



Contribution ID: 225

Type: Oral

Accelerating Australia: Perspectives on future particle accelerators and their applications

Friday, 26 November 2021 09:45 (30 minutes)

There are over 50,000 particle accelerators in the world used for everything from treating cancer to finding out the secrets of the Universe. Australia has a long history in this area and excels in accelerator-based science: nowhere is this clearer than in the science carried out at our world-class infrastructure. That said, we have barely scratched the surface of what might be possible with beams of ions or electrons. Potential uses of particle beams are growing every day –from mining to archaeology to high-tech factories –enabled by breakthroughs in accelerator science and technology. In light of this, a new research group in accelerator physics was created at the University of Melbourne in 2019, who collaborate with ANSTO in a number of areas: from compact X-band electron accelerators to next-generation particle therapy. In this talk I will give an overview of some of the vast array of applications of accelerators and introduce the cutting-edge accelerator development research now happening in Australia. With strong collaboration between end-users and accelerator experts, together we can create a step-change in Australia's capacity to deliver real-world impact using particle beams.

Presenter Gender

Woman

Do you wish to take part in the Student Poster Slam

Condition of submission

Yes

Students Only - Are you interested in AINSE student funding

Level of Expertise

Expert

Pronouns

Which facility did you use for your research

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Session Classification: Plenary

Track Classification: Plenary