

GATSBY TECHNICAL EDUCATION PhD STUDENTSHIPS

The Gatsby Charitable Foundation plans to sponsor two PhD studentships in technical education starting in October 2017. One of the studentships will be based at the Institute for Manufacturing's Centre for Science, Technology & Innovation Policy at the University of Cambridge.

The research topic for this studentship will be as follows:

TECHNICIAN SKILLS FOR THE 'FOURTH INDUSTRIAL REVOLUTION': ANTICIPATING FUTURE SKILLS REQUIREMENTS FOR ADVANCED MANUFACTURING IN HIGH WAGE ECONOMIES

This studentship will support doctoral research related to the development of novel frameworks and methods for characterising and anticipating future advanced manufacturing skills needs and identifying the appropriate delivery mechanism(s). In particular, this research will focus on future technician skills needs for advanced manufacturing in high wage economies.

The research may draw upon concepts from operations management, technology management, engineering systems and/or innovation economics to explore the skills-related implications of key trends in advanced manufacturing (e.g. the 'digitalisation' of manufacturing, advances in automation, integrated production technology systems, etc). Particular attention will be paid to skills relevant to those high value-adding manufacturing engineering activities which are likely to be retained in high wage economies.

Examples of potential PhD topics relevant to this research agenda include:

The skills requirements of future 'smart manufacturing' technicians: Rethinking how we characterise skills in the context of the 'digitalisation of manufacturing'. In particular, exploring the implications of trends whereby technicians are increasingly receiving real-time information, to which they may have to respond, not only from other parts of vertically integrated 'smart factories', but from across horizontally integrated supply chains.

Technology foresight and 'industrial strategy' analyses for future skills priorities: Exploring how current technology foresight frameworks and/or industrial strategy futures analyses might be adapted to more effectively anticipate skills priorities. In particular, this research would investigate opportunities to enhance current foresight processes to more effectively explore future skills needs related to key challenges to national manufacturing competitiveness (or opportunities).

The potential skills development role of advanced manufacturing R&D institutions: Investigating the role of public R&D institutions in providing technician training. In particular, this research would review current practices and explore future opportunities for such institutions to provide training in more specialised areas of high value production or emerging technology-based manufacturing. This research could also address how these institutions complement more conventional VET actors (which may provide less specialised but potentially more transferable skills training).

To register your interest or learn more about this opportunity,
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