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From Simulation to Reality: Patterns in Building Digital Twins for Accelerators

Monday 3 November 2025 19:35 (3 minutes)

Digital twins are increasingly used to support accelerator commissioning and operation. Beyond accurate simulations, much of the effort lies in connecting real-world data streams and control systems with their virtual counterparts. This talk presents recent developments toward flexible, modular architectures that enable seamless exchange between measurement, modeling, and control. Emphasis is placed on strategies that reduce computational load, support model substitution, and maintain consistency across changing machine configurations. Parallels to digital-twin development in other large-scale scientific and industrial environments are briefly outlined.

Speed talk:

Normal speed talk selection

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