

# Award Ceremony

2021 IEEE-NASPI Oscillation Source Location  
Contest

IEEE PES PSDP Committee Meeting

2021/07/21



# Background

## Who Are the Hosts?

- IEEE-PES-PSDP-PSSC



Oscillation Source Location Task Force (OSL-TF)

- North American SynchroPhasor Initiative (NASPI)



# Background

## Why Did We Host The OSL Contest?

- PMUs discovered a lot more oscillations, mostly forced
- Locating the “sources” is the first step to mitigate them
- A lot of research have been done
  - Papers have been published
  - Software have been developed
- People want to know
  - What works and what doesn't?
  - Are there any limitations and how to improve them?

## Where to Find the Information?

### Search IEEE NASPI OSL Contest

- <https://www.naspi.org/node/890>
- <http://web.eecs.utk.edu/~kaisun/Oscillation/2021/Contest/>

### Search IEEE Oscillation Source Location TF

- <http://web.eecs.utk.edu/~kaisun/TF/index.html>

## 2021 IEEE-NASPI Oscillation Source Location Contest



This webpage hosts data and models to be used for the 2021 IEEE-NASPI Oscillation Source Location (OSL) Contest. For complete contest info and registration, please visit: <https://www.naspi.org/node/890>

IEEE Data Hosting Website

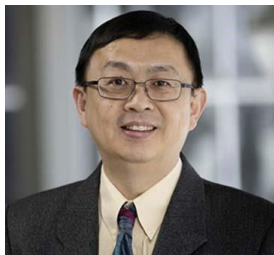
IEEE-NASPI Oscillation Source Location Contest



In recent years, large-amplitude sustained oscillations have been observed in power grids around the world, thanks to widely deployed PMUs. Many of the observed oscillations did not appear in traditional model-based studies. Such oscillations are either due to unmodeled dynamics or unexpected periodic inputs. Since these oscillations are not represented in the simulation models, they are not visible in the planning studies and no mitigation measures can be designed offline. Therefore, finding the originating source(s) is crucial in real-time operations. Finding the source(s) not only enable timely mitigation measures and ensure secure grid operations, but also help generator owners manage asset health and investigate asset failures at an early stage.

NASPI Registration Site

## 2021 IEEE-NASPI OSL Contest Committee



Ning Zhou  
(Binghamton Uni.)



Jim Follum  
(PNNL)



Athula Rajapakse  
(Uni. of Manitoba)



Bin Wang  
(NREL)



Slava Maslennikov  
(ISO-NE)



Mani Venkatasubramanian  
(WSU)



Evangelos Farantatos  
(EPRI)



Jeff Bloemink  
(Powertech Labs)

# Heroes Behind the Curtain

## Special Thanks!

- Web support:
  - **Kai Sun, Teresa Carlon**
- WECC-240 bus base case:
  - **Jin Tan and the NREL team**
- TSAT simulation technical and license support:
  - **Powertech Labs**

# Participation Summary

## A Worldwide Contest!

- 61 teams registered, 21 teams made to the finish line



# IEEE & NASPI

Present the top 3 teams...





# Award

## Third Place

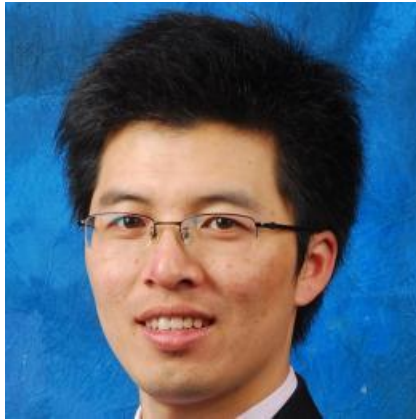
- **Team FIUBA** – from University of Buenos Aires
  - Pablo Gill Estevez, Pablo Marchi, Cecilia Galarza



# Award

## Tied for First Place

- **Team Woodpecker** – from General Electric
  - Honggang Wang, Shaopeng Liu, Gang Zheng



# Award

## Tied for First Place

- **Team RPI** – from Rensselaer Polytechnic Institute
  - Denis Osipov, Stavros Konstantinopoulos, Joe H. Chow



# Congratulations Teams!!

And thank you all for participating,  
hope you had fun!



# Post-Award Activities

## There Is More...

- Check out our **contest website**: results will be posted there
- The **full simulation dataset** used to generate the test cases will be published
  - On the OSL TF website, as part of the Test Cases Library
- **Fall NASPI Meeting**
  - Contest design and result analysis
  - Winners will also be invited to present
- Stay tuned for **publications** as well