Dr Michael Crabb

✉ mzcrabb@dundee.ac.uk
ⓘ 0000-0002-9563-0691

I am a forward-thinking leader with a unique blend of strategic vision, hands-on experience, and dedication to success. I am Head of Computing at the University of Dundee and lead a team of academic staff members while overseeing teaching, scholarship, and research aspects of Computing. I've successfully championed the integration of cutting-edge technologies into our curriculum. Under my leadership, we've developed new, pathway-based undergraduate degrees designed to boost employability and promote research-led learning.

I have a strong track record of forging strategic partnerships with global technology leaders and have created innovative learning initiatives based on these. This focus on future-oriented, flexible learning positions me to contribute significantly towards developing a digitally enabled campus and sector-leading digitally enhanced education. My approach combines strong leadership, modern pedagogical techniques, and a commitment to aligning education with industry advancements.

Professional Experience

University of Dundee (2018 - Present)

2024 - Present — **Head of Computing (Discipline)**, *University of Dundee*

I manage a diverse team of academic staff members, ensuring a balanced distribution of teaching, scholarship, and research. I assist in fostering a collaborative environment that bridges the theoretical and practical aspects of computing and contributes significantly to advancing Computing standing in the academic community, both nationally and internationally.

I support and develop excellence in Computing activities aligned with school and university-level strategies. I assist in setting the strategic and operational direction of the more comprehensive School of Science and Engineering. I oversee all Computing activities, working with a larger team of academics to ensure our activities are collectively recognised and supported.

2021 - 2023 — **Computing Learning and Teaching Lead**, *University of Dundee*

I lead teaching activities for computing academic staff, playing an instrumental role in setting and guiding the department's educational initiatives. This role encompasses workload allocation, budget management, and strategically directing the department's evolution in alignment with industry standards and best practices. My leadership is evident in steering Computing degree programs through aspects like recruitment, development, delivery, and accreditation.

Notable Achievements in Role:

○ *Undergraduate Portfolio Development:* I championed the full redevelopment of our undergraduate teaching curriculum, creating a suite of 6 new pathway-based degrees, launching in 2024. This initiative emphasises enhancing employability skills and endorsing a research-led teaching approach. The introduction of this new suite of degrees saw a 40% increase in applications based on the previous year.

○ *Digital Infrastructure Improvements:* Faced with an unprecedented increase in student enrolment and a corresponding strain on our existing IT infrastructure, I spearheaded the adoption of industry-based cloud services to support Computing degrees. This major transition required extensive collaboration with academic colleagues, professional service staff, students, and AWS. This strategic move addressed immediate scalability issues and positioned the department at the forefront of modern, tech-enabled education.

2018 - Senior Lecturer (2022-Present), Lecturer (2018-22), *University of Dundee*
Present I oversee web development and project management curricula for both undergraduate and postgraduate computing students. Drawing on my Certified Scrum Professional and PMI-CAPM certifications, I've designed courses from foundational web development to advanced agile project management methodologies. Driving the university's transition to modern pedagogies, I championed the integration of Cloud Computing in our curriculum, setting a benchmark for teaching practices in how this can be used within pre-existing programmes. Beyond instruction, I guide students in conducting research while providing mentorship to fellow academic staff.

Notable Achievements in Role:
- *Industry Partnerships:* By forging alliances with GitHub Global Campus and AWS Academy, I positioned the university as a collaborator with industry leaders. These partnerships enhance our tech reputation and systematically embed practical, industry-relevant exposure into our curriculum.
- *Microcredential Development and Pipeline:* Recognising the evolution of education towards modular, flexible structures, I spearheaded the development of a cloud computing micro-credential — the first of five planned offerings. Envisioned as stackable qualifications over the next few years, the initiative attracted over 150 enrolments in its inaugural year, underscoring the strategic alignment with modern educational demands.

2018 - UX'd Research Group Lead
Present I steer the UX'd Research Group with a visionary goal of creating a more digitally inclusive society. This encompasses transforming digital accessibility from a mere function to an engaging experience. Despite the challenges posed by the pandemic, including a halt to face-to-face research, my leadership ensured the group's resilience through swift adaptation and skill acquisition in new research methodologies.

Notable Achievements in Role:
- *International Research Impact:* I steered the foundational architecture of WCAG3 (Web Content Accessibility Guidelines), liaising with diverse stakeholders, both internal and external, to W3C. My contributions were later recognised with my appointment as lead for the XR accessibility guidelines workstream where I led initial work on understanding how to develop accessibility guidance for emerging technology platforms.
- *Research Excellence:* Emphasising collaboration and a multi-disciplinary approach, I've readied top-quality papers for REF2029. All papers are in partnership with academics from multiple universities and reflect my commitment to collaborative research that transcends disciplinary boundaries. Ranked at UoD as 4*- (C11), 3*+(C9), 3*(C10), and 3*-(J6, J9).

