

Post-doctoral Fellowship in Multimodal Interfaces & Behavior Analytics

The Faculty of Information Technology (<https://www.monash.edu/it>) at Monash University in Melbourne Australia is establishing a new group in HCI and creative technologies. We invite accomplished and creative PhDs to apply for a 3-year postdoctoral fellowship in multimodal interfaces and behavior analytics. The selected candidate will join a rapidly expanding 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.



MADA Design building

This position involves research on predicting user cognition and health status, based on analysis of different modalities (e.g., speech, writing, images, sensors) during naturally occurring activities. These analyses involve exploring predictive patterns at the signal, activity pattern, lexical, and/or transactional levels. The ideal candidate would be an initiating researcher with a strong publication record who is interested in pioneering in emerging research areas. He/she would have an interest in developing new technologies to identify users' cognitive and health status, and using this information to develop personalized and adaptive interfaces that promote learning, performance, and health.

Requirements:

- PhD in computer science, engineering, information sciences, cognitive or linguistic sciences, or related field
- Training in HCI, multimodal interfaces, data science and analytics, modeling human behavior & communication
- Experience collecting and analyzing speech, images, handwriting, and/or other sensor data
- Experience applying machine learning/deep learning, empirical/statistical, linguistic, or hybrid analysis methods
- Interest in human cognition and educational technologies, and/or health and mental health technologies
- Strong interpersonal, teamwork, communication and writing skills
- Ability to work with diverse partners— domain experts (teachers, clinicians), industry, undergraduate/graduate students
- Prefer candidate with 2-3 years post-PhD research or work experience

HCI Group: 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, health, media design, and other topics. We are interested in applications such as health, education, communications, personal assistance, and digital arts. The HCI group has partnerships with CSIRO-Data61 and industry. The HCI area director is Dr. Sharon Oviatt, an ACM Fellow and international pioneer in human-centered, mobile, and multimodal interfaces.

Monash is Australia's largest university, and ranks in the top 60 universities worldwide, with Computer and Information Systems rated in the top 70 worldwide (QS World University rankings 2018). In addition to growing rapidly in human-centered computing, software, and cyber-security, it includes data science and machine learning, artificial intelligence and robotics, computational biology, social computing, and basic computer science.

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 Centre for Data Science, and the 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 multisensor interfaces, analyzing human multimodal interaction (e.g., whole-body activity, speech), and predicting users' cognitive and health status.

Melbourne Area: Melbourne recently has been rated the #1 city worldwide for quality of life (see Economist & Guardian, <http://www.economist.com/blogs/graphicdetail/2016/08/daily-chart-14> and <https://www.theguardian.com/australia-news/2016/aug/18/melbourne-wins-worlds-most-liveable-city-award-sixth-year-in-a-row>), with excellent education, healthcare, infrastructure, low crime, and exceptional cuisine, cultural activities, and creative design. The regional area is renowned for its dramatic coastline, extensive parks, exotic wildlife, and Yarra Valley wine region.

Position & Compensation: This position is full-time for 3 years, with competitive salary (Academic level B-6, \$119,683 AUD) and benefits, including 17% superannuation retirement fund, health insurance options, relocation, and seed funds for equipment and travel. Start date is negotiable after March 1, 2018. For further information, or submission instructions, send email to Dr. Sharon Oviatt (with "Postdoc Application" in header) to: Oviatt@incaadesigns.org

To apply: Required application materials include: (1) cover letter (indicating date of availability); (2) current CV with publication list, research and teaching interests, and 3 references with email/phone contact; (3) graduate transcripts; and (4) three representative publications. Monash has a Women in IT Program, and participates in the Athena Swan Charter to enhance gender equality. We welcome female, minority and international applicants.