1   Advertisement

Post Title: Professor in Human Computer Interaction
School/department: Engineering and Informatics/Informatics
Hours: Full time. Requests for flexible working options will be considered (subject to business need).
Contract: Permanent
Reference: 8062
Salary: Competitive
Placed on: 17 May 2023
Closing date: 27 July 2023. Applications must be received by midnight of the closing date.
Expected Interview date: 24 August 2023
Expected start date: 01 September 2023

The School of Engineering and Informatics at the University of Sussex is appointing new academic staff in Computer Science and Artificial intelligence as part of a strategy to grow and complement the current strengths in the Department of Informatics.

We wish to appoint a Professor in Human Computer Interaction to work in the Department of Informatics and join our Creative Technology research group. Current research is concerned with the interfaces between humans and digital technology and how these are changing. We investigate interaction in the broadest sense, considering it in relation to digital technologies, connected physical artifacts, people's experience and their practices with mobile, immersive, multi-sensory, ubiquitous and pervasive computing.

The successful candidate will undertake research and teaching within the department. They will be associated with the Creative Technology research group and contribute to research leadership and research-led undergraduate and postgraduate courses.

Applications should be accompanied by a full CV, and statements of future research plans and ways in which the applicant could contribute to teaching across the School.

Please contact Professor Ian Mackie I.Mackie@sussex.ac.uk, Head of the Department of Informatics, for informal enquiries.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

Please note that this position may be subject to [ATAS clearance](#) if you require visa sponsorship.

For full details and how to apply see our [vacancies page](#)

The University of Sussex values the diversity of its staff and students, and we welcome applicants from all backgrounds.

2.   The School of Engineering and Informatics

The School of Engineering and Informatics covers the disciplines of computer, electrical and electronic engineering, mechanical, and automotive engineering, product design, digital media, computer science and informatics.

Distinctive characteristics of the School are: creativity, interdisciplinarity, strong links with industry, and an international outlook in both research and teaching. £10m (£4.9m from HEFCE) has been invested in the Future Technologies Laboratory as a result of a 60% surge in applications for the School's degrees.

The School offers a range of undergraduate and postgraduate degrees in its areas of expertise, often in collaboration with other schools at Sussex, to create a distinctive focus which addresses the needs of industry, commerce and society. Examples include joint degrees with the MSc in Artificial Intelligence and Adaptive Systems (AIAS) which includes modules from the Schools of Engineering and Informatics and Psychology; and the MScs in Engineering Business Management, and Management of Information Technology, which were developed in collaboration with the School of Business, Management and Economics.

This interdisciplinary approach also applies to our research, with current and recent externally funded projects with researchers in a wide range of other subject areas including geomorphology, media practice, medical imaging, neuroscience, anthropology, English literature, epidemiology, geography, international development, mathematics, psychiatry, psychology and sociology.

The School has strong links with industry, and has an established Strategic Advisory Board. Innovative research across the School has led to a number of patents which are being commercialised including: novel electric potential sensors (EPS) licensed to Plessey Semiconductors and marketed as the EPIC sensor chip; and University spin-out companies, including InCrowd Sports, which is deploying delay-tolerant networking to provide smartphone connectivity in large crowds, and TexRAD, which has developed software for the analysis of medical images and has recently demonstrated the ability to detect brain texture anomalies in Asperger's Syndrome patients. These developments are supported by the University's Enterprise fund. The EPS sensor technology was awarded the IET Innovation award for 'Measurement in Action' and shortlisted for two other IET categories and for a THES award.

The School is, for administrative purposes, comprised of two departments: the *Department of Informatics* and the *Department of Engineering and Design*. Staff teach across the School, and undertake research on cross-School, as well as cross-University projects.

In addition, there is a School-wide research group in **Creative Technology**. The Group brings together a number of academics working in the areas of human-centred technology, product design, experience design, tangible and physical computing, games, digital media,

digital cultural heritage, child-computer interaction, novel interfaces, animal-computer interaction, broadcast technologies and social innovation.

2.1   Department of Engineering and Design

The Department of Engineering and Design has a strong reputation for excellence in research and teaching. Its research outputs were rated as 88%, and impact as 90% 4*/3* (world-leading/internationally excellent) in the REF 2014.

