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Miniaturised Linear Accelerators for Medical Imaging

In a world with a fast-growing and rapidly aging population, where availability and accuracy of diagnosis is key to early detection and treatment of disease and injury, the development of enhanced medical imaging techniques will improve the wellbeing of unwell members of society. Miniaturised electron linear accelerators can be engineered to be a core component for a portable system for 3D X-ray imaging, that will combine the superior clinical diagnose of 3D with the lower running costs and radiation dose similar to traditional 2D radiography. My talk will describe the current challenges that prevent the commercialisation of such technology, as well as the ongoing research we are undertaking to overcome them.

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