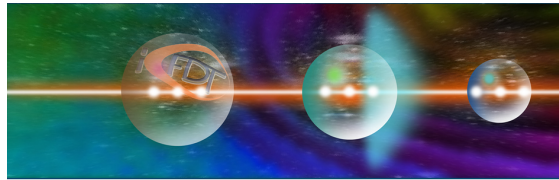


ICFDT7 - 7th International Conference on Frontier in Diagnostic Technologies



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Type: **Talk**

Advanced X-ray imaging for intraoperative imaging and national security

Monday, 21 October 2024 09:20 (20 minutes)

The Advanced X-Ray Imaging (AXIm) group at University College London has developed technology that enables x-ray phase contrast imaging (XPCI) to be performed with conventional x-ray sources. The group is now engaging with industrial collaborators to seek translation of the developed technology.

The most advanced applications, which have reached the pre-commercial prototype stage, are intra-operative imaging for real-time use during surgery procedures and detection of threat materials in security scans. In the former area, the technology has been piloted for breast conserving surgery and proof-of-concept data have been collected in oesophageal interventions. The latest developments show that microscopic implementations of the technique are also viable, allowing to scan biopsies with sub-cellular resolution. In security, the technique showed exceptional capabilities for detection of concealed explosives when combined with machine learning.

This talk will present the state-of-the-art in both areas, show key results and discuss future perspectives.

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