The Department's students won the automotive category of the Telegraph UK STEM Awards 2014 sponsored by McLaren Group (link to video).

Research activity is focused on mechanical engineering (turbomachinery, dynamics and control, and tribology); and electronic engineering (sensor technology, image and signal processing, and mobile digital communications). There are strong collaborations with industry, including Jaguar Land Rover, General Electric, Plessey Semiconductors and Meggitt Sensing Systems.

The Department's research is organised into six groups:

- Dynamics, Control and Vehicle Research Group (www.sussex.ac.uk/dcv)
- Industrial Informatics and Signal Processing Research Group (http://www.sussex.ac.uk/iisp/)
- Sensor Technology Research Centre (www.sussex.ac.uk/strc/)
- Thermo-Fluid Mechanics Research Centre (http://www.sussex.ac.uk/tfmrc/)
- Centre for Advanced Communications, Mobile Technology and IoT
- Space Research Group

The Department currently has 665 undergraduate students, 63 taught postgraduate students, and 39 postgraduate research students.

The Department's undergraduate courses, all of which are accredited and have an industrial placement year option, include:

MEng (Hons) / BEng (Hons) Automotive Engineering
MEng (Hons) / BEng (Hons) Electrical and Electronic Engineering
MEng (Hons) / BEng (Hons) Mechanical Engineering
BSc (Hons) Product Design.
Both Electrical and Mechanical Engineering can be taken with a Robotics minor.

The Department's masters level courses, the majority of which are also accredited, are in the process of being reviewed as part of a cross-School process. Courses currently include:

MSc Advanced Mechanical Engineering
MSc 5G Mobile Communications and Intelligent Embedded Systems
MSc Digital Signal and Image Processing
MSc Robotics and Autonomous Systems
MSc Engineering Business Management

Detailed information about the Department can be found at *www.sussex.ac.uk/engineering*

2.2   Department of Informatics

The Department of Informatics is highly rated for its teaching and research. Its researchers work in an environment that was deemed to be wholly 4*/3* (world-leading/ internationally excellent) in the REF 2014.

The Department maintains a strong emphasis on interdisciplinary teaching and research and has substantive links with almost all other Schools of study at Sussex. Its research spans the theoretical and applied.

The Department's research is organised around the following three research groups:

- Artificial Intelligence
- Creative Technology
- Foundations of Software Systems

Members of Informatics play leading roles in the following interdisciplinary research centres at Sussex:

- Centre for Computational Neuroscience and Robotics (CCNR)
- Centre for Research in Cognitive Science (COGS)
- Sackler Centre for Consciousness Science (SCCS)
- Data Intensive Science Center, University of Sussex (DISCUS)
- Sussex Centre for Sensory Neuroscience and Computing (SNAC)
- Sussex Humanities Lab (SHL)
- Sussex Neuroscience

The Department has long-standing collaborations with a range of external organisations including Animazoo, the Clinical Practice Research Datalink, and American Express, which has sponsored over 120 MSc students in Informatics over the past 10 years.

The Department currently has 794 undergraduates, 124 taught postgraduates, and 83 doctoral students. Undergraduate courses that are accredited by the relevant professional institutions where appropriate, and have an industrial placement year option, include:

MComp (Hons) / BSc (Hons) Computer Science
BSc (Hons) Computer Science and Artificial Intelligence
BSc (Hons) Computing for Business and Management
BSc (Hons) Games and Multimedia Environments

The Department's masters level courses currently include:

MSc Advanced Computer Science
MSc Computing with Digital Media
MSc Artificial Intelligence and Adaptive Systems
MSc Management of Information Technology

Detailed information about the Department can be found at *www.sussex.ac.uk/informatics*

JOB DESCRIPTION

Job Title: Professor in Human Computer Interaction

Grade: Professor (Research & Education focussed) Grade 10

School: Engineering and Informatics

Location: Falmer Campus

Responsible to: Head of School

Direct reports: n/a

Key contacts: Students, other members of Faculty within the School and University, School Officers, academics of similar standing in the field in other institutions.

Role description: Professor is the most senior career-grade teaching and research position. Post-holders are expected to show high academic standing, to make a broad and sustained contribution to their field and discipline nationally and internationally, and to demonstrate sustained exceptional performance in research. They will demonstrate academic leadership in both teaching and research, and support the management and strategic planning processes of the School and the University.