2021 - Vice Chair of Accessibility, *ACM SIG in Computer-Human Interaction*
Present As a senior member of the SIGCHI Accessibility Committee, I assume the mantle of leadership in the absence of the committee chair. Under my leadership, significant strides have been made towards fostering a universally inclusive environment at SIGCHI events:

Notable Achievements in Role:
- *Stakeholder Engagement:* Pioneered engagement initiatives with conference chairs and stakeholders, succeeding in integrating accessibility considerations into a significant number of SIGCHI events. This achievement was marked by careful dialogue and negotiation, overcoming initial resistance or apathy in many cases.
- *Community Development:* Introduced and championed initiatives that bolstered ties and mutual support among accessibility chairs across ACM SIGCHI-sponsored conferences.

2020 - HCI Research Theme Lead, *Scottish Informatics & Computer Science Alliance*
Present Leading the Scottish HCI community within SICSA, my focus lies in developing inter-university partnerships and enhancing collaboration across Scotland's Computer Science departments.

Notable Achievements in Role:
- *Event Leadership:* I initiate and chair yearly workshops and events designed for Scottish HCI researchers. I work with the community to set priorities for event direction and allocate event funding to meet our yearly community objectives.
- *Community Building:* Championed face-to-face initiatives, acknowledging their pivotal role in community building and successfully securing their priority in funding decisions.

Robert Gordon University (2015 - 2018)

2015 - 2018 **Lecturer**
I was responsible for the teaching of front and back-end web programming on modules at both undergraduate and postgraduate levels. I also taught several modules related to User Experience and Human-Computer Interaction. I led UX research as director of the RGUx research group and focused on the usability and accessibility of web services.

University of Dundee (2010 - 2015)

2014 - 2015 **Research Assistant**
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. As part of this role, I participated in an Academic Secondment with BBC R&D and worked as part of a team examining the user experience of accessibility services. I tested and evaluated new accessibility services developed into products launched on BBC platforms.

2010 - 2014 **PhD Researcher**
In my research, I investigated information retrieval task performance across various age groups. My findings underscored the importance of considering prior Internet experience and fluid cognitive abilities to gain deeper insights into users' browsing experiences. Moreover, the study emphasised that age should not be relied upon as a valid metric for future research.

Education and Qualification History

Formal University Degrees

2014 **Doctor of Philosophy (Ph D.)**, *Computing*, School of Computing, The University of Dundee

2010 **Batchelor of Science (Honours)**, *Applied Computing*, School of Computing, The University of Dundee

Short Courses and Professional Development

2024 **Certificate in Awareness of Mental Health Problems - Scotland**, *Skills Development Scotland*

2023 **Delivering Successful Projects**, *Edinburgh Business School*, MBA Course

2022 **Certificate in Principles of Team Leading**, *Skills Development Scotland*

2022 **Leadership Theory and Practice**, *Edinburgh Business School*, MBA Course

2021 **Certificate in Lean Organisational Management Techniques**, *Skills Development Scotland*

2021 **People, Work and Organisations**, *Edinburgh Business School*, MBA Course

Industry Recognised Qualifications

2023 **Certified Scrum Professional - Scrum Master ®**, *Scrum Alliance*

2022 **Certified Cloud Practitioner**, *Amazon Web Services*

2022 **Certified Advanced Scrum Master ®**, *Scrum Alliance*

2021 **Certifeid AWS Academy Educator**, *Amazon Web Services*

2020 **Certified Scrum Master ®**, *Scrum Alliance*

2019 **Certified Associate in Project Management**, *Project Management Institute*

Professional Memberships and Invited Positions

2020 **Fellow of the Royal Society of the Arts**, *Royal Society of the Arts*

2018 **Fellow of the Higher Education Academy**, *Advance HE*

2012 **Professional Member of the ACM**, *Association for Computing*

2018 **AWS Campus Expert (Scotland)**, *Amazon Web Services*

2018 **GitHub Campus Advisor (Scotland)**, *GitHub Education*

Awards and Honours

Research

2019 **Best Paper Honourable Mention**, *"Developing Accessible Services: Understanding Current Knowledge and Areas for Future Support"*, ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'19).
This designation is given to the top 5% of peer-reviewed submissions to CHI'19.

2013 **First Place, Student Research Competition**, *"Human Cognitive Measurement as a Metric within Usability Studies"*, ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'13)

Teaching

2023 **Student Led Teaching Award Nominee**, *Nominations for "Most Inspirational Teaching", and "Best Advisor or Personal Tutor". Nomination and Final Shortlist for "Innovation in Teaching". Dundee University Students Association - Student Lead Teaching Awards*

2022 **Student Led Teaching Award Nominee**, *Nominations for "Outstanding Commitment to Student Welfare", and "Best Advisor or Personal Tutor". Dundee University Students Association - Student Lead Teaching Awards*

2021 **Best Advisor or Personal Tutor**, *Dundee University Students Association - Student Lead Teaching Awards*

2021 **Student Led Teaching Award Nominee**, *Nominations for "Best Distance Learning Tutor", "Best Advisor or Personal Tutor", and "Innovation in Teaching". Dundee University Students Association - Student Lead Teaching Awards*

2021 **Staff Member of the Year**, *University of Dundee School of Science and Engineering Learning and Teaching Awards*

2021 **Best Assessment and Feedback, Innovation in Teaching Award, Most Supportive Advisor of Studies**, *University of Dundee School of Science and Engineering - Learning and Teaching Awards*

