

## Call for Digests: Special Session on

### Grid Forming Inverters for Power Grid Stability Enhancement

Organized and co-chaired by

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### Technical Outline of the Special Session

Power grids are transitioning to low-carbon power grids by integrating converter-interfaced renewable sources. This transition has resulted in various stability issues due to low inertia and system strength conditions, especially under high penetration of converter-interfaced sources. The grid-forming inverters (GFMI) offer a wide range of functionalities to improve power grid stability, including frequency, voltage, and system strength support. Therefore, GFMI are becoming one of the cornerstone technologies of the future low-carbon power grids, and it is imperative to shed light on how this technology is deployed in modern power grids.

This special session calls for articles related to GFMI applications on power grid stability enhancement, system planning with GFMI technologies, and system operation and control with GFMI technologies.

### Topics of the Special Session

- Grid-forming inverter control under various network conditions.
- Grid forming inverter for frequency stability enhancement.
- Grid forming inverter for system damping enhancement.
- Grid-forming inverter planning and deployment for future grids.
- Dynamic interaction studies of grid-forming and grid-following inverters.
- Role of grid-forming technologies in 100% power electronic-based grid's stability.
- Clustering technologies of grid-forming and grid-following inverters.

### Important Dates

- Digest Submission Deadline – 30th of June.
- Notification of Acceptance – 18th of August.
- Final Paper Submission – 29th of September.

### Digest Template and Submission Information

<https://spec-ieee.org/spec2024/digest-submission/>

### Digest Submission Link

<https://easychair.org/conferences/?conf=ieeespec2024>