



# Manchester Metropolitan University / Hands-On Mobile EPSRC CASE PhD Studentship (3.5 years)

Department of Computing and Mathematics (DOCM)

As part of the department's commitment to research excellence, applications are invited from graduates with a minimum of a 2:1 Honours degree or equivalent for a full-time CASE PhD studentship commencing 1st June 2007 or as soon as possible afterwards. Applicants should be resident in the UK and have appropriate computing and mathematical skills.

**Grant:** approximately £15,500 per year, tax free.

**Background:** The CASE PhD Studentship will do high quality research in the area of Mobile Entertainment Applications (including games). This research project is jointly funded by EPSRC and Hands-On Mobile.

**Aims of proposed project:** The main aim is to advance the efficacy of content delivery and/or user experience of mobile platform applications. The project will initially review possible areas of advancement before focussing on one of a number of specific objectives based on maximising the commercial return of the mobile products.

**Specific objectives:**

- (i) "Interaction and Usability of Mobile Games"- a design led activity aimed at expanding the uptake of mobile applications and content. The research would look at ways of measuring and improving interaction with the handset, and developing novel interaction using current or future handset technology. It would also involve analysing potential user demographics and optimising usability to attract new users.
- (ii) "Product Scaling and Portability" – an engineering task aimed at improving the mobile content development processes. It involves tools and core technology (including compilers and programming languages) to tackle the perpetual problem of how to deploy games across a huge range of targets, and what might be done to reduce the costs.
- (iii) "Connected Games Over High Latency Mobile Networks" will focus on expanding the range of game genres which can be delivered with connected play. Currently only games which are turn based can be deployed due to latency and the potential risk of disconnection in mobile networks. This research will look at how products might be configured to use server side AI and/or particular communications structures to allow us to deploy other types of connected games. This area could also include use of

GPRS networks to allow real-life elements to be integrated into games. Alternative areas which arise during the initial phases of the work, or which are proposed by a strong candidate, may also be considered.

**Candidates:**

- Strong interest in computer games and/or mobile technology and should be able to program in Java (preferable) or C/C++.
- The ideal candidate will hold, or expect to receive, an upper second or first class degree in Computing, Mathematics, Physical Science or Electrical Engineering, although other related degrees will be considered for candidates who can show a strong interest in the Games industry. Candidates whose degrees include some element of Games study will be of particular interest.
- Candidates will need to be flexible, able to adapt to the rapidly changing needs of the mobile applications industry. They will be expected to spend a considerable portion of the study at the company's Bollington (Cheshire) studio, and will be subject to the intellectual property ownership and confidentiality restrictions of the Hands-On Mobile.

**About MMU:**

The Department of Computing and Mathematics (DOCM) at MMU is a large department with our own teaching and research laboratories offering a person-centred working and learning environment. More information on DOCM visit <http://www.doc.mmu.ac.uk/> and for information on Manchester and MMU please click: <https://www.jobs.mmu.ac.uk/mmujobsite/forms/MMUManchesterInfoPack.pdf>

**About Hands-On Mobile:** Hands-On Mobile is a leading global publisher of mobile lifestyle, games and personalization products targeting all market segments of the mobile handset marketplace. With operations in four continents, Hands-On Mobile develops, publishes and distributes mobile content to more than 150 of the world's leading operators in 40 countries. Hands-On Mobile provides operators and their customers with the world's best entertainment brands and applications and provides brand owners with the shortest route to market. Hands-On Mobile is a U.S. corporation with headquarters in San Francisco and offices in San Diego and Los Angeles, California; London and Bollington, England; Krakow, Poland; São Paulo, Brazil; Shanghai and Beijing, China; and Seoul, Korea. For more information about Hands-On Mobile's products and organization please visit [www.HandsOn.com](http://www.HandsOn.com). For informal inquiries about the company contact Dr Simon Tomlinson at [simon.tomlinson@handson.com](mailto:simon.tomlinson@handson.com).

**Outcomes:** The general outcome will be a set of novel tools and toolkits that incorporates the advances in the work into the general processes of the company. Work conducted as part of this research will help to push the boundaries of tools and toolkits for personal and community based content development and deployment. Moreover, this PhD research will stimulate cross-disciplinary approaches and a more effective user/developer dialogue, and other measures, including field validation and standards, aimed at a faster uptake of research results.

**Application:** Application forms, reference forms and details of the entry requirements are available at [http://www.mmu.ac.uk/academic/downloads/admissions\\_form.pdf](http://www.mmu.ac.uk/academic/downloads/admissions_form.pdf). Please send your application form with 2 references and a full CV by email or post to Dr Edmond Prakash by the closing date of 1<sup>st</sup> June 2007. For informal enquiries, contact:

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