2020 **Staff Member of the Year**, *University of Dundee School of Science and Engineering - Learning and Teaching Awards*

2020 **Best Assessment and Feedback**, *University of Dundee School of Science and Engineering - Learning and Teaching Awards*

Service

2023 **Merit Award - Accelerated Advancement**, *University of Dundee*
Awarded exceptionally to recognise outstanding performance

2021 **Merit Award - Accelerated Advancement**, *University of Dundee*
Awarded exceptionally to recognise outstanding performance

Special Recognition Awards for Outstanding Reviews, *CHI 2024, CHI 2023, CHI 2022, CHI 2021 (x2), CHI Play 2020, CHI 2019 (x2)*, [8 to date]

External Research Funding

Funded Research and Large Grants

2023 **Human Centred AI Hub**, *Tay Cities Deal*, Digital Skills Initiative, Michael Crabb, Gemma Webster. £129,297.

2023 **FlexAble Narratives**, *Innovate UK*, Innovation-to-Commercialisation of University Research (ICURe) Discover Programme, Michael Crabb, Benjamin Gorman. £5,000. *UoD Award £2,500.*

2023 **Carbon Capture and Sustainable Process Building Management**, *Innovate UK*, Knowledge Transfer Partnership, Michael Crabb (PI), Moray Newlands (Co-I). £213,117.

2022 **EMBEDD - Engaging Minoritised Beneficiaries in Engineering Diversity Development**, *Royal Academy of Engineering*, Margi Vilnay, Leon Chernin, Michael Crabb, Keith Johnston, Olanre Lewis, Markus Pakleppa, D Shamvedi, Kate Ward. £98,259.

2019 **HCI Camp - Research Methods Summer School**, *Funding from SICSA, Overleaf, and Ticket Sales*, Michael Crabb (PI), Miguel Nacenta (Co-I). £17,754.

2018 **Accessible Reality - Augmented Reality Interaction Techniques with Accessibility at its Core**, *Carnegie Trust for the Universities of Scotland*, Research Incentive Scheme, Michael Crabb (PI). £4,928.

2016 **Defining the Future of Game Accessibility**, *Scottish Funding Council*, SICSA Knowledge Exchange Short Theme, Michael Crabb (PI), Michael Heron (Co-I). £3,800.

SFC Innovation Voucher Scheme - Working With Industry

2023 **Carbon Capture and Sustainable Process Building Management**, *Scottish Funding Council*, Innovation Voucher Scheme, Michael Crabb (PI), Donna Butchart (Co-I). £4,996.

2022 **Technology Enhanced Education for Older Adults**, *Scottish Funding Council*, Innovation Voucher Scheme, Michael Crabb (PI), Linda Steedman (Co-I). £5,000.

2021 **XR Training Guidelines for Future Application Development**, *Scottish Funding Council*, Innovation Voucher Scheme, Michael Crabb (PI), Serge Sange (Co-I). £5,000.

2021 **Growth Mindset Yeti − A Framework for Application Direction**, *Scottish Funding Council*, Innovation Voucher Scheme, Michael Crabb (PI), Alexia Barrable (Co-I), Carol Arnott (Co-I). £5,000.

2018 **A System to Gather Structured Argument Data**, *Scottish Funding Council*, Innovation Voucher, Michael Crabb (PI), Kirsty Noble (Co-I). £4,625.

2018 **Legible Data: Smart Glasses Application**, *Scottish Funding Council*, Innovation Voucher, Michael Crabb (PI), Duncan Hart (Co-I). £3,869.

2017 **Skillfluence: Online Collaboration Tool**, *Scottish Funding Council*, Innovation Voucher, Michael Crabb (PI), Alison Gray (Co-I). £4,881.

2016 **SpaceIPX: Web Portal**, *Scottish Funding Council*, Innovation Voucher, Michael Crabb (PI), Bruce Thomson (Co-I). £4,981.

2016 **FireSpec: Mobile Application**, *Scottish Funding Council*, Innovation Voucher, John Isaacs (PI), Michael Crabb (Co-I), John Aitken (Co-I). £4,861.

Student Internship Funding

2018 **Gaming for Individuals with Severe Visual Impairment**, *Carnegie Trust for the Universities of Scotland*, Vacation Scholarship, Marcus Robertson-Jones (PI), Michael Crabb (Co-I). £2,000.

2017 **UI Prompts to Keep Older Adults Safe Online**, *Carnegie Trust for the Universities of Scotland*, Vacation Scholarship, Zaklina Rycko (PI), Michael Crabb (Co-I). £1,350.

2017 **Recolouring IDEs for Dyslexia**, *Carnegie Trust for the Universities of Scotland*, Vacation Scholarship, Cara Henderson (PI), Michael Crabb (Co-I). £1,350.

2017 **Future Web Trends and Accessibility Guidelines**, *Carnegie Trust for the Universities of Scotland*, Vacation Scholarship, Graham Stead (PI), Michael Crabb (Co-I). £1,350.

2016 **Increasing Board Game Interaction with Projected Content**, *Carnegie Trust for the Universities of Scotland*, Vacation Scholarship, Kirsty Noble (PI), Michael Crabb (Co-I). £1,350.

