

ISGT 2018 – Grid Transformation Call for Papers

Deadline for submission extended to September 30, 2017 at 11:59 pm EST

The Ninth Conference on Innovative Smart Grid Technologies (ISGT 2018), sponsored by the IEEE Power & Energy Society (PES), will be held on February 19-22, 2018 at the Washington Hilton, Washington DC.

ISGT 2018 is a forum to discuss the latest issues, trends, and emerging and innovative technologies for grid modernization given the rapidly changing environment of increased deployment of renewable and Distributed Energy Resources (DERs) and the emergence of new concepts and services such as prosumers, microgrids, aggregators, distribution markets, platforms, and third parties in the generation and management of electricity. The Conference will feature plenary sessions, panels, technical papers, and tutorials by experts on grid modernization, transmission and distribution systems planning and operations, DER integration, smart grid technologies and applications, and system integration. The conference will also feature speakers and panelists from key federal and state government agencies and discuss ongoing activities, trends and recent developments in the regulatory, policy, and technical arenas. The theme for this year will be “**Grid Transformation**” with three tracks: 1) emerging methods and approaches for transmission and distribution system planning and analysis, 2) the application of technology and supporting tools for transmission and distribution system operations, and 3) market and policy considerations associated with grid transformation.

The Conference Organizing Committee invites researchers and practitioners worldwide to submit papers for review and possible presentation. The Conference scope covers the three tracks and could include the following general topics:

Emerging methods and approaches for transmission and distribution systems planning and analysis

- Emerging practices for integrated transmission and distribution system planning considering DER and grid-edge actors, including approaches for:
 - Scenario and forecasting analysis
 - Hosting capacity analysis
 - Interconnection processes
 - Locational value analysis
 - DER sourcing
 - Transmission-distribution coordination.
- Application of “Big Data” and advanced analytics to grid planning
- Technologies and methodologies for advancing physical and cybersecurity
- Application of grid architecture to address requirements and design considerations for coordination, information management, interoperability, and communications and control systems.

The application of technology and supporting tools for transmission and distribution system operations

- Technologies and methodologies addressing grid integration of (technology-enabled system operations):
 - PV distributed generation
 - Energy storage
 - Combined distributed generation-storage
 - Smart homes and buildings
 - Electric vehicles, and other DER

- Emerging practices and methodologies for grid operation, including provision of grid services from DER.
- Microgrid and advanced technologies and operational experience
- Distributed and optimization methods, e.g., for use in DER Management Systems (DERMS)
- Advanced Distribution Management Systems (ADMS) and future grid operating systems, platforms, and applications
- Sensing, communications and control
- Next generation Advanced Metering Infrastructure (AMI)
- Next generation synchrophasors
- Advanced technology and methodologies for managing grid dynamics
- Advanced technologies and methodologies for wide area operations and awareness
- Edge computing, control and analytics
- Applications of cloud computing in electric power systems
- Application of “Big Data” and advanced analytics to grid operations

Market and policy considerations associated with grid transformation

- Methods and tools that can evaluate technological and policy options.
- Operational and regulatory coordination challenges and possibilities at the transmission and distribution seams
- Distribution markets and system platforms (DSP, DSO, etc.)
- Converged infrastructures, including Smart Cities
- Transactive Energy Systems and related topics such as emerging grid services, tradable products, and incentive-compatible market design
 - Possibilities and limitations of emerging hardware/software technologies (IoT, Blockchain, etc.) in facilitating distributed transactive exchanges

Manuscript Submission

Complete manuscripts (maximum length 5 pages, and in accordance with the [PES Author's Kit](#)) are to be submitted by September 15, 2017 (no later than 11:59 pm eastern) via the document submission portal, which will be available on the [ISGT website](#).

In addition to general criteria mentioned in the Author's Kit, the following criteria will be used in evaluating the submissions:

1. Evidence of actual deployment or application
2. Representative of a state-of-the-art capability or practice
3. Ability to inform strategies for advancing grid capabilities

Accepted papers must be presented at the conference before they can be included in IEEE Xplore. Papers will be selected to be presented at either a paper session or a poster session. Please contact kathy.heilman@ieee.org with any questions.

Conference Registration and Accommodation

Information on hotel and conference registration will be available on the [ISGT website](#).

Conference Organizing Committee

- Conference Chair: Michael Pesin
- Technical Program Chair: Gerald FitzPatrick

Important Dates

Paper Submission Site Opens: **July 26, 2017**

Paper Submission Site Closes: ~~September 15, 2017~~ (at 11:59 pm EST)

Deadline for submission extended to September 30, 2017 at 11:59 pm EST

Notification of Paper Acceptance: **December 1, 2017**

Contact: kathy.heilman@ieee.org

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