ONLINE WORKSHOP

with Pietro Perlo (I-FEVS)

FIRST APPLICATIONS OF SPINTRONICS CROSSBAR IN ENERGY HARVESTING

Monday, 18 May

14:00 (CET) - 15.00 (IST)

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“(...) Most spintronic activity today is directed toward in-memory computing, where crossbars are used as analog accelerators for computation; in the MultiSpin.AI research context, this includes advanced multilevel devices such as a 4×4, 16-level crossbar. IFEVS is pursuing a different and independent exploitation direction: not using confidential MultiSpin.AI know-how, but applying the general concept of simplified binary N×N/N×M spintronic crossbars to edge-reflex functions. A mirror reflects immediately because its physical structure transforms an input into an output without reasoning. In the same way, a binary crossbar can map many local signals into many safety or energy routing actions with minimal computation, minimal energy and minimal delay (...)”

References:

P. Perlo, “Guide to Spintronic Crossbar Arrays: From Binary Switches to Analog Computing,” Preprints, 2026. doi: 10.20944/preprints202604.1208.v1.

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P. Perlo, “Hybrid Control for a 4-Cell PV String: Spintronic Bypass Management with Classical MPPT,” Preprints, 2026. doi: 10.20944/preprints202604.1179.v1.

P. Perlo, “Full Spintronic Crossbar MPPT for a 4-Cell PV String: Toward Autonomous Energy Materials,” Preprints, 2026. doi: 10.20944/preprints202604.1213.v1.

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