Peer-Refereed Journal Articles

J.9 **A systematic review in understanding stakeholders' role in developing adaptive learning systems**, *Nawaf Alajlani, Michael Crabb & Iain Murray* , Computers in Education (2023), `https://doi.org/10.1007/s40692-023-00283-x` **REF Ranked at 3*-**

J.8 **Communication Challenges in Social Board Games**, *Michael Crabb & Michael Heron*, Simulation and Gaming (2023), `https://doi.org/10.1177/1046878123118390` **REF Ranked at 2***

J.7 **Understanding mindsets, skills, current practices, and barriers of adoption of digital accessibility in Kuwait's software development landscape**, *Zainab AlMeraj, Dari Alhuwail, Rumana Qadri, Shok Shama & Michael Crabb*, Universal Access in the Information Society (2023), `https://doi.org/10.1007/s10209-023-00980-5`

J.6 **Author Reflections on Creating Accessible Academic Papers** , *Rachel Menzies, Garreth Tigwell, Michael Crabb*, ACM Transactions on Accessible Computing. Volume 15.Issue 4 (2022), `https://doi.org/10.1145/3546195` **REF Ranked at 3*-**

J.5 **W3C Accessibility Guidelines for Mobile Games**, *Amy Wilson, Michael Crabb*, The Computer Games Journal 7, p.49–61. (2018), `https://doi.org/10.1007/s40869-018-0058-7`

J.4 **Eighteen Months of Meeple Like Us: An Exploration into the State of Board Game Accessibility**, *Michael James Heron, Pauline Helen Belford, Hayley Reid, Michael Crabb*, The Computer Games Journal 7, p.97-114. (2018), `https://doi.org/10.1007/s40869-018-0057-8`

J.3 **Meeple Centred Design: A Heuristic Toolkit for Evaluating the Accessibility of Tabletop Games**, *Michael James Heron, Pauline Helen Belford, Hayley Reid, Michael Crabb*, The Computer Games Journal 7, p.97-114. (2018), `https://doi.org/10.1007/s40869-018-0057-8`

J.2 **Understanding the Diverse Needs of Subtitle Users in a Rapidly Evolving Media Landscape**, *Mike Armstrong, Andy Brown, Michael Crabb, Chris Hughes, Rhianne Jones, James Sandford*, SMPTE Motion Imaging Journal, vol. 125, no. 9, p.33-41. (2016), `https://doi.org/10.5594/JMI.2016.2614919`

J.1 **An Analysis of Age, Technology Usage, and Cognitive Characteristics Within Information Retrieval Tasks**, *Michael Crabb and Vicki L. Hanson. 2016*, ACM Transactions on Accessible Computing (2016), `https://doi.org/10.1145/2856046` **REF Ranked at 3*-**

Peer-Refereed Papers, published in Conference Proceedings

C.12 **Perceived communication experiences of children and young people with Down syndrome: The impact of people, places, and AAC methods**, *Elaine Scougal, Annalu Waller, Alissa Melinger & Michael Crabb*, CHI Conference on Human Factors in Computing Systems (CHI '23), `https://doi.org/10.1145/3544549.3585660` [Acceptance rate: 34%] **REF Ranked at 2***

C.11 **I'm Surprised So Much Is Connected": A Study on Users' Online Accounts**, *Sven Hammann, Michael Crabb, Saša Radomirović, Ralf Sasse, and David Basin*, CHI Conference on Human Factors in Computing Systems (CHI '22), `https://doi.org/10.1145/3491102.3502125` [first round acceptance rate: 12.5%] **REF Ranked at 4*-**

C.10 **Adaptive Subtitles: Preferences and Trade-Offs in Real-Time Media Adaption**, *Benjamin M. Gorman, Michael Crabb, and Mike Armstrong*, CHI Conference on Human Factors in Computing Systems (CHI '21), `https://doi.org/10.1145/3411764.3445509` [acceptance rate: 26.3%] **REF Ranked at 3***

C.9 **Household Surface Interactions: Understanding User Input Preferences and Perceived Home Experiences**, *Garreth W. Tigwell and Michael Crabb*, Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20), `https://doi.org/10.1145/3313831.3376856` [acceptance rate: 24.3%] *Best Paper* **REF Ranked at 3*+**

C.8 **Developing Accessible Services: Understanding Current Knowledge and Areas for Future Support**, *Michael Crabb, Michael Heron, Rhianne Jones, Mike Armstrong, Hayley Reid, and Amy Wilson*, Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), `https://doi.org/10.1145/3290605.3300446` [acceptance rate: 23.8%] *Honourable Mention Award* **REF Ranked at 3*+**

C.7 **Inclusive Design for Immersive Spaces**, *Michael Crabb, Daniel Clarke, Husam Alwaer, Michael Heron & Richard Laing*, The Design Journal, 2019, `https://doi.org/10.1080/14606925.2019.1594934` **REF Ranked at 2*+**

C.6 **Take a GANDER. Gathering Accessibility Needs by Doing Explorative Research**, *Michael Crabb, Rachel Menzies, Garreth W. Tigwell, Daniel Clarke, Christopher Lim & Cara Henderson* , The Design Journal, 2019, `https://doi.org/10.1080/14606925.2019.1595040`

