

ICIEA 2022 Special Session

Title of session	Reluctance Machines
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Summary of session	<p>The reluctance machine has the advantages of simple structure, high-temperature resistance, wide speed range, and strong fault tolerance, which is widely used in electric vehicles, household appliances, aerospace, and industrial transmission. Due to the highly nonlinear electromagnetic characteristics, the reluctance machines also have some disadvantages, such as torque ripple, source current ripple, serve vibration, etc. These disadvantages limit their further application promotion. This special session is aimed to collect the latest theoretical and technological ideas for the better development of reluctance machines. Optimization design methods, new analytical and modeling methods, advanced control strategies, and novel converter topologies are warmly welcomed. Topics of great interest are categorized as follows in detail.</p> <p>Topics of interest include, but are not limited to, design, modeling, control technology, and applications in the following sections:</p> <ul style="list-style-type: none">• Topic A: Optimization design methods of the reluctance machines• Topic B: New analytical and modeling methods of the reluctance machines• Topic C: Advanced control strategies of reluctance machine drive system• Topic D: Novel converter topologies of reluctance machines• Other related topics, such as condition monitoring of reluctance machines, fault diagnosis of reluctance machines, and the application of reluctance machines in renewable energy power generation, etc.