

# 4th PLC Based Control systems workshop

7th September 2023



# Organisation

CERN, Beams Department, Industrial Controls Systems Group

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# Objectives

- Create **collaborative** atmosphere
- Promote exchange of expertise, methods, tools, solutions, lessons learned...
- Seek for collaboration opportunities.

# Scope

- **Control systems specification:** Formalisation
- **Engineering:** standardisation, automated code generation, versioning.
- **Testing and verification:** methods, automated testing, virtual commissioning.
- **Maintenance:** Obsolescence, upgrades.

# Workshop participants

## 19 institutes

- Australian Nuclear Science And Technology Organization
- CEA Paris-Saclay. France
- CERN. Switzerland
- ELETTRA Synchrotron Trieste. Italy
- European Spallation Source. Sweden
- European XFEL (X-Ray Free-Electron Laser Facility). Germany
- Helmholtz. Germany
- INFN-LNL. National Institute for Nuclear Physics. Laboratori Nazionali di Legnaro. Italy
- Institute of High Energy Physics, CAS. China
- Institute of Modern Physics, Chinese Academy of Sciences. China
- King Faisal Specialist Hospital And Research Centre. Saudi Arabia
- Lawrence Livermore National Laboratory. United States
- LNLS. Laboratório Nacional de Luz Síncrotron. Brazil
- Oak Ridge National Laboratory. United States
- iThemba Laboratory for Accelerator Based Sciences (NRF-iThemba LABS). South Africa
- SLAC National Accelerator Laboratory. United States
- UKRI. UK Research and Innovation. UK
- PARTREC. Particle Therapy Research Center. Netherlands
- SARAQ. South African Radio Astronomy Observatory

1st	Barcelona 2017	45
2nd	New York 2019	34
3rd	Shanghái 2021	57
<b>4th</b>	<b>Cape Town 2023</b>	<b>55</b>

## 7 companies

- AWE
- Beckhoff
- Medastron
- FMBFeinwerk Und Messtechnik
- PROCON
- Observatory Sciences Ltd.
- Nusano

# Agenda

08:00	<b>Arrival Tea &amp; Coffee</b> Cape Town (South Africa) 08:00 - 08:30
	<b>PLC Based Control System workshop presentation</b> Jeronimo Ortola Vidal Cape Town (South Africa) 08:30 - 08:50
09:00	<b>UMCG-PARTREC</b> Mr Oscar Kuiken Cape Town (South Africa) 08:50 - 09:10
	<b>STFC - ISIS Neutron and Muon Source</b> Mr Hamza Maqbool  Cape Town (South Africa) 09:10 - 09:30
	<b>Mid-Morning Tea &amp; Coffee</b> Cape Town (South Africa) 09:30 - 10:00
10:00	<b>SLAC National Accelerator Lab</b> Mr Shawn Alverson  Cape Town (South Africa) 10:00 - 10:15
	<b>ELBE (Helmholtz-Zentrum Dresden-Rossendorf)</b> Mr Matthias Justus Cape Town (South Africa) 10:15 - 10:35
	<b>EBG MedAustron GmbH</b> Mr Vörös Sandor Cape Town (South Africa) 10:35 - 10:55
11:00	<b>CEA Paris-Saclay</b> Mr Tom Joannem  Cape Town (South Africa) 10:55 - 11:10
	<b>INFN-LNL</b> Loris Antoniazzi Cape Town (South Africa) 11:10 - 11:30
12:00	<b>Lunch</b> Cape Town (South Africa) 11:30 - 12:30

	<b>Virtual Commissioning for Advanced Controllers</b> Dr Brad Schofield Cape Town (South Africa) 12:30 - 13:00
13:00	<b>Optimizing control: Engineering lifecycle</b> Mr Daniel Marchante Morales Cape Town (South Africa) 13:00 - 13:30
	<b>XFEL. PLC framework</b> Mrs Sylvia Huynh Cape Town (South Africa) 13:30 - 14:00
14:00	<b>Database driven control system specification</b> Diogo Monteiro Cape Town (South Africa) 14:00 - 14:30
	<b>Afternoon Tea &amp; Coffee</b> Cape Town (South Africa) 14:30 - 15:00
15:00	<b>Full Stack PLC to EPICS Integration at ESS</b> Mr Alfio Rizzo Cape Town (South Africa) 15:00 - 15:30
	<b>PLC Based Control system workshop closing session. Q&amp;A.</b> Dr Brad Schofield et al. Cape Town (South Africa) 15:30 - 16:45

**Please sign up to the workshop event in INDICO**

<https://indico.cern.ch/event/1250169/>

**Thanks for your contribution and participation!**