OMAM - Optical Manipulation and Metrology

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Heriot-Watt

OMAM

- Commercial goals:
  - Short-term
  - Medium-term
  - Long-term

➢ Thin-film metrology
➢ 3-d surface metrology
➢ BIL, surveillance

Leading to products with an established demand

OMAM

- A range of research goals of various nature

  - Incremental
    - improving wfs precision
    - relationship to national standard of length
  - Non-incremental
    - wfs on discontinuous and rough surfaces
    - optical μ-manipulation
    - fs lasers
  - PPARC interests
    - OWL/segmented/space optics
  - EPSRC interests
    - bio-medical and engineering

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- Project about to start
  - Legal collaboration agreement signed
  - 3 research students in place
    - Heather Campbell (PhD CASE student ATC)
    - Clare Dillon (EndD student BAE SYSTEMS)
    - David Faichnie (EngD student Scalar Technologies)
  - RA applicants interviewed - offers being made

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- Work to date
  - Risk-reduction work on laminate structures (Scalar
    - $\pm$20µm interface location in structure 150µm to 8mm thick
    - $\pm 10^{-4}$ rad. on angle (parallelism) of interfaces
  - Generalisation of phase-diversity wfs
    - sufficient conditions established for generalised phase diverse functions (EOARD)