C.5 **An Analysis of User Engagement in Relation to Computing Workshop Activities**, *Rachel Menzies, Michael Crabb, Daniel Herron, Karen Petrie, Craig Stewart, and Mark Zarb*, Proceedings of the 46th ACM Technical Symposium on Computer Science Education (SIGCSE '15), `https://doi.org/10.1145/2676723.2677272` [acceptance rate: 43.5%]

C.4 **Dynamic Subtitles: The User Experience**, *Andy Brown, Rhia Jones, Mike Crabb, James Sandford, Matthew Brooks, Mike Armstrong, and Caroline Jay*, Proceedings of the ACM International Conference on Interactive Experiences for TV and Online Video (TVX '15), `https://doi.org/10.1145/2745197.2745204` [acceptance rate: 24%]

C.3 **Online News Videos: The UX of Subtitle Position**, *Michael Crabb, Rhianne Jones, Mike Armstrong, and Chris J. Hughes*, Proceedings of the 17th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '15), `https://doi.org/10.1145/2700648.2809866` [acceptance rate: 23%]

C.2 **Responsive design for personalised subtitles**, *Chris J. Hughes, Mike Armstrong, Rhianne Jones, and Michael Crabb*, Proceedings of the 12th Web for All Conference (W4A '15), `https://doi.org/10.1145/2745555.2746650` [acceptance rate: 35%]

C.1 **Age, technology usage, and cognitive characteristics in relation to perceived disorientation and reported website ease of use**, *Chris J. Hughes, Mike Armstrong, Rhianne Jones, and Michael Crabb*, Proceedings of the 16th international ACM SIGACCESS conference on Computers & Accessibility, `https://doi.org/10.1145/2661334.2661356`[acceptance rate: 26%]

White Papers

WP.5 **Dynamic Subtitles: The User Experience**, *Andy Brown, Michael Crabb, James Sandford, Matthew Brooks, Michael Armstrong, Caroline Jay*, BBC White Paper WHP 305, 2016., `https://www.bbc.co.uk/rd/publications/whitepaper305`

WP.4 **The development of a Framework for Understanding the UX of Subtitles**, *Michael Crabb, Michael Armstrong*, BBC White Paper WHP 316, 2016., `https://www.bbc.co.uk/rd/publications/whitepaper305`

WP.3 **Online News Videos: The UX of Subtitle Position**, *Michael Crabb, Michael Armstrong, Chris Hughes*, BBC White Paper WHP 317, 2016., `https://www.bbc.co.uk/rd/publications/whitepaper317`

WP.2 **Responsive Design for Personalised Subtitles**, *Michael Crabb, Michael Armstrong, Chris Hughes*, BBC White Paper WHP 295, 2015., `https://www.bbc.co.uk/rd/publications/whitepaper295`

WP.1 **Understanding the Diverse Needs of Subtitle Users in a Rapidly Evolving Media Landscape**, *Michael Armstrong, Andy Brown, Michael Crabb, Chris Hughes, James Sandford*, BBC White Paper WHP 307, 2015., `https://www.bbc.co.uk/rd/publications/whitepaper307`

Other Publications and Research Posters

O.11 **I'm Doing The Best I Can": Understanding Older Adults' Account Management Strategies**, *Melvin Abraham, Michael Crabb, and Saša Radomirović*, 11th Workshop on Socio-Technical Aspects in Security 2021), `https://link.springer.com/chapter/10.1007/978-3-031-10183-0_5`

O.11 **Graphic Novel Subtitles: Requirement Elicitation and System Implementation**, *Amy Gourlay, Michael Crabb*, In Proceedings of the 2021 ACM Conference on Interactive Media Experiences (IMX'21)), `https://doi.org/10.1145/3452918.3465489`

O.11 **The Development of a Framework for Understanding the UX of Subtitles**, *Michael Crabb, Rhianne Jones, and Mike Armstrong*, In Proceedings of the 17th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '15), `https://doi.org/10.1145/2700648.2811372`

O.6 **Human cognitive measurement as a metric within usability studies**, *Michael Crabb*, CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13), `https://doi.org/10.1145/2468356.2479492` *Student Research Competition, First Place*

O.5 **Cognitive Usability: Understanding Older Adults Search Habits**, *Michael Crabb*, The British Computing Society: Human Computer Interaction Conference 2012

O.4 **Understanding Older Adults Search Habits**, *Michael Crabb, Vicki Hanson, Andy Cobley*, SICSA PhD Conference, 2012

O.3 **Cognitive Usability: Using Human Factors to Influence Future Online Usability Requirements**, *Michael Crabb, Vicki Hanson, Andy Cobley*, EPSRC Digital Economy Conference, 2012

O.2 **Aiding Data Gathering in Web Usability Studies**, *Michael Crabb, Vicki Hanson, Andy Cobley*, EPSRC Digital Economy Conference, 2011

O.1 **Understanding Older Adults Search Habits**, *Michael Crabb, Vicki Hanson, Andy Cobley*, EPSRC Digital Economy Conference, 2011

Service to the Profession

Leadership Roles

2021 - Present **Vice Chair of Accessibility**, *ACM Special Interest Group in Computer Human Interaction*

