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| **Division (delete as appropriate):** | Warwick Clinical Trials Unit |
| **Project Title:** | Machine learning and artificial intelligence in UK Critical Care practice- PhD studentship |
| **Degree (delete as appropriate):** | PhD |
| **Mode of Study (delete as appropriate):** | Full time |
| **Project suitability (delete as appropriate):** | Home / EU |
| **Supervisor(s):** | Warwick Medical School: Prof Gavin Perkins and Dr Keith CouperWarwick Manufacturing Group: Prof Giovanni Montana |
| **Funding body (please tick as appropriate):** | Warwick Collaborative Postgraduate Research Scholarship (University of Warwick and University Hospitals Birmingham NHS Foundation Trust) |
| **Has the funding been awarded?:** | Yes- The award will cover tuition fees and stipend at UK Research Council level |
| **If the project requires consumables, please specify the amount and who is responsible for covering the cost:** | N/A |
| **Project Summary including key research questions, aims and anticipated outcomes (max 300 words)**This exciting PhD studentship will explore how machine learning and artificial intelligence techniques can inform emergency and critical care decision-making, and seek to apply these methods to large clinical datasets. The proposed project is driven by evidence that clinicians find that making decisions about critical care interventions challenging, and that there is wide variability in decision-making between clinicians. Examples of these decisions include cardiopulmonary resuscitation and decisions about admission to critical care. A key reason for this is the absence of validated tools to support decision-making. The availability of large electronic datasets has the potential to enable machine learning and artificial intelligence techniques to inform critical care practice through development of decision-support tools, particularly in relation to decision-making about the likely effectiveness of treatments.The planned studentship will be jointly supervised by academics from Warwick Medical School and the Centre for Applied Artificial Intelligence, Warwick Manufacturing Group (Professor Perkins and Dr Couper, WMS; Prof Montana, WMG).  |
| **Describe the methodology and techniques to be employed (max 200 words)*** Analysis of large datasets, including use of artificial intelligence and/ or machine learning techniques
* Systematic review
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| **The successful candidate will be expected to start in March 2020 and will be based at Warwick Medical School.****The closing date for applications is 26 July 2019****Interviews will be held mid-June at the University of Warwick.****Please contact Keith Couper for further information: k.couper@warwick.ac.uk****This studentship/project is available to Home and EU students. The studentship includes full fees for the successful candidate along with a tax free maintenance allowance in line with Research Council UK standard stipend for 3 years. (£15,009 for the year 2019/20)****The successful student must have a strong background in statistics or other relevant discipline (e.g. computer science/ engineering) and demonstrable programming skills. Please demonstrate how you meet this criteria in your application****To formally apply, please complete the online application****https://www2.warwick.ac.uk/study/postgraduate/apply/** **clearly stating the studentship/project you are applying for including the supervisors name.** |

**Approved by Academic Lead for Research Degrees**

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