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Accelerating Australia: Perspectives on future particle accelerators and their applications

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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.

Level of Expertise

Expert

Presenter Gender

Woman

Pronouns

Which facility did you use for your research

Students Only - Are you interested in AINSE student funding

Do you wish to take part in the Student Poster Slam

Condition of submission

Yes

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