



PHYSICS

Commissioning and quality assurance for deformable image registration in radiotherapy

Chairs: Mohammad Hussein and Michael Jameson

What is the topic of this workshop?

Deformable image registration (DIR) is becoming an essential tool in a variety of applications that include adaptive radiotherapy. However, there is a variety of challenges for radiotherapy departments in the safe commissioning and confidence in using DIR algorithms, and developing ongoing quality assurance (QA). Recent international surveys have highlighted the need for further guidance, particularly in the latest areas such as dose propagation. The workshop is endorsed by the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM).

Why should I sign up to this workshop?

The workshop will be a useful forum for discussions, exchange of ideas and experiences, and networking opportunities in this topic. We have some great keynote speakers including: Kristy Brock (USA, Department of Imaging Physics, MD Andersen Cancer Center, University of Texas; online participation), Jamie McClelland (UK, lecturer in medical physics, University College London) and Johnson Yuen (Australia, medical physicist, St George Hospital, Sydney). Along with interested researchers and clinical physicists, we will have technical representation from key vendors in DIR.

What do you expect the outcome of the workshop will be?

Potential outcomes could include: unified recommendations and guidance documents; recommendations to manufacturers based on participant feedback and discussion; DIR datasets that could be used by the community; and multicentre intercomparisons. During the workshop programme we will allocate time for focussed group discussions on outcomes and next steps.

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