PBCS: PLC based control systems Workshop

Report of Contributions

Contribution ID: **19** Type: **not specified**

PLC Based Control System workshop presentation

Saturday 7 October 2023 08:30 (20 minutes)

Presenter: ORTOLA VIDAL, Jeronimo (CERN)

Contribution ID: **20**   Type: **not specified**

PLC Based Control system workshop closing session. Q&A.

Saturday 7 October 2023 16:00 (15 minutes)

Co-authors: Dr SCHOFIELD, Brad (CERN); Dr BLANCO VINUELA, Enrique (CERN); ORTOLA VIDAL, Jeronimo (CERN)

Presenters: Dr SCHOFIELD, Brad (CERN); Dr BLANCO VINUELA, Enrique (CERN); ORTOLA VIDAL, Jeronimo (CERN)

Contribution ID: **23**　　　　　　　　　　　　　　　　　　　　Type: **not specified**

Optimizing control: Engineering lifecycle

Saturday 7 October 2023 13:30 (30 minutes)

What do an automotive industry welding line, a safety system for an accelerator and a mirror coating system for a telescope have in common?
Managing engineering projects amidst changing processes, technology, standards, and customers.

Presenter:　Mr MARCHANTE MORALES, Daniel

Session Classification:　Shaping the Future of Automation

Contribution ID: **24** Type: **not specified**

UMCG-PARTREC

Saturday 7 October 2023 08:50 (20 minutes)

Presenter: Mr KUIKEN, Oscar (UMCG-PARTREC)

Session Classification: Presentations from Institutes

Contribution ID: 25   Type: **not specified**

STFC - ISIS Neutron and Muon Source

Saturday 7 October 2023 09:10 (20 minutes)

Presenter: Mx MAQBOOL, Hamza (Science and Technology Facilities Council)

Session Classification: Presentations from Institutes

Contribution ID: 26   Type: **not specified**

SLAC National Accelerator Lab)

Saturday 7 October 2023 10:00 (15 minutes)

Presenter: Mr ALVERSON, Shawn

Session Classification: Presentations from Institutes

Contribution ID: **27** Type: **not specified**

ELBE (Helmholtz-Zentrum Dresden-Rossendorf)

Saturday 7 October 2023 10:15 (20 minutes)

Presenter: Mr JUSTUS, Matthias

Session Classification: Presentations from Institutes

Contribution ID: **28** Type: **not specified**

EBG MedAustron GmbH

Saturday 7 October 2023 10:35 (20 minutes)

Presenter: Mr SANDOR, Vörös (EBG MedAustron GmbH)

Session Classification: Presentations from Institutes

Contribution ID: **29** Type: **not specified**

CEA Paris-Saclay

Saturday 7 October 2023 10:55 (15 minutes)

Presenter: Mr JOANNEM, Tom (CEA Paris-Saclay)

Session Classification: Presentations from Institutes

Contribution ID: **30**   Type: **not specified**

INFN-LNL

Saturday 7 October 2023 11:10 (20 minutes)

Presenter: ANTONIAZZI, Loris

Session Classification: Presentations from Institutes

Contribution ID: **31**   Type: **not specified**

Virtual Commissioning for Advanced Controllers

Saturday 7 October 2023 13:00 (30 minutes)

Developing and deploying advanced controllers is complex and time consuming. Often, it is not possible or desirable to perform lengthy tests on the real process before deploying. In this presentation an approach based on a dynamic process simulator is introduced, which has recently enabled the very smooth deployment of a Model Predictive Controller for HVAC systems at CERN. The use of the model as an online 'Digital Twin' for monitoring and further tuning after deployment is also discussed.

Presenter: Dr SCHOFIELD, Brad (CERN)

Session Classification: Shaping the Future of Automation

Contribution ID: **32**   Type: **not specified**

Redeveloping the PLC Framework at XFEL

Saturday 7 October 2023 15:00 (30 minutes)

In redeveloping the PLC Framework at the EuXFEL, we have tried to learn from past mistakes, whole embracing many of the software programmatic features and standards that are often overlooked within the realm of PLCs.

Presenter: Mrs HUYNH, Sylvia (XFEL)

Session Classification: Shaping the Future of Automation

Contribution ID: **33**   Type: **not specified**

Database driven control system specification

Saturday 7 October 2023 14:00 (30 minutes)

Reflections on database driven specifications and presentation of editing tool developed at CERN.

Presenter: MONTEIRO, Diogo (CERN)

Session Classification: Shaping the Future of Automation

Contribution ID: 34   Type: **not specified**

Full Stack PLC to EPICS Integration at ESS

Saturday 7 October 2023 15:30 (30 minutes)

The European Spallation Source is one of the largest science and technology infrastructure projects being built today. The Control System at ESS is then essential for the synchronisation and day-to-day running of all the equipment responsible for the production of neutrons for the experimental programs. The standardised PLC platform for ESS to handle slower signal comes from Siemens, *while for faster data interchange with deterministic timing and higher processing power, from Berkoff/EtherCAT. All the Control Systems based on the above technologies are integrated using EPICS framework**.* We will present how the full stack integration from PLC to EPICS is done at ESS using our standard Configuration Management Ecosystem.

Presenter: Mr RIZZO, Alfio (ESS-ERIC)

Session Classification: Shaping the Future of Automation

Contribution ID: **35** Type: **not specified**

SOLEIL

Saturday 7 October 2023 12:30 (15 minutes)

Presenter: ABIVEN, Yves-Marie

Session Classification: Presentations form the Institutes

Contribution ID: **36**   Type: **not specified**

SLAC National Accelerator Lab)

Saturday 7 October 2023 12:45 (15 minutes)

Presenter: Mr WALLACE, Alex (SLAC)

Session Classification: Presentations form the Institutes