



6th IEEE International Conference on Sustainable Energy and Future Electric Transportation (SeFet 2026)



Visvesvaraya National Institute of Technology, Nagpur

8th to 11th July 2026



Call for papers: Special Session

SS14: Virtual Replicas for Real-Time Monitoring, Control, and Optimisation of Sustainable Energy Technologies

Topic of the Session includes, but are not limited to:

- Digital twin in optimal energy management and techno-economic analysis
- Application of digital twin for real-time monitoring of RES
- Integration of renewable energy sources with the latest digital tools
- Advanced AI tools for load forecasting, energy prediction and market scenarios
- Role of digital tools for home energy management
- Online battery management system for EVs
- Safety aspects of hydrogen storage systems and real-time monitoring
- How digital twin act under cyber attacks?
- Asset management, predictive maintenance and life cycle assessment of electrical equipment with digital tools
- Condition monitoring, fault diagnosis, intelligent protection systems, and reliability
- Carbon capture with digital tools
- Case studies of conventional energy systems vs digital twin-driven energy systems
- Data-driven situation awareness and predictive maintenance systems
- Smart grid and microgrid planning aspects with digital twin Substation automation systems

Organizers



Dr. V V S N Murty Vallem
Assistant Professor
NIT Kurukshetra
murty.vallem@nitkkr.ac.in



Dr. Ashwani Kumar Sharma
Professor
NIT Kurukshetra
ashwani.k.sharma@nitkkr.ac.in

Important Dates

Paper Submission Opens: 01 October 2025

Full Paper Submission Deadline: 31 January 2026

Notification of Acceptance: 15 March 2026

Submission

<https://cmt3.research.microsoft.com/SEFET2026/Submission/Index>

Select Special Session as “SS 14: Virtual Replicas for Real-Time Monitoring, Control, and Optimisation of Sustainable Energy Technologies”

Conference Website: <https://vnit.ac.in/sefet26/index.html>

All accepted and presented papers will be published in e-proceedings and submitted to the IEEE Xplore Digital Library, indexed by Scopus and Google Scholar.

All presented papers will also be considered for extended publication in the IEEE Transactions on Industry Applications or IEEE Industry Applications Magazine.

