workspaces Florin Bode, Ilinca Nastase and Paul Dancă	8	Influence of wind direction on the containment of asbestos removal worksites: application to a high-rise building Romain Guichard, Anjali Krishan Radhakrishnan Jayakumari, Stefanie Gillmeier, Alessio Ricci and Bert Blocken		
10:30 - 11:00	<b>Coffee break</b>							
	<b>Session 3 (Chair Florin Bode)</b>							
11:00 - 12:00	5	Marginal gains in cycling aerodynamics: bicycles on the roof of a team car Bert Blocken and Fabio Malizia	15	Measurements of longitudinal velocity distributions in a boundary layer wind tunnel Ioel Giger, Costin Ioan Coşoiu and Andrei Mugur Georgescu	16	Experimental and numerical analysis in port areas for the formulation of a new mean wind velocity profile in and above the canopy layer Alessio Ricci and Bert Blocken	14	Robust approach to automatic grid generation of complex environments in computational wind engineering applications Josip Žužul, Alessio Ricci and Massimiliano Burlando
12:00 - 13:00	<b>Lunch</b>							
13:00 - 13:45	<b>Keynote Lecture (Chair Maria Pia Repetto)</b> <b>New European standard for the calculation of wind-induced, dynamic structural reactions, Professor Rüdiger Höffer</b>							
13:45 - 14:30	31	Wind-induced fatigue life assessment of a slender lightning rod Andrea Orlando, Luisa Pagnini, Andi Xhelaj and Maria Pia Repetto	11	Historical evolution of wind design for tall RC chimneys in Romania Florin Pavel	19	Assessment of wind speed between satellite altimetry data and SWAN model simulations in the Black Sea basin Eduard Luca, Georgeta Bandoc, Mircea Degeratu and Iris Țițineanu		
14:30 - 15:00	<b>Coffee break</b>							
	<b>Session 4 (Chair Alessio Ricci)</b>							
15:00 - 16:00	3	Basic characteristics of wind pressures on open-type structures with flat roofs Yuki Takadate and Yasushi Uematsu	9	Decoupling and quantifying cause-effect relationships of bluff-body fluid-structure interactions via the Koopman linear-time invariance approach Cruz Li and Tim K.T.Tse	12	Wind flow prediction above high-rise building rooftops using machine learning techniques Anina Šarkić Glumac, Miloš Jočković, Kristina Kostadinović Vranešević, Stephane Bordas and Bert Blocken	13	Experimental study of the wind action on the Therme Bucharest complex façade Iustina Florea, Alexandru Cezar Vladuț, Costin Ioan Cosoiu, Andrei-Mugur Georgescu and Mircea Degeratu
16:00 - 16:15	Closing Ceremony							