

3. Advanced VEH Circuits Toward Motion-Powered IoT Systems

Introduction: An interface circuit plays an important role in vibration energy harvesting systems. It connects the electromechanical transducer output and offers a stable dc voltage powering the IoT application. The interface technology ranges from its dynamic interaction with the electromechanical structure, advanced power electronics topology, IC implementation, maximum power transfer, efficient energy management for powering the application stage, etc. In this proposed special session, we collect some cutting-edge developments of VEH interface circuits, from theory, implementation, and application aspects. There will be about five talks covering the related topics under the umbrella title of advanced VEH circuits. The presentations offer valuable insights into complex electromechanical interaction in dynamic VEH systems and applications of motion-powered IoT systems.

Topics:

- Dynamic models for VEH circuits and systems
- Power electronic interface circuits for VEH
- Advanced IC designs for VEH
- Maximum power transfer in VEH
- Energy management circuits for VEH-powered IoT systems

Session Organizer(s)

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