

Minutes of Annual Meeting
Wind Hazard and Infrastructure Performance Center (WHIP) IAB Meeting
April 1, 2021 – 8:30 a.m. – 3:30 p.m.
Zoom Online Meeting

Attendees

An attendance roster is attached and becomes a part of these minutes. Eleven representatives from 6 company members, one NSF assessment/evaluator, and 16 invited guests from 7 companies and 3 agencies, and 9 faculty and one student from three universities participated in the meeting.

Call to Order and Welcome

Kishor Mehta, WHIP Center Director, called the meeting to order and welcomed everyone participating.

Introductions

Introductions were self-made by those in attendance. Individuals identified themselves and place of employment.

Preamble, State of WHIP, Level of Interest and Feedback Evaluation (LIFE) Form

Documents listed in the title of this paragraph were reviewed by Mehta.

Preamble - The Preamble was reviewed by Mehta.

State of WHIP – Mehta reported the WHIP organization was in good shape. He reviewed the Center’s vision, research focus, accomplishments, and milestones for the Center’s second year, membership benefits, and the timeline for years two and three.

LIFE Form – This online document is used to provide feedback from IAB members to the faculty on the funded and proposed projects. Mehta covered how to login and complete the form.

Video Presentation: Prakash Balan, National Science Foundation (NSF) director, provided a video which was played for the group.

Progress Reports of Year 2 Projects

- **Progress Report 01:** *Investigation of wind driven rain and wind-induced vibration effects on curtain wall systems*, Co-PIs: Amal Elawady and SJ Lee, Florida international University; Mentor: Guido Lori.
- **Progress Report 02:** *Prediction of wind surge damage to buildings by hurricane*, PI: Doug Smith, Texas Tech University; Mentor: Tim Doggett
- **Progress Report 03:** *Estimation of interior and content damage due to wind driven rain ingress in to mid/high-rise buildings*, PI: Jean-Paul Pinelli, Florida Institute of Technology; Mentors: Maurizio Savina and Karthik Ramanathan.

- **Progress Report 04:** *Investigation of wind performance of roofing elements using full-scale experimentation*, Co-PIs: Arindam Chowdhury and Ioannis Zisis, Florida International University; Mentor: Ming Shiao

Project Proposals – Listed below are the proposals presented. Presentations were done by the Principal Investigators (PIs). During this session, Mehta, the PIs, and IAB members asked and answered questions as they pertained to the different projects.

- WHIP2021_P01-*Investigation of installation and anchor requirements of roof systems under high wind conditions*, PI: Arindam Chowdhury, Co-PI: Ioannis Zisis
- WHIP2021_P02- *Wind effects on roof-mounted photovoltaic systems*, PI: Arindam Chowdhury, Co-PI: Ioannis Zisis
- WHIP2021_03-Withdrawn.
- WHIP2021_P04-*Wind-induced loads on irregular shaped buildings*, PI: Ioannis Zisis, Co-PI: SJ Lee
- WHIP2021_P05-*Time related expenses model, based on combination of exterior, interior, and contents damage*, PI: Jean-Paul Pinelli
- WHIP2021_P06-*Exploratory investigation of field damage, hazard, and institutional data for potential use in risk models*, Jean-Paul Pinelli, Co-PIs: Kishor Mehta, Ioannis Zisis, Delong Zuo
- WHIP2021_P07-*Empirical vulnerability model to assess impact of windborne tree debris on low-rise construction*, PI: Amal Elawady, Co-PI: Jean-Paul Pinelli
- WHIP2021_P08-*Understanding the impact of design strategy, installation, and service life effects on the wind hazard resistance of curtainwall system*, PI: Amal Elawady, Co-PI: Jean-Paul Pinelli
- WHIP2021_P09-*Thunderstorm Downburst-Induced Dynamic Response of Curtain Wall Systems*, PI: SJ Lee, Co-PI: Amal Elawady
- WHIP2021_P10-*Probabilistic Modelling of Household Recovery after Hurricane and Wind Disaster*, PI: Brad Ewing
- WHIP2021_P11-*Development of Fragility Curves for Tornadoic Loading on Low-Rise Buildings*, PI: Delong Zuo
- WHIP2021_P12-*Prediction of wind and surge damage to buildings by hurricane*, PI: Doug Smith

Debriefing of Guests by Denis Gray – Gray discussed the survey each of the guest received and the value to the WHIP Center. The survey was done to gather information concerning the guests' impressions of the information provided at the meeting.

Completing L.I.F.E. Forms

General discussion was held concerning the L.I.F.E. form. All IAB members and their representatives were encouraged to complete the form.

Adjournment at 3:30 p.m.