2020 - Present **Research Theme Lead**, *Scottish Informatics and Computer Science Alliance (SICSA) HCI Research Theme*, Application and Appointed Role

2019 - 2021 **Sub-Group Lead**, *World Wide Web Consortium, Web Content Accessibility Guidelines, XR: Mixed Reality.*

2021 **Academic (General) Chair**, *The 2021 Scottish Informatics and Computer Science Alliance Conference, Dundee*

2021 **Accessibility Chair**, *The 2021 IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR '21)*

2021 **Doctoral Consortium Mentor**, *The 24th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2021)*

2021 **Event Organiser**, *The Scottish Informatics and Computer Science Alliance 2021 PreCHI Day*

2021 **Event Organiser**, *Socially Distant Research Methods Workshop, Online 2021. Sponsored by SICSA*

2021 **Accessibility Chair**, *The 2021 ACM IMX Conference on Interactive Media Experiences (IMX '21)*

2021 **Event Organiser**, *The Scottish Informatics and Computer Science Alliance 2020 HCI All Hands Meeting, Dundee, Scotland.*

2019 **Poster Chair**, *The Scottish Informatics and Computer Science Alliance PhD Conference 2019*

2019 **General Chair and Lead Organiser**, *Human Computer Interaction Research Methods Summer School (HCI Camp 2019)*
I was responsible for all organisation aspects of this weeklong research methods summer school that was attended by 44 PhD students and 9 academic facilitators. Representation from 16 international universities.

2019 **Doctoral Consortium Chair**, *The Scottish Informatics and Computer Science Alliance Human Computer Interaction Theme Event 2019*

2019 **Event Organiser**, *The Scottish Informatics and Computer Science Alliance 2019 PreCHI Day*

2018 **Academic (General) Chair**, *The Scottish Informatics and Computer Science Alliance PhD Conference*

2016 - 2017 **Knowledge Exchange Theme Lead**, *Scottish Informatics and Computer Science Alliance (SICSA) Future of Game Accessibility Knowledge Exchange Theme*

2014 **Event Organiser**, *The Scottish Informatics and Computer Science Alliance 2014 HCI All Hands Meeting*

2011 **Doctoral Consortium Mentor**, *The 2011 British Computer Society Human Computer Interaction Conference (BCS-HCI'11)*

2011 **Website Chair**, *UKRI EPSRC Digital Economy Conference, 2011. Newcastle, UK.*

Senior Program Committee Roles

2022 **Awards / Best Paper Committee**, *The 2022 ACM CHI Conference on Human Factors in Computing Systems (CHI '22), New Orleans, LA.*

2021	**Awards / Best Paper Committee**, *The 2021 ACM CHI Conference on Human Factors in Computing Systems (CHI '21), Tokyo, Japan.*
2020	**Best Paper Committee**, *The 2020 ACM ASSETS Conference on Human Factors in Computing Systems (ASSETS '20), Athens, Greece.*
2020	**Best Poster/Demo Committee**, *The 2015 ACM IUI 2015 Conference on Intelligent User Interfaces (IUI-2015), Atlanta*

Programme Committee Roles

2020 - Present	**Associate Chair**, *Subcommittee on Accessibility and Aging, ACM CHI Conference on Human Factors in Computing Systems (CHI '20, '21, '22, '23, '24)*
2022 - Present	**Associate Chair**, *The ACM Conference on Nordic Computer Human Interaction (NORDICHI'22, NORDICHI'24)*
2020 - 2022	**Associate Chair**, *The 2022 ACM IMX Conference on Interactive Media Experiences (IMX '20, '21, '22)*
2016 - Pres	**Program Committee Member**, *The International ACM SIGACCESS Conference on Computers and Accessibility.*
2021 - 2022	**Program Committee Member**, *User Modelling and Personalisation Track, The Web Conference*

Journal Reviewing

2017 - Pres	**Reviewer**, *Universal Access in the Information Society, Springer*
2017 - Pres	**Reviewer**, *Behaviour & Information Technology, Taylor & Francis*
2015 - Pres	**Reviewer**, *ACM Transactions on. Accessibility, Association for Computing Machinery – Special Interest Group on Accessibility*

Conference Reviewing

2014 - Pres	**Reviewer**, *ACM Conference on Human Factors in Computing Systems* Special Recognition Awards for Outstanding Reviews were received in 2023, 2022, 2021, 2019.
2015 - 2017, 2020 - 2021	**Reviewer**, *ACM IMX Conference on Interactive Media Experiences [Previously Television Experience]*
2017, 2021	**Reviewer**, *ACM Conference on Creativity and Cognition*
2021	**Reviewer**, *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR)*
2020	**Reviewer**, *ACM CHI Play Conference on Playful Computer Human Interaction* Special Recognition Awards for Outstanding Reviews were received in 2020
2017 - 2018, 2020	**Reviewer**, *ACM Conference on Designing Interactive Systems*
2015 - 2016, 2019	**Reviewer**, *ACM Interaction Design and Children Conference*
2014, 2016	**Reviewer**, *ACM Conference on Computer Supported Cooperative Work*
2015 - 2016	**Reviewer**, *ACM Conference on Intelligent User Interfaces*

