



Wind Hazard and Infrastructure Performance Center

(<http://www.whipc.org/>)



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Background

What is WHIP



WHIP is an Industry-University Cooperative Research Center sponsored by the National Science Foundation (NSF). Its mission is to pursue research of interest to industry to enhance the resiliency of buildings and infrastructure to hurricanes and tornadoes.

Objects

What WHIP does



The research thrusts of the Center include:

- Characterization of Wind (and related) Hazard
- Assessment of Buildings & Infrastructure Vulnerability
- Evaluation of Societal Impact and Community Resilience

Expectation from a future partner

Why belong to WHIP

- Research gives competitive advantage to your organization
- Investment gives high return from pooled funds
- First access, royalty-free rights to intellectual property
- Access research faculty, students, & state-of-the-art facilities
- Connection with students gives advantage in recruiting
- Social responsibility to mitigate damage and suffering

Seeds and Needs

Challenges

- Losses of life and property create societal stresses
- Infrastructure damage causes business interruption
- Slow transition of innovations to mitigation measures

Seeds

Current research projects include:

1. *Development of fragility curves for tornadic loading on low-rise buildings,*
2. *Prediction of wind and surge damage to buildings by hurricane,*
3. *Wind effects on ballasted rooftop photovoltaic systems,*
4. *Wind-induced loads on irregular shaped buildings,*
5. *Integration of field damage, hazard, and exposure data for potential use in risk models,*
6. *Empirical vulnerability model to assess impact of windborne tree debris on low-rise construction*

Needs

The industry members of the Center form an Industry Advisory Board (IAB) with one representative from each member. The IAB selects the research projects to be pursued during a year from a pool of proposals by faculty members and allocates the funding for selected projects. The funding for research comes from the yearly fees paid by the members.

The WHIP-C welcomes both:

- New IAB members, national or international
- New academic sites, either in the USA or abroad

Contact Information

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