Prepared by Marie Hanza, *Program Coordinator - WHIP Center*

Minutes
Wind Hazard and Infrastructure Performance Center (WHIP) IAB Meeting
April 2, 2021 – 8:30 a.m. – 11:00 a.m.
Zoom Online Meeting

Attendees

AIR Worldwide – Karthik Ramanatham and Tim Johnson; **Berkshire Hathaway** – Tim Doggett; **GAF** – Kevin McGrath and Erica Sherman; **SCOR Global P & C** – Maurizio Savina; **State Farm Insurance** – Eric Haefli; **USAA** – Daniel Diaz

Call to Order and Welcome

Kishor Mehta, WHIP Center Director, called the meeting to order and welcomed everyone participating. From 8:30 a.m. to 9:45 a.m. is a closed session for IAB representatives.

Closed Session of IAB for Selection of Projects and Allocation of Funds

After discussion, the following seven proposals were selected for funding during Year 3.

- WHIP2021_P01-*Investigation of installation and anchor requirements of roof systems under high wind conditions*, PI: Arindam Chowdhury, Co-PI: Ioannis Zisis – Mentors: Erica Sherman and Ming Shiao – GAF – Duration Years – 2 – Budget Year 1 - \$61,352
- WHIP2021_P05-*Time related expenses model, based on combination of exterior, interior, and contents damage*, PI: Jean-Paul Pinelli – Mentors: Maurizio Savina (SCOR), Karthik Ramanathan (AIR), Daniel Diaz (USAA) – Duration Years – 1 - Budget Year 1 - \$44,975
- WHIP2021_P06-*Exploratory investigation of field damage, hazard, and institutional data for potential use in risk models*, Jean-Paul Pinelli, Co-PIs: Kishor Mehta, Ioannis Zisis, Delong Zuo – Mentors: Tim Doggett (BHSI), Eric Haefli (State Farm), Karthik Ramanathan (AIR), Maurizio Savina (SCOR) – Duration Years – 1 - Budget Year 1 - \$15,000
- WHIP2021_P07- *Empirical vulnerability model to assess impact of windborne tree debris on low-rise construction*, PI: Amal Elawady, Co-PI: Jean-Paul Pinelli – Mentors: Tim Johnson (AIR), Eric Haefli (State Farm) – Duration Years – 2 - Budget Year 1 - \$44,328
- WHIP2021_P10-*Probabilistic Modelling of Household Recovery after Hurricane and Wind Disaster*, PI: Brad Ewing – Mentors: Daniel Diaz (USAA) – Duration Years – 1 - Budget Year 1 - \$12,000
- WHIP2021_P11-*Development of Fragility Curves for Tornadic Loading on Low-Rise Buildings*, PI: Delong Zuo – Mentors: Tim Doggett (BHSI), Tim Johnson (AIR) – Duration Years – 2 - Budget Year 1 - \$77,310
- WHIP2021_P12-*Prediction of wind and surge damage to buildings by hurricane*, PI: Doug Smith – Mentors: Eric Haefli (State Farm), Tim Doggett (BHSI), Tim Johnson (AIR) – Duration Years – 1 - Budget Year 1 - \$50,000

Debriefing by IAB Chair to Directors of Selection of Projects

Karthick Ramanatham discussed with Site Directors Ioannis Zisis and Delong Zuo the proposals which were selected. Ramanatham provided feedback from the IAB members thoughts on the projects and announced the mentors for each project.

The IAB also has determined the following concerns should be addressed for the proposals identified. Once these are incorporated, the proposals should be re-submitted via email to approve funding.

1. WHIP2021_P01 – The cost of deck construction should be incorporated into the budget. GAF can provide materials for this project but not labor. Therefore, it is critical that the project amount reflect the cost of deck construction.
2. WHIP2021_P05 and WHIP2021_P10 - Can we explore combining 05 and 10 and reduce the budget a touch? P05 in itself seems to be a touch overpriced for the promised deliverables. Once P05 and P10 are combined, it would be great if the combined budget is reduced.
3. The total of all proposals identified in the table above is approximately \$5,000 over the available funding of \$300,000. The site directors should work with the PIs to make sure we do not exceed the available funding.

Voting on By-Laws Changes – All voted yes to the proposed change in the by-laws.

Selection of Chair-Elect - Tim Doggett of Berkshire Hathaway, was elected as the Chair-Elect. Kevin McGrath was thanked for his service. McGrath noted that from this point forward, Erica Sherman would be the main point of contact for GAF.

Discussion of Recruiting of New Members During the Year – General discussion was held on this topic. The results of Gray’s survey will be utilized in membership recruitment. Main points made for recruiting were:

- The approach to companies should be toward benefit of the WHIP Center and not the technical capabilities.
- Glossy flier is more effective than long discussion of the technical capabilities of the Center.
- Sector of industry (e.g., petro-chemical) should be targeted rather than individual company.

Mid-annual meeting will be in October; it may be in-person or remote depending on pandemic circumstances.

Adjournment at 11:00 a.m.

Prepared by Marie Hanza, *Program Coordinator - WHIP Center*