Invited Presentations and Guest Lectures

2023	**Flexible Media - An Inclusive and Adaptive Approach to Media Design**, *Invited Talk, University College Dublin, HCI@UCD Seminar Series.*
2022	**"I'm Surprised So Much Is Connected": A Study on Users' Online Accounts"**, *Conference Presentation at 37th ACM CHI Conference on Human Factors in Computing Systems (CHI-2022), Online.*
2021	**"Accessible Everyone"**, *WorkDay, Invited Speaker for Internal Industry Event.*

2019 **"Developing Accessible Services"**, *Conference Presentation at 35th ACM CHI Conference on Human Factors in Computing Systems (CHI-2019), Glasgow.*

2019 **"UX with Hard-to-Reach People in Easy-to-Reach Places"**, *Invited speaker at UX Scotland, Edinburgh.*

2018 **"Accessible Everyone"**, *Invited speaker at UX Scotland, Edinburgh.*

2018 **"Accessible Everyone"**, *Invited speaker at Accessibility Scotland, Edinburgh.*

2018 **"Accessible and Assistive Interfaces"**, *Invited speaker at the Scottish Informatics and Computer Science Alliance 2018 HCI All Hands Meeting.*

2016 **"Teaching the Cloud Programmers of Tomorrow"**, *Invited speaker at ScotCloud 2016 Conference.*

2015 **"Dynamic Subtitles - The User Experience"**, *Conference Presentation at the 2015 ACM Conference on Interactive Media Experiences (IMX'15).*

2015 **"Online News Videos - The UX of Subtitle Position"**, *Conference Presentation at the 17th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2015).*

2014 **"Human Cognitive Measurement as a Metric within Usability Studies"**, *Conference Presentation the 29th ACM CHI Conference on Human Factors in Computing Systems (CHI-2014), Paris.*

2012 **"Aiding Data Gathering in Web Usability Studies"**, *Conference Presentation at the 2012 EPSRC Digital Economy Conference.*

2012 **"Using Human Factors to Influence Future Online Usability Requirements"**, *Conference Presentation at the 2012 EPSRC Digital Economy Conference.*

Teaching Experience and Curriculum Design

Curriculum Design and Accreditation - Leadership

2024 **BCS Accreditation Lead**, *Computing UG Portfolio and MSc Computer Science*, The University of Dundee.

I successfully led our department through the British Computer Society Accreditation process, ensuring our computing degrees met the required standards for educational quality and relevance to the computing profession. The accreditation process affirmed our commitment to excellence, innovation in teaching, and the provision of comprehensive academic and pastoral support, enhancing our students' educational journey and career readiness.

2024 **Periodic Programme Review Lead**, *Computing UG and TPG Portfolio*, The University of Dundee.

I successfully led the Periodic Programme Review for our computing degrees, championing inclusivity, industry collaboration, agile methodologies, and student-centred learning. Our team's dedication was recognised by the Review Board, particularly for embedding inclusivity within the curriculum, fostering strong links with industry through placements and partnerships with AWS Academy & GitHub, and enhancing employability through our Agile Development and Work Placement modules.

2023 **Undergraduate Degree Development Lead** , *BSc Computer Science (and pathways)*, The University of Dundee.

I was responsible for the redevelopment of Undergraduate Computing Programmes at the University of Dundee, creating a suite of 6 new pathway-based degrees that launch in 2024. This full redevelopment of our undergraduate teaching curriculum was carried out to promote employability skills among graduates and to emphasise the benefits of a research-led teaching approach.

Curriculum Design and Accreditation

2024   **Degree Approval Event**, *External Panel Member*, BSc Digital Technology Solutions, Liverpool John Moores University

2024   **Degree Approval Event**, *Internal Panel Member*, MDes Communication Design & MDes Interiors, University of Dundee

2024   **Periodic Programme Review Panel Member**, *Critical Friend*, BSc Graduate Apprenticeship, University of Dundee

2023   **Periodic Programme Review Panel Member**, *Internal Panel Member*, MSc Design for Business, University of Dundee

2022   **Periodic Programme Review Panel Member**, *Critical Friend*, BSc Civil Engineering, University of Dundee

External Examiner Positions

2021 - 2025   **Coventry University**
- **University Chief Examiner** *(2023-25)*
- BSc Cloud Computing *(2021-25)*
- Foundation in Computing and Mathematics *(2023-25)*
- BSc Computing Science, BSc Cyber Security, Digital and Technology Solutions Professional Degree Apprenticeship *(2022-23)*

2023 - 2027   **Goldsmiths - University of London**
- MSc User Experience Engineering

2024 - 2028   **City - University of London**
- MSc AI in User Experience Engineering

Teaching Experience

2019 - Pres   **Agile Methodologies**

I teach modules that focus on the development of agile software skills with attention focused on lean, scrum, and extreme programming. Students participate in an intensive teaching block followed by a two-week group coursework with an industrial client. They are expected to develop a prototype system and follow scrum best-practice throughout. Modules taught include:
- AC31007 - Agile Software Engineering (2019 - Present)
- AC51004 - Agile Engineering (2019 - Present)