PRINCIPAL ACCOUNTABILITIES

1.   To provide academic leadership in the design and delivery of innovative and high-quality teaching programmes.

2.   To engage in high-quality research activity resulting in high-quality publications to be submitted to the REF at acceptable levels of volume and academic excellence; to lead major research projects; to consistently secure research funding and third-stream income; and to play a key role in the development and implementation of the School research strategy.

3.   To provide guidance, support and mentoring to junior members of staff working in the same or cognate research areas.

4.   To play a key role in supporting the management activities of the School and University, and to undertake a significant School directorship role if required.

KEY RESPONSIBILITIES

1.   Teaching & Student Support

1.1   Lead the innovative design, development and delivery of the overall curricula.

1.2   Develop the quality assurance framework within the University's overall framework e.g. for the validation and re-validation of courses.

1.3   Regularly review and update course content and teaching materials, ensuring that they remain up-to-date and relevant, incorporating advances in the subject area and utilising appropriate technology.

1.4   Set, mark, and assess work and examinations; select appropriate assessment instruments and criteria; and provide constructive and comprehensive feedback to students.

1.5   Actively maintain an understanding of appropriate pedagogy in the subject area.

1.6   Provide academic leadership and inspiration to those teaching within subject area.

1.7   Supervise PhD students and/or externally-funded post doctoral staff.

1.8   Undertake and complete administrative duties required in the professional delivery of teaching.

1.9   Undertake academic advising duties, and provide first-line support for sensitive issues, referring on as appropriate to services providing further assistance.

1.10   Adopt an approachable and accessible attitude towards students, offering office hours, informal advice etc.

2.   Research, Scholarship & Enterprise

2.1   Play a leading role in the development and implementation of School research strategies and themes, and lead and co-ordinate research activity in own subject.

2.2   Identify and develop research objectives, and proposals for own or joint research.

2.3   Carry out independent research and act as a Principal Investigator or project leader on major research projects. This may involve leading and line-managing the staff including their recruitment, probation, mentoring, performance review and staff development; managing the budget, and taking responsibility for the delivery of the programme.

2.4   Define research objectives and questions, review and synthesise the outcomes of research studies, and develop ideas for application of research outcomes.

2.5 Develop proposals for major research projects which will make a significant impact, and lead to an increase in knowledge or understanding or the development of new explanations, insights, concepts or processes.

2.6 Produce high-quality research outputs that are world-leading in the field, for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate, and make a significant contribution to the School's REF assessment at acceptable levels of volume and academic excellence.

2.7 Make presentations at national and international conferences or exhibit work in other appropriate events of a similar standing, and play a lead role in identifying ways to disseminate research outputs informally via the internet, the media and other forms of public engagement.

2.8 Develop and maintain an independent research reputation by, for example, serving on peer review committees, or acting as a referee for journal articles or research grant applications.

2.9 Play a key role in the internal management of the REF assessment exercise.

2.10 Play a lead role in identifying sources of funding and securing bids, both individually and in collaboration with others.

2.11 Play a lead role in identifying and exploring opportunities for enterprise activity, knowledge exchange income and/or consultancy.

2.12 Provide academic leadership and inspiration to those working within own research area, and foster inter-disciplinary team-working.

2.13 Lead and develop internal and external networks to foster collaboration on both an individual level and on behalf of others in the School, share information and ideas, and promote the subject and the University, both nationally and internationally.

2.14 Develop successful links with external contacts such as other educational and research bodies, employers, professional bodies and other providers of funding and research initiatives to foster collaboration and generate income, and to influence the external research and policy agenda.

2.15 Contribute to the enhancement of research quality and thinking in the field by being involved in quality assurance and other external decision-making bodies.

2.16 Act as a leading authority in the field or specialism, developing new knowledge, understanding and innovation in the area.

2.17 Conduct risk assessments and take responsibility for the health and safety of others, if required.

3. Contribution to School & University

3.1 Attend and contribute to School meetings.

3.2 Contribute to the overall management of the School in areas such as budget management and business planning.

3.3   Contribute to School- and University-level strategic planning and development.

3.4   Engage in activities beyond day-to-day teaching duties, for example Admissions Days.

3.5   Assist with undergraduate and postgraduate recruitment.

3.6   Chair School or University committees, and participate in University decision-making and governance.

3.7   Undertake a School directorship role, for example Director of Research.

3.8   Advise and provide support to less experienced colleagues, and conduct Performance and Development Reviews, if required.

