

Fully Funded EPSRC PhD Case studentship.

Project Title: Determining the effect of cartridge variability on ballistic toolmark investigation

In previous PhD research (Katie Addinall), it was concluded that while techniques developed within the CPT for the measurement and correlation of ballistic toolmark evidence could result in a robust and accurate system, it was found that more research is needed to account for cartridge variability. In the manufacture of cartridges, there are several variables that are not controlled with a level of repeatability to minimise differences in ballistic toolmark topography. These include (but are not limited to):

- Material composition
- Material thickness (bullet jacketing and primer cap)
- Propellant weight
- Primer cap seating angle

As areal correlation of ballistic toolmark evidence is an emerging technique, there is currently very little published research on the effect of these variables on toolmark correlation.

The project would focus on determining the physical and measurable differences in toolmark topography as a result on these variables, and the effect on correlation techniques.

Eligibility: The student must have a high-grade qualification, at least the equivalent of a UK 1st or 2:1 class degree or MSc with distinction in Physics, Engineering or related disciplines. The student must be proficient in both written and spoken English, and possess excellent presentation and communication skills.

Salary: £15,285 (2020/21 EPSRC Standard)

Contact:

Professor Liam Blunt
Future Metrology Hub
Centre for Precision Technologies
University of Huddersfield

Tel: 01484 472037

E-mail: l.a.blunt@hud.ac.uk