

**The 3rd UN World Conference on Disaster Risk Reduction**  
***Announcement of IAWE Public Forum***

**Necessity and Efficiency of Large-Scale Facilities  
 for Wind-Related Disaster Risk Reduction**

**Room C202, Kawauchi-Kita Campus, Tohoku University, Sendai, Japan  
 13:00 - 18:00, March 16, 2015**

*Organized by* IAWE  
*Co-sponsored by* IRIDeS, IG-WRRR, TPU WE-JURC, JAWE  
*Co-supported by* AIJ, MSJ, JSCE

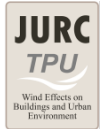
The number of devastating wind-related disasters has been increasing remarkably, and the risk of future wind-related disasters is hypothesized to escalate due to global warming or potential climate change. In order to mitigate the impact of wind-induced damage worldwide, perfectly controlled performance tests of full-scale houses and structures should be conducted under such very rare strong wind actions, as well as rain, snow, hail, solar heating, fire and so on. A kind of paradigm shift in wind-induced disaster mitigation measures is necessary to realize safer and sustainable societies. For this, a large full-scale test facility has to be constructed and effectively utilized. In this public forum, existing large-scale facilities in the wind engineering field are introduced, and then the necessity and importance of full-scale facilities to mitigate wind-induced disaster are discussed.

***Presentations on Large- and Full-Scale Meteorological Hazards  
 Experimental Facilities in the World***

13:30-13:35	Opening Remarks	Yukio Tamura, Beijing Jiaotong University, China, Tokyo Polytechnic University WE-JURC, Japan
13:35-14:00	Summary advancements in full-scale wind engineering experimental facilities	Forrest Masters, University of Florida, Arindam Chowdhury, Florida International University, USA
14:00-14:25	Full-scale multi-chamber, pressure tests of buildings under extreme wind loads	Greg Kopp, University of Western Ontario, Canada
14:25-14:50	Reducing vulnerability to non-synoptic winds. The WindEEE Dome	Horia Hangan, University of Western Ontario, Canada
14:50-15:15	An active multiple-fan wind tunnel proposal to meet the necessity of wind-related DRR in China	Shuyang Cao, Tongji University, China
15:15-15:25	Coffee Break	
15:25-15:50	Simulating climate in wind tunnel : why do it at full scale ?	Olivier Flamand, Centre Scientifique et Technique du Bâtiment, France
15:50-16:15	Benefits and challenges of full-scale testing in a large wind facility	Tim Reinhold, Institute for Business and Home Safety, USA
16:15-16:40	Why do we need a full-scale storm simulator?	Yukio Tamura (previously described)
16:40-17:00	Coffee Break	

***Panel Discussion on Necessity and Efficiency of Full-Scale  
 Meteorological Hazards Facilities for Disaster Risk Reduction***  
**17:00-18:00**

*Presided by* Ahsan Kareem (University of Notre Dame) and Yuichi Ono (Tohoku University)



## 第3回国連防災世界会議 パブリック・フォーラム

### 風関連災害低減のための大規模施設の必要性と有効性

東北大学・川内北キャンパスC202室, 仙台  
2015年3月16日13:00 - 18:00

主催 国際風工学会

共催 東北大学・災害科学国際研究所, ISDR風関連災害低減のための国際グループ, 東京工芸大学・風工学研究拠点, 日本風工学会

後援 日本気象学会, 日本建築学会, 土木学会

世界の台風等による激甚風水害の数は、近年大きく増加しており、それに伴う経済的損失も著しく増加している。2008年のミャンマーでのサイクロン・ナルギスでは死者行方不明者が14万人近くにもものぼり、温暖化、気候変動などの影響で、将来さらにこの増加傾向が顕著になることが懸念されている。激甚な風災害を繰り返さないためには、建物の破壊プロセスを含んだ耐風性能等を正しく把握し、材料、構工法の改善を図ることが必要である。そのためには、十分に管理された状態での極稀事象の実大実験が必要であり、これを可能とする大型施設の世界における現状と将来を概観し、その必要性、重要性、気象災害低減への寄与について議論する。

#### 世界の大型／実大気象災害研究施設の現状と展望

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13:35-14:00	Summary advancements in full-scale wind engineering experimental facilities	Forrest Masters, University of Florida, Arindam Chowdhury, Florida International University, USA
14:00-14:25	Full-scale, multi-chamber, pressure tests of buildings under extreme wind loads	Greg Kopp, University of Western Ontario, Canada
14:25-14:50	Vulnerability to non-synoptic wind systems. A new paradigm	Horia Hangan, University of Western Ontario, Canada
14:50-15:15	An active multiple-fan wind tunnel proposal to meet the necessity of wind-related DRR in China	Shuyang Cao, Tongji University, China
15:15-15:25	Coffee Break	
15:25-15:50	Jules Verne Climate Wind Tunnel (tbc)	Olivier Flamand, Centre Scientifique et Technique du Bâtiment, France
15:50-16:15	Benefits and challenges of full-scale testing in a large wind facility	Tim Reinhold, Institute for Business and Home Safety, USA
16:15-16:40	Why do we need a full-scale storm simulator?	Yukio Tamura (previously described)
16:40-17:00	Coffee Break	

#### パネルディスカッション

実大気象災害研究施設の必要性と災害低減への寄与  
17:00-18:00

モデレータ Ahsan Kareem (University of Notre Dame) and Yuichi Ono (Tohoku University)