

**6<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON  
ENVIRONMENTAL EFFECTS ON BUILDINGS AND PEOPLE:  
ACTIONS, INFLUENCES, INTERACTIONS, DISCOMFORT  
EEBP VI**

TOMASZOWICE NEAR CRACOW, POLAND  
OCTOBER 11-13, 2010

**THIRD ANNOUNCEMENT  
SYMPOSIUM PROGRAMME**

**MONDAY, 11.10.2010**

**9<sup>00</sup> – 11<sup>00</sup> : REGISTRATION**

**11<sup>00</sup> : OPENING CEREMONY**

**12<sup>00</sup> – 13<sup>15</sup> : WIND CLIMATE AND WIND CHARACTERISTICS**

Tadeusz Chmielewski (Poland) – Chairman  
Tsukasa Tomabechi (Japan) – Vice – Chairman

Nagesh R. Iyer (India)

***WIND ENGINEERING RESEARCH IN INDIA – CURRENT SCENARIO AND FUTURE NEEDS– KEYNOTE LECTURE***

D. Lungu, R. Vacareanu, S. Demetriu  
*Statistics of the maximum annual wind load in Romania*

A.C. Kruger, A.M. Goliger, J.V. Retief, S. Sekele  
*Estimation of extreme wind speeds in the mixed strong wind climate of South Africa*

T. Chmielewski, H. Nowak, K. Walkowiak  
*Tornado near Opole – results of post-disaster investigation*

P. Martinez-Vazquez, M. Sterling, N. Rodriguez-Cuevas  
*Design spectra for wind loading*

**13<sup>15</sup> – 13<sup>30</sup> : COFFEE BREAK**

**13<sup>30</sup> – 14<sup>45</sup> : B) BUILDING AERODYNAMICS**

Mark Sterling (Great Britain) – Chairman  
Anton Makhinko (Ukraine) – Vice – Chairman

Andrzej Flaga (Poland)

***MODELLING OF AERODYNAMICAL AND MECHANICAL CHARACTERISTICS OF DIFFERENT TYPE OF WIND ROTORS – KEYNOTE LECTURE***

A. Tesár  
*Aeroelasticity of bridges with wind-screens*

S. Pichugin, A. Makhinko  
*Reliability of steel lattice towers under stochastic along-wind load*

A. Flaga, T. Lipecki, J. Bęc  
*The quasi-steady approach to dynamic wind action on footbridges*

A. Flaga, J. Bęc, T. Lipecki  
*Dynamic wind analysis of the cable-stayed bridge in Wrocław*

**15<sup>00</sup> – 16<sup>00</sup> : LUNCH**

**16<sup>15</sup> – 17<sup>45</sup> : C) WIND TUNNEL TESTS**

Nagesh R. Iyer (India) – Chairman  
Pedro Martinez - Vazquez (Great Britain) – Vice – Chairman

Mark Sterling (co-author Chris Baker) (Great Britain)

***A RE-CONSIDERATION OF SOME BASIC ASSUMPTIONS OF WIND ENGINEERING – KEYNOTE LECTURE***

A. Flaga, G. Bosak, Ł. Flaga, R. Kłaput, P. Matys

*Wind tunnel tests of aerodynamic interference of two bridge spans set nearby*

A. Flaga, G. Bosak, Ł. Flaga, R. Kłaput, P. Matys

*Investigation of the influence of wind on facade facings of sky tower in Wrocław*

A. Flaga A, Flaga Ł.

*Wind tunnel tests of aquaporine model exhibit*

T. Nowicki, A. Flaga

*Empirical formulae for frequency and onset velocity of flutter for typical bridge decks cross – sections*

R. Kinash, M. Branny

*Football stadium roofing model aerodynamic tests*

A.J. Bronkhorst, C.P.W. Geurts, B.J.E. Blocken, C.A. van Benthum

*Adverse local wind effects on neighbouring buildings*

**18<sup>00</sup> – 22<sup>00</sup>: GRILL PARTY**

## **TUESDAY, 12.10.2010**

### **9<sup>00</sup> – 10<sup>30</sup>: D) SNOW LOADS AND SNOW TRANSPORT**

Thomas Thiis (Norway) – Chairman  
Takuya Tsutsumi (Japan) – Vice – Chairman

Grzegorz Kimbar (co-author Andrzej Flaga) (Poland)

***SIMILARITY CRITERIA OF SNOW PRECIPITATION AND REDISTRIBUTION AND SNOW LOAD SIMULATION IN WIND TUNNEL – KEYNOTE LECTURE***

T. Yukawa, N. Taniguchi, T. Tomabechi  
*Snow sedimentation around detached houses in cold and snowy regions*

T.K. Thiis  
*A model for the distribution of snow load on gable roofs*

N. Taniguchi, T. Yukawa, T. Tomabechi  
*Planning to reduce the need to remove snow in the case of detached houses in cold and snowy regions*