2015 - Pres   **Introductory Web Development**

I teach modules where students are taught essential aspects to web design and development. A focus is placed on understanding HTML, CSS, JavaScript, and various libraries/frameworks that are core to modern web development. Students are set coursework elements throughout the course to evaluate their understanding and to assess their ability to implement web applications. Modules taught include:
- CS11001 - Front End Website Development (2023 - Present). The University of Dundee.
- AC51046 - Web Application Development (2022). The University of Dundee.
- AC11002 - WWW Authoring (2018 - 2023). The University of Dundee.
- CM1016 - Computing Information Systems (2016 - 2017). Robert Gordon University.
- CMM507 - Web System Development (2015 - 2016). Robert Gordon University

2016 - 2019   **Software Development**

I taught on modules where students develop an understanding of physical/digital systems with a focus on the Arduino software platform. Students are given the opportunity to learn about smart homes, smart-city infrastructure, and the legal and ethical issues related to deploying computer systems in our homes. Modules taught include.
- AC22006 - Physical Computing (2018 - 2019). University of Dundee
- CM2027 - Software Architecture and Engineering (2016). Robert Gordon University.
- CM2019 - Programming Mobile Devices (2016). Robert Gordon University.

2016 - 2019	**Human Computer Interaction**

I taught on modules that explore human-computer interaction and the importance of user-centred design. Students are given the opportunity to explore cutting edge research within these areas and to apply findings to their own software development work. Modules taught include:

- AC52012 - Research Methods (2022 - 2023)
- AC41001 - Research Frontiers (2019 - 2023)
- CM3026 - User-Centred Design (2015 - 2016). Robert Gordon University.
- CM3009 - Perception and Visualisation (2016). Robert Gordon University.

2015 - 2016	**Advanced Web Development**

I taught on modules where students are taught aspects of web development that relate to server-side technologies and data structures. This can include traditional web stacks such as LAMP (Linux, Apache, MySQL and PHP) and more traditional stacks such as MERN (Mongo, Express, React, Node). Students are set coursework elements throughout the course to evaluate their understanding and to assess their ability to implement web applications. Modules taught include:

- CM3028 - Web Application Development (2015 - 2016). Robert Gordon University.
- CM4025 - Enterprise Web Systems (2016). Robert Gordon University.
- CM3006 - Internet-Based Programming (2015). Robert Gordon University.

Research Staff and Student Supervision

Research Staff Supervision

2019	**Dr Garreth Tigwell**, *Research Assistant*, School of Science and Engineering, University of Dundee.

PhD Student Supervision

2023 - Pres	**Anderson You**, *Investigating Subtitle Adjustments for People with Aphasia.*, Primary Supervisor
2022 - Pres	**Nawaf Alajlani**, *Investigating the Inclusion of Educators as Stakeholders within Adaptive Learning*, Primary Supervisor., Primary Supervisor
2020 - 2021	**Lee Cheatley**, *Continued Bonds: Towards the Design of Computationally Creative Bereavement Support*, Secondary Supervisor.
2019 - Pres	**Rob Ryder-Richardson**, *Developing the User Experience within the Customer Journey to University*, Primary Supervisor.
2020 - 2024	**Anthony Sweeney**, *Situating Audio for Environments With Operator Reactive Knowledge*, Primary Supervisor.
2019 - 2023	**Labake Odushegun**, *Aesthetic Semantics: Developing Affective Visual to Non-Visual User Experiences Using Cognitive Affect Rating*, Primary Supervisor.

PhD Thesis and Examination Committees

2023	**PhD External Examiner**, *Gloria Mittmann*, University of Vienna
2023	**PhD External Examiner**, *Alice Lynch*, University of St. Andrews
2022	**Transfer of Ordinance Committee**, *Elaine Scougal*, University of Dundee
2021	**PhD Thesis Committee Convenor**, *Debela Gemechu*, University of Dundee
2020	**PhD Thesis Committee Convenor**, *Rory Duthie*, University of Dundee
2020	**PhD External Examiner**, *Charalampos Kyfonidis*, Strathclyde University
2020	**Transfer of Ordinance Committee**, *Dominic De Franco*, University of Dundee
2019	**Transfer of Ordinance Committee**, *Ladan Safiee*, University of Dundee

Summer Research Internship Supervision

2021 **Gina Fenton**, *Maximising Adventure Chances for Historic Augmented Interaction Routes*, University of Dundee Innovation and Impact Development Fund Internship.

2018 **Marcus Robertson-Jones**, *Gaming for Individuals with Severe Visual Impairment*, Carnegie Vacation Scholarship. Carnegie Trust for the Universities of Scotland.

2017 **Zaklina Rycko**, *UI Prompts to Keep Older Adults Safe Online*, Carnegie Vacation Scholarship. Carnegie Trust for the Universities of Scotland.

2017 **Cara Henderson**, *Recolouring IDEs for Dyslexia*, Carnegie Vacation Scholarship. Carnegie Trust for the Universities of Scotland.

2017 **Graham Stead**, *Future Web Trends and Accessibility Guidelines*, Carnegie Vacation Scholarship. Carnegie Trust for the Universities of Scotland.

2016 **Kirsty Noble**, *Increasing Board Game Interaction with Projected Content*, Carnegie Vacation Scholarship. Carnegie Trust for the Universities of Scotland.