Early Stage Researchers (2 research staff fixed positions leading to PhD)

Introduction

The ArcInTexETN is a collaborative EU network project which aims at the design/technology interface by undertaking research in advanced materials for improving sustainable living through innovation. PhD students will form the core of the network and they will undertake academic research, collaborate with partners and with industry and disseminate the findings of the research program to the wider community. New adaptive, responsive, multifunctional, SMART materials will form the basis of this research program which is expected to produce innovations in textiles, garments and interiors.

Two fully funded PhD positions based at the Scottish Borders Campus of Heriot Watt University are now open in the board area of "Textile Structures for Adaptive and Responsive Clothing".

PhD Program Description and Requirements

The two PhD students will be based at the Research Institute for Flexible Materials (RIFleX) at the School of Textiles and Design, in the Scottish Borders Campus of Heriot Watt University and will be under the primary supervision of Prof George K Stylios, the Director of RIFleX. The focus of the research is on advanced textiles for garments, covering the following areas:

1. Shape and Colour Changing Fabrics
   1.1. Knowledge of chemistry and materials is needed
2. PsychoTextiles; Interacting textiles with brainwave activity and developments of wearable EEG systems and/or SMART fabrics
   2.1. Knowledge of interactive textiles and use of EEG is essential
3. Wearable textile sensors integrated into clothing for intelligent living environments and/or extreme conditions
   3.1. Knowledge of sensors and wireless computing are essential
4. Wearable and textile-based electronics for wearable computing systems
   4.1. Knowledge of electronics, signal processing, programming and wireless computing are essential
5. Synthesis and Development of Multifunctional Nanotextiles; chemical formation, nanoprocessing, characterisation, with end-uses in garments and/or interiors
   5.1. Knowledge of chemistry and nano technology is essential

The duration of the research is three years full-time and will be coordinated in accordance with the scope of the overall aims of the programme, for more information please see further details about the network below.

Qualifications and mobility rules

Candidates should possess the minimum of a first class undergraduate degree of the highest grade, preferably a Masters also with evidence of research, independent thinking and publication. The normal requirement of English Language for those with English being their second language is IELTS 6.5 minimum. We are looking for highly motivated individuals that want to push boundaries. The selection process is expected to be very competitive and based on academic attainment and experience.

The successful candidates are expected to undertake secondments with partners and industry, to participate at summer schools and conferences and to publish/exhibit findings of their research. The rotation of PhD students between the partners will enable them to learn complementary research techniques and methods, experience different working/living environments and cultures, and consequently broaden their perspectives and capabilities and enhance their career development.

Applicants must also meet the requirements of the Marie Skłodowska-Curie Conditions of Mobility of Researchers. The researchers may be a national of a Member State, of an Associated Country or of any other country and are required to undertake transnational mobility. Researcher must not have resided or carried out his/her main activity (work, studies etc) in the country of his/her host organisation for more than 12 months in the 3 years immediately prior to his/her recruitment. Short stays as holidays, are not taken into account. An ESR must be an early stage researcher (i.e. in the first four years of his/her research career and not have a doctoral degree).

Benefits

Successful and eligible candidates will be employed at Heriot Watt University, register for a PhD degree and carry out research under the supervision of Prof G K Stylios. These candidates will be research staff of the university and will receive a mobility allowance and, if eligible, a family allowance, for three years at the rates stipulated by the European Commission for Marie Skłodowska Curie researchers. The estimated annual gross salary would therefore be of the order of £30,050 yearly for an ESR with family and £27,014 without family. These research contracts will conform with the Human Resource rules of Heriot Watt University in accordance with UKs relevant employment regulations whilst meeting the European Commission´s requirements for Marie Skłodowska Curie programmes.

Application Process and Contact

Prospective candidates are invited to send a complete PhD Application form (https://myhwu.hw.ac.uk/HWSAS8/bwskalog.P_DispLoginNon) together with evidence of qualifications and knowledge of English if necessary. They should also provide a case for support of their application, indicating in which area they would like to work and why.

Please send complete applications to Ms Mags Fenner at m.fenner@hw.ac.uk. The deadline of receipt of applications is the 14 April 2015

We are to complete a short-list of ten candidates by the 20th April and to complete final interviews by 8th May.

The appointed candidates are expected to undertake their post by the 1st September 2015.

Further Details about the ArchInTex Network

ArcIn Tex ETN Project Outline

This is a prestigious international network between 5 universities and 3 companies that aims to train researchers of the future in how new adaptive and responsive materials and technologies can be developed to improve quality of life and the demands of intelligent living.

The project follows our research philosophy and adapts the design/technology interface underpinning. Through a cross-disciplinary and cross-national network the consortium will build and train a new research community to take on board the challanges that new materials impose to design by collaboration between academia and the private sector. To that effect it is bringing into play interfaces, communication systems and devices in a well directed collaborative programme of carefully instrumented world class research, training and dissemination which will last beyond the 4 year duration of this project.

