



SPECIAL SESSION

POWER CONVERTERS FOR FUEL CELLS AND ELECTROLYZERS

ORGANIZED AND CO-CHAIRRED BY:

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OBJECTIVE AND TOPICS

Outline of the session:

In recent years, the use of electrolyser to cleanly and efficiently produce hydrogen from renewable energy source (e.g. wind, solar) has gained a growing interest from researchers and industrial. Similarly to fuel cells, electrolysers require power conditioning system, such as DC/DC converters. Generally, electrolysers need a very low DC voltage to generate hydrogen from de-ionised, pure or distilled water.

For electrolyser and fuel cell applications, DC/DC converters must meet several challenging issues from energy efficiency, high conversion ratio, and current ripple reduction point of view. Furthermore, availability and reliability of DC/DC converters remain a major concern so that stand-alone power supply can guarantee a high-level of autonomy in case of electrical failures.

Prospective authors may submit contributions dealing with (but are not limited to):

- ❖ Power converter topologies for electrolysers and fuel cells;
- ❖ Fault tolerant topologies and control for fuel cells and electrolysers;
- ❖ Impacts of power electronics systems on fuel cell and electrolyser operating behavior.
- ❖ Power density optimization.
- ❖ Diagnostic and failure detection.
- ❖ Integration of wide-bandgap semiconductors.

All the instructions for full paper submission are included in the conference website: <https://www.eeeic.net/eeeic/>