J. Potac  
*CFD simulation and full scale measurements of snow deposition on a triple-arch roof*

### **10<sup>30</sup> – 10<sup>45</sup>: COFFEE BREAK**

### **10<sup>45</sup> – 12<sup>00</sup>: D) SNOW LOADS AND SNOW TRANSPORT**

Sergiej Piczugin (Ukraine) – Chairman  
D. Lungu (Romania) – Vice – Chairman

S.F. Pichugin, Yu.V. Dryzhyruk  
*Snow load investigation for buildings of different heights*

A. Flaga, G. Kimbar, J. Zych  
*Case study of a natural disaster of icing in southern Poland in January 2010*

T. Tsutsumi, T. Tomabechi  
*Experimental study on effects of high-rise building on roof snow*

T. Tsutsumi, T. Tomabechi, T. Chiba  
*Field measurements of snowdrifts around buildings*

D. Lungu, S. Demetriu, A. Aldea  
*Statistics of the maximum annual Snow load in Romania*

### **12<sup>00</sup> – 12<sup>15</sup>: COFFEE BREAK**

### **12<sup>15</sup> – 14<sup>15</sup>: E) ACOUSTIC, THERMAL AND WIND COMFORT**

Chris Geurts (Netherlands) – Chairman  
Sergiej Kuznetsov (Ukraine) – Vice – Chairman

Nicolas Plom (Belgium)  
***NOISE OF WIND TURBINE – KEYNOTE LECTURE***

L. Tarczyński  
*Thermal conditions of access of people to ventilated space of industrial chimneys*

R. Gnatowska  
*Numerical method for detection of wind discomfort areas*

T. Kamisiński, R. Kinash, J. Rubacha, A. Pilch  
*Analysis of the Lviv Opera Hall acoustics after the modernization*

E.F. Gorokhov, V.N. Vasylev, S.G. Kuznetsov, G.A. Nazarov, E.A. Lozinskiy  
*Distribution of heat emissions from the heating systems of residential buildings in a built-up area*

### **14<sup>15</sup> – 15<sup>15</sup>: LUNCH**

## **15<sup>15</sup> – 16<sup>15</sup> : F) VIBRATION COMFORT, DAMPING AND DAMPERS**

Jan Benčat (Slovakia) – Chairman  
Jan Potac (Norway) – Vice – Chairman

Kenny Kwok (Australia)

***HUMAN PERCEPTION AND TOLERANCE OF WIND-INDUCED BUILDING MOTION – KEYNOTE LECTURE***

A. Flaga, M. Polak

*Non-linear numerical study of single degree of freedom system equipped with a pendulum mass damper at its high vibrations amplitude*

H. Ciurej, J. Kawecki, R. Masłowski

*Application of PSO algorithm to determine optimum damper's parameters and position*

P. Wielgos, A. Flaga

*The optimization of multiple tuned mass dampers parameters. The theoretical basis and numerical examples*

Z. Siewierda, P. Wielgos, A. Flaga, T. Lipecki

*Tuned mass dampers with elastomeric limiters. Theory and research.*

## **16<sup>15</sup> – 16<sup>30</sup> : COFFEE BREAK**

## **16<sup>30</sup> – 18<sup>30</sup> : G) ENVIRONMENTAL EFFECTS ON BUILDING MATERIALS AND STRUCTURES**

Pier Luigi Bonora (Italy) – Chairman  
Roman Kinasz (Poland) – Vice – Chairman

Agnieszka Królikowska (Poland)

***IMPACT OF CORROSION AND ANTICORROSION ON PUBLIC SAFETY, THE ECONOMY AND THE ENVIRONMENT – KEYNOTE LECTURE***

A. Zaborski

*Numerical modeling of coupled chemo-mechanical degradation of RC elements 281*

Ł. Augustynski

*Effects of road traffic on the corrosivity of the atmosphere in the urban area 285*

T. Wierzbicki

*The weathering steel in bridge structures – the experience gained through its application in Poland 287*

## **19<sup>00</sup> – 22<sup>00</sup> : SYMPOSIUM DINNER WITH FOLKLORE GROUP**

## **WEDNESDAY, 13.10.2010**

### **9<sup>00</sup> – 11<sup>00</sup>: H) MISCELLANEOUS**

Marek Łagoda (Poland) – Chairman  
Naohiro Taniguchi (Japan) – Vice – Chairman

Chris Geurts (Netherlands)

#### ***LOCAL WIND LOADS ON SOLAR ENERGY SYSTEMS – KEYNOTE LECTURE***

Tadeusz Chmielewski (Poland)

#### ***MONITORING OF TALL STRUCTURES AND SHORT, MEDIUM AND LONG SPAN BRIDGES BY GPS MEASUREMENTS – KEYNOTE LECTURE***

P.L. Bonora

*Are buildings eco-compatible?*

P. Martinez-Vazquez, C.J. Baker, M. Sterling, A.D. Quinn

*Estimation of free flight trajectories of windborne debris using eigenfaces for recognition*

J. Benčat, O. Kubovčík, D. Papán

*Prediction models for building structure response due to railway traffic*

A. Flaga, Ł. Bednarski, R. Sieńko, M. Stoliński, P. Ćwiek

*Monitoring of the roof structure of the municipal stadium in Poznań*

M. Wrona

*GNSS application for structural monitoring systems*

### **11<sup>00</sup> – 11<sup>30</sup>: CLOSING CEREMONY**