This symposium aims to provide a high-level international forum for researchers, professionals, professors, PhD students and in general for specialists in diagnostics and monitoring of electrical systems, including machines, power electronics, adjustable speed drives, fuel cells and electrolysers, dielectric materials, signal processing methods, and related areas. A special focus will on applications in transportation systems and especially on applications to aerospace embedded systems

Topics of the symposium

1. **Electrical machines:** Failure detection and location in electrical machines using vibration, audible noise, electrical or mechanical variables, sensors, insulation failures, electrical, mechanical and thermal models.
2. **Power electronics:** Diagnostics in power converters using input-output monitoring, thermal and/or electrical measurements on power semi-conductors, control supervision, signal processing.
3. **Adjustable speed drives** : Monitoring and diagnostics for ASDs using electrical machines, power converters and control systems supervision, computer-based signal processing and data analysis.
4. **Methods and tools for diagnostic and prognostic:** neural networks, fuzzy logic, artificial intelligence, genetic algorithms, expert systems, identification, signal processing techniques, observers…
5. **Materials for electrical machines:** Insulating and magnetic materials, remaining life models, ageing tests.
6. **Tests for predictive maintenance:** Partial discharge analysis and tests, new instruments for diagnostics.
7. **Fuel Cells and Electrolyzers :** models for diagnostic or ageing, tests
8. **Power Systems and Power Networks, Embedded Systems, Emergency Applications**

Sessions for IEEE-SDEMPED'2019

"Stability and Reliability of Power Semiconductor Devices", Dr Marina Antoniou and Dr. Neophytos Lophitis
"PD measurements, a useful tool for the diagnosis of Electrical Equipment?", Prof. David Malec and Dr Thierry Lebey
"Electrical Machines Fault Diagnosis During Transient Operation", Prof. Jose A. Antonino-Daviu and Dr K. N. Gyftakis
"Resilience of hydrogen-energy systems", Prof. Daniel Hissel and Prof. Marie-Cécile Pera
"Artificial intelligence based fault detection and identification procedures applied to electromechanical systems", Dr Roque A. Osornio Rios, Dr Antoine Picot and Dr Miguel Delgado Prieto

Committees

- General chair: Pascal Maussion (France)
- Honorary co-chairs : G. Buja (Italy), G.A. Capolino (France)
- Technical program committee: Jose A. Antonino-Daviu (Spain), Sang Bin Lee (Korea), Hubert Razik (France), Antoine Picot (France)
- Special sessions organizers: K. Gyftakis (U.K.), Jérémi Régnier (France)
- Publicity chairs: Bilal Akin (USA), Pinjia Zhang (China), Lucia Frosini (Italy), Thomas Wolbank (Austria)
- Publication chair: Luca Zarri (Italy)
- Keynote speakers/tutorials organizers : Elias Strangas (USA), Bruno Sareni (France)
- International steering committee: Gérard-André Capolino (Chair), Alberto Bellini (Awards Chair), Sang Bin Lee (Secretary), Jose A. Antonino-Daviu, Antonio J. Marques Cardoso, Humberto Henao, Pascal Maussion, Michael Orkisz, Martín Riera-Guasp, Tadeusz Sobczyk, Elias Strangas, Thomas Wolbank, Luca Zarri
- Organizing committee: P. Maussion, A. Picot, M. Chabert, M. Pietrzak-David, B. Sareni, M. Fadel, B.Dagues, M. Giamporcaro, R. Esculier, SAIC Inpact, L.Zarri.

Deadlines

Provisional full paper and tutorials proposals : 2019, March, 10
Acceptance notification : 2019, April 21
Final submissions : 2019, June 2nd

Venue

INP-ENSEEIHT, school of engineers, Toulouse downtown : http://www.enseeiht.fr/en/index.html

http://www.sdemped2019.com