The ArcInTexETN is a network collaboration between the following institutions and companies:

Beneficiaries (hiring PhD Students)

- Heriot-Watt University (United Kingdom) www.hw-ac.uk
- AB Ludvig Svensson (Sweden) www.ludvigsvensson.com
- Philips Electronics Nederland B.V. (The Netherlands) www.philips.com
- Royal College of Art (United Kingdom) www.rca.ac.uk
- Eindhoven University of Technology (The Netherlands) www.tue.nl
- University of Borås (Sweden) – coordinators www.hb.se
- The Berlin University of the Arts (Germany) www.udk-berlin.de
- Vilnius Academy of Arts (Lithuania) www.vda.lt

Partner Organisations

- Audejas UAB (Lithuania) www.audejas.lt
- Haworth Tompkins London (United Kingdom) www.haworthtompkins.com
- Heatherwick Studio London (United Kingdom) www.heatherwick.com

Other Project Details

HORIZON 2020

INFORMATION SCIENCE AND ENGINEERING PANEL

Project ID: 642328

Project Proposall Number SEP 210148479

The project is very well funded for attracting world class researchers who will network within and outside the consortium and carry out ambitius world class research and innovation. In textiles this is unique and it will be a platform for further leading collaborations in projects, conference and commercialisation for providing the highest impact. The themes of the research by institution are given below.

ESR	Theme/Specific Skill	Main supervisor	Assistant supervisor	Assistant supervisor
ESR1	2.1 Textile structures for adaptive and responsive architecture (textile architecture)	UDK, Prof. Norbert Palz*	RCA Prof. Jo-Anne Bichard*	RCA Prof Clare Johnston*
ESR2	2.1 Textile structures for adaptive and responsive architecture (textile architecture)	UDK Prof. Norbert Palz*	TUE Ass. Prof. Bart Hengeveld*	HB Ass. Prof. Linda Worbin*
ESR3	2.2 Designing adaptive and responsive textiles (textile and fashion design)	RCA Prof Clare Johnston*	HB Ass. Prof. Linda Worbin*	UDK Prof. Gesche Joost*
ESR4	2.2 Designing adaptive and responsive textiles (textile and fashion design)	HB Prof. Clemens Thornquist*	UDK Prof. Norbert Palz*	HB Prof. Lars Hallnäs*
ESR5	2.3 Designing for adaptive and responsive far-field interactions (textile interaction design)	RCA Prof. Jo-Anne Bichard*	UDK Prof. Gesche Joost*	RCA Mr Ian Higgins*
ESR6	3.1 Textile structures for adaptive and responsive interiors (textile design)	RCA Prof. Clare Johnston*	VAA Prof. Egle Ganda Bogdaniene*	HB Dr. Delia Dumitrescu*
ESR7	3.1 Textile structures for adaptive and responsive interiors (textile design)	HB (LUS) Ass. Prof. Linda Worbin*	LUS Mrs Dorte Bo Bojesen*	VAA Prof. Jolanta Vazalinskiene*
ESR8	3.2 Designing bespoke textiles for interior performance (textile and fashion design)	VAA Prof. Jolanta Vazalinskiene*	RCA Prof. Clare Johnston*	UDK Prof. Gesche Joost*
ESR9	3.2 Designing bespoke textiles for interior performance (textile and fashion design)	VAA Prof. Egle Ganda Bogdaniene*	HB Ass. Prof. Linda Worbin*	HB Prof. Lars Hallnäs*
ESR10	3:3 Designing for adaptive and responsive near-field interactions (textile interaction design)	UDK Prof. Gesche Joost*	VAA Prof. Jolanta Vazalinskiene*	RCA Mr Ian Higgins*
ESR11	4.1 Textile structures for adaptive and responsive clothing (textile design)	HWU Prof. G. K. Stylios*	TUE Ass. Prof. Oscar Tomico Plasencia*	HB Prof. Clemens Thornquist*
ESR12	4.1Textile structures for adaptive and responsive clothing (textile design)	HWU Prof. G. K. Stylios*	TUE Prof. Bart Hengeveld*	HB Ass. Prof. Linda Worbin*
ESR13	4.2 Designing adaptive and responsive clothing (fashion design)	HB Prof. Clemens Thornquist*	HWU Dr. L. Luo*	TUE Ass. Prof. Oscar Tomico Plasencia*
ESR14	4.2 Designing adaptive and responsive clothing (fashion design)	TUE Prof.Ron Wakkary*	HB Prof. Lars Hallnäs*	HWU Dr. L. Luo*
ESR15	4:3 Designing for adaptive and responsive wearable interactions (textile interaction design)	TUE (PHI) Prof. RonWakkary*	PHI Mr Koen van Os*	HB Ass. Prof. Linda Worbin*

Network Coordinators

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