3.9   Mentor staff in related or cognate research areas, providing advice on personal and career development plans, and assisting them in identifying and securing career development opportunities.

3.10 Undertake additional administrative duties, as required by the Head of School.

4.   Role-specific duties

4.1   Contribute to the activities of their research group.
4.2   Contribute to teaching within the School of Engineering and Informatics in general areas of Computer Science and Artificial Intelligence.
4.3   Carry out a programme of research related to the activities of the Creative Technology research group.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- Evidence of quality in teaching and learning demonstrated in a range of measures, including student satisfaction; of thoughtful and effective innovation in the development of new courses and/or programmes; and of leadership in the promotion of teaching and learning in the subject.

- Proven innovative teaching practice, typically adopted as best-practice within the institution.

- Evidence of providing, or demonstrable potential to provide academic leadership, development, mentoring and career management advice for colleagues, research assistants and students in the area of teaching and learning.

- A record of consistent involvement in external examining at research-intensive universities, and other forms of engagement in upholding academic standards.

- Leadership of a national subject association.

- Evidence of commitment to improving the student experience and/or leadership of a major change project designed to improve the student experience.

- Publication of highly-regarded text books or other significant teaching materials for use in higher education, chosen by third parties on a discretionary basis.

- Evidence of sustained output of high-quality research publications or other recognised forms of output, subjected to peer review and describing significant discoveries, applications or observations.

- Evidence of leadership in the discipline and cognate disciplines, demonstrating an ability to inspire colleagues to develop their own research potential, including partnerships with individuals and/or bodies of international standing.

- Sustained record of attracting funds year-on-year, which are notable awards in terms of size and scope, and of leadership of and collaboration in significant research projects and/or consultancy or work with external organisations.

- Transfer of intellectual property into the wider economy.

- Development of research and consulting relationships with other organisations, and development of business and community links that bring tangible benefits to the University.

- Sustained record of successful postgraduate research supervision.

- Academic distinctions (e.g. academic awards; editorship of, or refereeing for, journals; grant reviewer for awarding bodies; services for learned societies; election to Fellowships).

- Transfer of research findings into practical applications and/or enrichment of the wider culture through creativity in the social sciences, humanities and the visual and performing arts.

- External and visiting appointments.

- Influence on the formulation of policy.

- Advancement of the discipline through a distinctive contribution to intellectual leadership, professional, clinical or vocational practice.

- Evidence of enhancing the international standing and profile of the School and University.

- A sustained contribution to the delivery of University and/or School strategy.

- Evidence of exceptional collegiality.

- A leadership role within the University, creating significant performance improvement.

PERSON SPECIFICATION

ESSENTIAL CRITERIA

1. Educated to doctoral level in a relevant discipline (see role-specific criteria below).

2. In-depth knowledge of specialism to enable the development of new knowledge, innovation and understanding in the field.

3. Excellent interpersonal skills, with the proven ability to engage with students using a variety of different methods.

4. Excellent presentation skills, with the proven ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.

5. Significant experience of high-quality teaching at undergraduate and postgraduate level.

6. Successful track record of innovative curriculum design or redesign.

7. Significant track record of influential publications in reputable journals and other appropriate media of similar standing.

8. Successful and sustained track record of generating research and knowledge exchange income that is notable in terms of size and scope, and the translation of research results into practice.

9. Experience of successfully leading large externally-funded research projects.

10. An international reputation in the field of study.

11. Successful track record of supervising postgraduate students.

12. Evidence of proactive contribution to the School and/or University.

13. Leadership and people management skills.

14. Ability to exercise a high degree of innovation and creative problem-solving.

15. Commitment to collegiality and inter-disciplinary working.

16. Excellent organisational and administrative skills.

17. Ability to prioritise and meet deadlines.

18. A willingness to participate in support activities beyond normal teaching duties.

19. Excellent IT skills, with the ability to produce high-quality learning support materials.

ESSENTIAL ROLE-SPECIFIC CRITERIA

1. A track record of internationally excellent research in Computer Science and related fields.