

Dr. Michael Crabb

School of Computing Science and Digital Media
Robert Gordon University
Aberdeen

Email: m.j.crabb@rgu.ac.uk

Qualifications

- 2014 **Ph.D Computing**, University of Dundee, Scotland.
Thesis title: An exploration into the use of cognitive characteristics when designing for older adults
Demonstrated the flaws that exist in using age as a metric in usability studies and showed that previous technology usage can be used as an alternative measure.
Produced a fully adaptive web system that can be used to manipulate the design of a site to tailor it for individuals' preferences.
- 2010 **B.Sc, Applied Computing (Hons)**, University of Dundee Scotland.

Employment History

- Dec 15 - Present **Lecturer in Computer Science**, RGU, School of Computing
I am responsible for the teaching of front and back end web programming on modules at both undergraduate and postgraduate level. I conduct user research as part of the RGUx research group and look at the usability and accessibility of web services.
- April 15-Dec 15 **Teaching Assistant in Computer Science**, RGU, School of Computing
I worked alongside colleagues to deliver and develop teaching material related to programming for the Internet. I created interactive sessions where students learned about the importance of creating accessible web services.
- Nov 14 – Jan 15 **Research Scientist (Academic Secondment)**, BBC R&D.
I worked as part of a team that looked at the user experience that is attached to accessibility services. I tested and evaluated new accessibility services that are now being developed into products to launch on BBC platforms.
- April 14 – March 15 **Research Assistant**, University of Dundee, School of Computing
I worked alongside accessibility/usability researchers in the SiDE (Social Inclusion through the Digital Economy) research group. I carried out research examining how to make online services better for all.
-

Funded Research Activity

- **SICSA (2016): Year Long Short Theme - Defining the Future of Video Game Accessibility.** Completed with Dr Michael Heron. Amount awarded including RGU support: **£3,800.**
- **Interface (2016). Innovation Voucher - SpaceIPX.** Completed with Dr Michael Heron. Amount awarded including company support: **£4,981.**
- **Carnegie Trust. (2016). Vacation Scholarship – Increasing Board Game Interaction with Projected Content.** Completed with Ms. Kirsty Noble. Amount Awarded: **£1,350.**
- **Interface (2016). Innovation Voucher – FireSpec.** Completed with Dr John Isaacs. Amount awarded including company support: **£4,861.**
- **SICSA (2015). HCI Theme Workshop - TV Services in the Home: Interaction, Accessibility and Future Perspectives.** Funding Awarded: **£1,000.**

Total Funded Research Activity: **£15,992.**

Professional Activities

- **Doctoral Consortium Mentor** – BCS HCI 2015. Lincoln, UK.
- **Conference Co-Chair** – The 4th SICSA HCI All Hands Meeting, July 2014, Dundee, Scotland.
- **Website Chair** - Digital Engagement 2011 - The 2nd Annual Digital Economy All Hands Conference, Newcastle, UK, November 15 – 17, 2011.
- **Programme Committee** – The ACM Conference on Accessible Computing. ASSETS'16 (Full Papers, Short Papers, Demos).
- **Programme Committee** – The International Conference on Intelligent User Interfaces. IUI'15 (Posters, Demos, Best Poster Committee). IUI'16 (Posters, Demos)
- **Peer Reviewer** – The ACM Conference on Human Factors in Computing Systems. CHI'14 (Short Papers), CHI'15 (Full Papers, Short Papers, WiP, alt.chi), CHI'16 (Full Papers, Short Papers) CHI'17 (Full Papers, Short Papers).
- **Peer Reviewer** – The ACM TVX Conference on Interactive Television Experiences. TVX'14 (Courses). TVX'17 (Full Papers)
- **Peer Reviewer** – The ACM Conference on Computer Supported Cooperative Work and Social Computing. CSCW'14 (WiP).
- **Peer Reviewer** – The ACM Conference on Designing Interactive Systems. DIS'17 (Full Papers)
- **Peer Reviewer** – The ACM Conference on Creativity and Cognition C&C'17 (Full Papers)

Professional Memberships

- The Association for Computer Machinery (Professional Member)
- The ACM Special Interest Group in Accessible Computing
- The ACM Special Interest Group on Human Computer Interaction

Awards and Honours

- | | |
|------|------------------------------------------------------------------------------------------------------|
| 2014 | Grand Finalist – ACM Student Research Competition 2013/2014. |
| 2013 | First Place - CHI 2013 Microsoft/ACM Student Research Competition. |
| 2013 | Second Place - UIST 2013 Microsoft/ACM Student Innovation Competition (Most Useful Category). |

