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# Materials and Engineering Technologies for Particle Accelerator Beam Diagnostic Instruments

Virtual workshop June 21<sup>st</sup> to 23<sup>rd</sup>, 2021

Organized by CERN and Oxford University



# ARIES and Network ADA

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**First of all: Thank you very much for contributing to this workshop!**

**ARIES integrating activity:**

**Accelerator Research and Innovation for European Science and Society**

- Funded by European Union from 2016 to 2021
- 41 participating institutions from 18 countries coordinated by M. Vretenar CERN
- 18 work-packages on many aspects for accelerator research

Work-package **Network ADA = Advanced Diagnostics for Accelerators**

Exchanges of knowledge by *special topic* workshops and exchange of personnel

- Organized by ALBA, CERN, DESY and GSI with help of further institutes
- 8 previous workshops as face-to-face event with 30 to 85 participants
- 3 remote workshops, up to almost 200 participants
- 1 upcoming workshops: FPGA usage in beam instrumentation, organized by CERN
- Personnel exchanges between several institutes, presently on halt

**Goal: Initialize and strengthen collaboration between experts on various fields**

Documentation at <https://aries.web.cern.ch/wp8>



# Originally planned Face-to-Face Workshop

## Workshop originally planned for 29<sup>th</sup> of March to 1<sup>st</sup> of April 2020:

- Organized by Ray Veness, D. Eakins et al., Location historical Wadham College Oxford
- Duration 2.5 days with 32 talks and excursion



**European Union would have sponsored:** Historical conference site, hotel and full board

⇒ pleasant workshop atmosphere

Excursion to facility of company 'First Light Fusion Ltd'



**We are looking forward to a fruitful remote workshop and personal meetings in future!**



# Workshop on Materials and Engineering Technologies

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This workshop is related to

**'Materials and Engineering Technologies for Particle Accelerator Beam Instruments'**

Many new technologies developed in the last years in mechanical science:

→ **Novel applications for accelerator beam instrumentation**

**The aims of the Workshop are:**

- Novel materials and production e.g. ultra-thin wires for wire scanners and SEM-Grid
- Novel materials for vacuum installations with improved properties
- Precise vacuum installations and drives, e.g. magnetically coupled
- Improved methods for mechanical development & production, e.g. 3-d printing
- Review the state-of-the-art in materials & production technologies
- Intensify collaborations institutes and industry

**Thanks to Program Committee:**

Daniel Eakins Oxford Uni., Peter Forck GSI, Ubaldo Iriso CELLS-ALBA, Rhodri Jones CERN, Gero Kube DESY, Volker Schlott PSI, Tom Shea ESS, Kay Wittenburg DESY, **Ray Veness** CERN

**Thanks to the technical support:** Madeleine Catin, Dmitry Gudkov CERN

**Thanks for your contributions:** 205 registration for the workshop

**Thank you for your participation and have fun!**

