

## 1st TETIS Workshop



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# ESPRESSO: a laboratory for ELT control technologies

*Wednesday 28 October 2020 09:30 (20 minutes)*

ESPRESSO is a fiber-fed, high-resolution, cross-dispersed echelle spectrograph installed at the ESO VLT-Cerro Paranal observatory. Since it is one of the latest instruments installed at VLT, it has been an ideal laboratory to explore the new technologies envisaged for the forthcoming ELT telescope. The ESPRESSO control software is based on the VLT Control Software and uses the IC0 Field Bus extension (IC0/FB) to control devices connected to field-buses. The OPC Unified Architecture (OPC UA) protocol is used for the communication between the instrument control software, running on the instrument workstation, and the instrument control electronics. The latter is based on the Beckhoff PLCs (Programmable Logic Controllers), which replace the old VME-based Local Control Units (LCUs). The technical CCDs used for the field stabilization are based on the GigE interface. In this talk I will briefly review all the technologies described above.

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