

## Call for Papers for the Special Session on

### Z-Source Converters: Topologies, Modulation, Control Strategies, and Applications

#### Organizers and Co-chairs

Prof. Ebrahim Babae, University of Tabriz, Iran

[e-babaei@tabrizu.ac.ir](mailto:e-babaei@tabrizu.ac.ir)

Prof. Yushan Liu, Beihang University, Beijing, China

[yushan\\_liu@yeah.net](mailto:yushan_liu@yeah.net)

Prof. Atif Iqbal, Qatar University, Doha, Qatar

[atif.iqbal@qu.edu.qa](mailto:atif.iqbal@qu.edu.qa)

#### Technical Outline of the Session and Topics

Z-source (Impedance Source) Converters provide efficient means for electric power conversion (DC–DC, DC–AC, AC–DC, AC–AC) between source and load in a wide range of applications. Z-source converters have been experiencing, in terms of research and applications, constant growth during the last 15 years. The efforts of research have led to the rapid development of different Z-source converter topologies, modulation techniques, and control strategies. Nevertheless, many interesting aspects, such as efficiency improvement, optimized parameters, and new applications, still require more investigation. We encourage all researchers working in this area to submit papers to this Special Session.

#### Topics of this Special Session Include but are not limited to

- Z-source (DC–DC, DC–AC, AC–DC, matrix, multilevel, ...) converters
- New modulation and control strategies for Z-source converters
- Industrial applications of Z-source converters
- Z-source converters for renewable energy applications
- Z-source converters for electric vehicles and motor drive applications
- Parameters optimization
- Design considerations for power and control stages
- Loss analysis and losses minimization methods
- Reliability issues
- Review and challenges on Z-source converters
- New topologies

#### Timeline for Author

Deadline for submission of special session papers      January 10, 2025

Notification of acceptance      March 10, 2025

Deadline for submission of final manuscripts      April 15, 2025

All the instructions for paper submission are available on the conference website.

