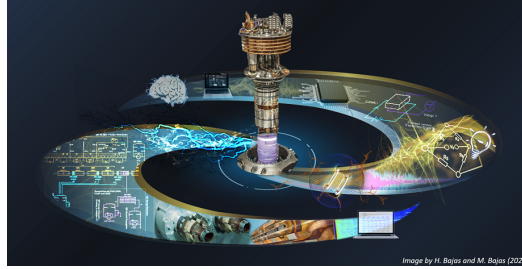


# Lectures on Superconducting Magnet Test Stands, Magnet Protections and Diagnostics (as integral part of SMTF & IDSM Workshops)



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## Design of the DAQ systems for the LHC superconducting magnet test benches

*Friday 9 June 2023 17:40 (1 hour)*

The LHC superconducting magnet test benches controls were designed in 1996. They were based on VME data acquisition systems, Siemens PLCs control and interlocks systems. After a review of renovation of superconducting laboratories at CERN in 2009, it was decided to replace the VME systems with a PXI based systems and the ageing Sun/Solaris workstations with Linux PC's. This lecture covers the process of designing a new DAQ system for superconducting magnets, from gathering requirements, signal conditioning, hardware and software architecture and finally the lessons learned after 14 years of operation.

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