Associate Professor – Human Computer Interaction

Department/Unit	Information Technology
Faculty/Division	Caulfield School of Information Technology
Classification	Level D
Work location	Caulfield campus
Date document created or updated	07/11/2017

Organisational and metropolitan context

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu

The **Faculty of Information Technology** aims to lead global IT research and education. Our strong reputation and international profile attracts the best students worldwide, and we offer a program and range of courses that transforms our graduates into highly skilled and sought after IT professionals, equipped to work globally. Our research is multi-disciplinary, multi-campus and multi-national, giving us a unique capacity to reach out further and deeper than any other institution in Australia. Our research priorities are both technically ambitious and embedded in everyday life. For more, see: www.infotech.monash.edu.au/

The **HCI group** designs, builds, and evaluates state-of-the-art interface technologies. Our multidisciplinary interests span computer science and engineering, cognitive and learning sciences, communications, medicine and health, media design, and other topics. Our work is based on empirical science, statistics, deep learning and data analytics, and diverse HCI methods. We are interested in applications in many areas, such as health, education, communications, personal assistance, robotics, automotive, and digital arts. The HCI group has partnerships with CSIRO-Data61, and an expanding collection of industry partners. The HCI area director is Professor Sharon Oviatt, an ACM Fellow and international pioneer in human-centered, mobile, and multimodal interfaces.

Experimental Labs & Design Spaces: The university has made recent strategic investments in facilities for prototyping innovative concepts, collecting and analyzing data, and displaying digital installations and interactive media—including sensiLab (supporting tangible, wearable, augmented and virtual reality, multimodal-multimedia, maker-space), Immersive Visualization platform and Analytics lab, the MADA Design building and space, Centre for Data Science, and ARC Centre of Excellence on Integrative Brain function (pioneering new multimodal imaging techniques for data exploration). The university currently is investing in HCI group facilities for prototyping and developing new mobile, multimodal and multisensory interfaces, capturing and analyzing human multimodal interaction (e.g., whole-body activity, speech), and predicting users' cognitive and health status.

Position purpose

The Faculty of Information Technology at Monash University is establishing a new group in HCI and Creative Technologies. The position will be part of the rapid expansion of a multidisciplinary group with expertise in areas such as mobile and multimodal-multisensor interfaces, agent-based conversational interfaces, brain-computer and adaptive interfaces, wearable and contextually-aware personalized interfaces, education and health interfaces, data analytics for predicting user cognition and health status, and other topics.

Level D academics contribute leadership to all activities of the Faculty and are responsible for conducting and fostering excellence in research, teaching and mentoring, professional activities, and policy development in their field across the Faculty of IT, Monash University, and broader community. An academic at this level plays a major leadership role in establishing and fostering high quality research, teaching, and scholarship.

Reporting Line: The position reports to the HCI area director

Supervisory responsibilities: This position would supervise undergraduate students, graduate students, and postdoctoral fellows

Duration: Continuing faculty appointment

Financial delegation and/or budget responsibilities: Manages grant funding, may assist with HCI Center budgeting

Key responsibilities

Specific duties required of a Level D academic may include:

1. Play a significant role in leading research projects and research teams
2. Conduct original research leading to publications in high-quality conferences, journals, and books
3. Supervise undergraduate, graduate, and honours students, as well as postdoctoral fellows
4. Provide leadership in developing new curricula and teaching (e.g., lectures, tutorials, demonstrations, studio classes, workshops), including implementing criteria for assessment of student assignments and examinations
5. Mentoring and team teaching with junior faculty and postdoctoral fellows to promote teaching excellence and HCI group coherence
6. Actively attract external government and corporate funding for their research area and team
7. Facilitate multidisciplinary research across different Monash faculties and research centres, including planning of larger joint research proposals
8. Promote collaborative approaches to research, including linking with other universities, national research groups (e.g., Data61/CSIRO), and international centres/laboratories in related fields
9. Establish corporate and/or international partnership opportunities (e.g., joint ventures, contract research, student traineeship exchanges) that expand the HCI group, its research and teaching activities, diversification of funding, and overall impact
10. Engage in strategic planning for the HCI group (e.g., laboratory development, new centre formation, hiring personnel), and ensuring its directions are well aligned with the IT Faculty, University and Research Dean’s long-term strategic vision
11. Contribute service and leadership for the IT Faculty, Monash, and national and international computing community and make a significant contribution to the profession and/or discipline nationally and internationally

Key selection criteria

Education/Qualifications

1. The appointee will have:

- a doctoral qualification in computer science, information sciences, cognitive or linguistic sciences, brain sciences, or related field
- In determining experience relative to qualifications, regard shall be had to teaching experience, experience in research, experience outside tertiary education, creative achievement, professional contributions and/or contributions to technical achievement. In addition, a position at this level will normally require a record of demonstrable scholarly and professional achievement in the relevant discipline area.

Knowledge and Skills

2. Demonstrated ability, commitment, and passion for engaging in research and scholarly activities, including a strong record of research leadership and accomplishment that includes publishing in top conferences and journals
3. Strong methodological skills such as empirical/statistical, machine learning/deep learning, HCI design and analysis methods, including the ability to teach them to others
4. Experience collecting and analyzing data in one or more key modality (e.g., speech, handwriting, images, gaze, activity patterns, etc.), sensor, or combination
5. Strong technical, leadership, and team-building skills relevant to the candidate's specific area of expertise (of those listed above), such as signal analysis (e.g., speech, brain waves), linguistic analysis, predictive data analytics, language and conversational dialogue processing, adaptive and personalized interface development, or multimodal fusion-based architectures and system development
6. Multidisciplinary profile of interests and collaborative team-oriented research
7. Strong motivational, mentorship, and teaching abilities when working with students, and highly effective teaching and supervision experience in a university setting with the ability to develop and implement innovative new curriculum, for student educational programs
8. Outstanding interpersonal and communication skills, and the ability to organize and manage high-level research teamwork
9. Successful at strategising and procuring diverse sources of external grants and contracts, including with industry partners and international colleagues
10. Successful at working with diverse groups of people, including corporate and federal sponsors, international partners, faculty from other disciplines, fieldwork partners (e.g., medical personnel, teachers), and students and university staff at all levels
11. Demonstrated leadership on university and professional committees, and in administrative leadership roles

Other job related information

- Travel required (e.g., to conferences, professional meetings, sponsors, other universities or partner sites)
- There may be peak periods of work during which taking leave could be discouraged or restricted

Legal compliance

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.