

# Engineering Analysis Task Team

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### **New Mission Statement**

- 1. **Proliferate** the development, testing, and validation of engineering applications that use synchronized measurements systems.
- 2. Assist in the deployment and utilization of synchronized wide-area measurement applications.
- 3. Formulate and guide recommended R&D activities related to the advancement of widearea synchronized measurement systems and their applications.

### Advanced Model Validation & Calibration

- EATT White Paper
- Lead: Honggang Wang (GE)

North American Synchrophasor Initiative   March 2015
Model Validation Using Phasor
Measurement Onit Data
NASDI Technical Penert
March 20, 2015
NASP North American Synchrop Phasor Initiative
Synchron Hussen Annualee

Objective: Document industry advancements in model validation and calibration



## Outline & Progress

#### Chapter 1

• Section 1.2 to be completed

#### • Chapter 2

- Completed section 2.2
  - Neeraj Nayak (EPG)
  - Mani Venkatasubramanian (WSU)
  - Urmila Agrawal & Pavel Etingov (PNNL)

#### • Chapter 3

- Completed section 3.1
  - Junbo Zhao (UConn)
  - Junjian Qi (Stevens Inst. Tech)
  - Honggang Wang (GE)
- Completed section 3.2
  - Renke Huang (PNNL)
  - Junjian Qi (Stevens Inst. Tech)
- Section 3.3 to be completed
  - Honggang Wang (GE)

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- Completed section 4.1
  - Honggang Wang (GE)
- Section 4.2 to be completed
  - Kaveri Mahapatra (PNNL)
- Section 4.3 to be completed
  - Kaveri Mahapatra (PNNL)
- Completed section 4.4
  - Honggang Wang (GE)

#### Target completion by October 2022

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## EATT Edge Computing Database

- Create a living document/database for industry on education and real-world applications of Edge Computing applications
- Provide expert knowledge of edge computing common applications based on a foundational definition:
  - Edge computing is computing that is done at or near the source of the data excluding cloud or remote data center computing.
  - Examples
    - Computations on the PMU directly
    - Computations on a substation synchrophasor device/server or on a field device
- Approach
  - Industry survey to collect real-world examples
    - Vendors Commercially available or in development
    - Research institutions What is being researched
    - Utilities What is currently in use (proprietary systems for sharing of information only)
  - Development of edge computing knowledge including:
    - Types of edge computing
    - Hardware, software and network needs