Peer-Reviewed Journal Publications

- [J1] Armstrong, M. Brown, A. **Crabb, M.** Hughes, C. Jones, R, Sandford. J. (2017). Understanding the Diverse Needs of Subtitle Users in a Rapidly Evolving Media Landscape. *To appear in Society of Motion Pictures and Television Engineers – Motion Imaging Journal.*
- [J2] **Crabb, M.**, & Hanson, V. L. (2016). An Analysis of Age, Technology Usage, and Cognitive Characteristics Within Information Retrieval Tasks. *ACM Transactions on Accessible Computing (TACCESS).*

PhD Thesis

- [T1] **Crabb M.** (2014). An Exploration into the Use of Cognitive Characteristics when Designing for Older Adults. University of Dundee.

Peer-Reviewed Conference Publications

- [C1] **Crabb M.**, Jones, R. Armstrong, M. Hughes, C. J. Online News Videos: The UX of Subtitle Position. In ASSETS15 Proceedings of the 17th International ACM SIGACCESS Conference on Computers and Accessibility. (Acceptance Rate 23%)
- [C2] Armstrong, M. Brown, A. **Crabb, M.** Hughes, C. Jones, R, Sandford. J. Understanding the Diverse Needs of Subtitle Users in a Rapidly Evolving Media Landscape. *In IBC2015 Proceedings of the 2015 IBC Conference.*
- [C3] Brown, A. Jones, R. **Crabb, M.** Sandford, J. Brooks, M. Jay, C. Armstrong, M. Dynamic Subtitles: The User Experience. *In TVX15 Proceedings of the 2nd ACM International conference on Interactive Experiences for Television and Online Video.* (Acceptance Rate: 24%)
- [C4] Hughes, C. J, Armstrong, M. Jones, R. **Crabb, M.** Responsive Design for Personalised Subtitled. *In W4A15 Proceedings of the 12th Web for All Conference.* (Acceptance Rate: 34%)
- [C5] Menzies, R. **Crabb, M.** Herron, D. Petrie, K. Stewart, C. Zarb, M. An Analysis of User Engagement in Relation to Computing Workshop Activities. *In SIGCSE '15 Proceedings of the 46th Technical Symposium on Computer Science Education.* (Acceptance Rate: 36%)
- [C6] **Crabb, M.** Hanson, V.L. The Use of Age, Technology Usage, and Cognitive Characteristics in Relation to Perceived Disorientation and Reported Website Ease of Use. *In ASSETS'14 Proceedings of the 16th International ACM SIGACCESS Conference on Computers and Accessibility.* (Acceptance Rate: 26%)

Extended Abstracts and Additional Publications

- [E1] **Crabb, M.** Jones, R. Armstrong, A. The Development of a Framework for Understanding the UX of Subtitles. In ASSETS15 Proceedings of the 17th International ACM SIGACCESS Conference on Computers and Accessibility.
- [E2] **Crabb, M.** Hanson, V.L Breaking the 'age' old rule: Alternative metrics in user research *Digital Economy 2014, Fifth Annual Digital Economy All Hands Conference, London.*
- [E3] **Crabb, M.** *The Use of Age, Technology Usage, and Cognitive Characteristics in Relation to User Perceived Disorientation.* In ACM Student Research Competition – Grand Final 2014.
- [E4] **Crabb, M.** 2013. Human Cognitive Measurement As A Metric Within Usability Studies. In CHI '13 Extended Abstracts on Human Factors in Computing Systems. (Acceptance Rate: 32%).
- [A1] Noble, K. **Crabb, M.** (2016). Projection Mapping as a Method to Improve Board Game Accessibility. ACM SIGACCESS – Accessibility and Computing.

- [A2] **Crabb, M.** Jones, R. Armstrong, M. Hughes, C. Responsive Design for Personalised Subtitles. *BBC White Paper – WHP295 July 2015.*
- [A3] Armstrong, M. Brown, A, **Crabb, M.** Hughes, C. Jones, R. Sandford. J. Understanding the Diverse Needs of Subtitle Users in a Rapidly Evolving Media Landscape – *BBC White Paper – WHP307 September 2015.*
- [A4] **Crabb M.**, Jones, R. Armstrong, M. Hughes, C. J. Online News Videos: The UX of Subtitle Position – *BBC White Paper [in publishing]*
- [A5] R. Jones, **Crabb, M.** Brown, A. Investigation the User Experience of Variable Subtitle Displays – *BBC Technical Note – RD3715 March 2015*
- [A6] R. Jones, **Crabb, M.** The Development of a Framework for Understanding the UX of Subtitles – *BBC Technical Note – RD3732 January 2015.*