Fully Funded EPSRC PhD Case studentship.

Project Title: Manufacturing control through online surface prediction

Modern manufacturing requires a high-performance, stable platform. Online verification, including surface-finish inspection is perceived as a huge benefit. With industrial sensor technology growing, and interest in the “industrial internet of things” (IIOT) the potential for sensor networks with massive data output is becoming a reality for many industries.
This project is looking for a cost-effect solution to implement online surface prediction and stability monitoring based on IIOT and edge computing with traditional Digital Signal Processing (DSP).
By the end of the project, a novel sensing network will be constructed which can sufficiently provide system dynamic information for predicting the surface finish of manufactured parts. In addition, a reliable data fusion method will be developed to interpret collected signals as a function of deviation between predicted and measured surface information. Finally, the project will propose a prototype control strategy based on the feedback of this surface examination.

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)

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