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My research operates at the interface between design, health and care practice, and people's experience of products and services. I use collaborative, participative approaches to co-develop healthcare interventions with a focus on ageing, health and care in work funded by UKRI grants (EPSRC, ESRC, AHRC and MRC), the National Institute for Healthcare Research, the Health Foundation, and charitable trusts. Recent inter-disciplinary studies have addressed challenges in stroke rehabilitation, ageing, nutrition monitoring and management, spinal cord injury, end-of-life care, dementia, and infection prevention and control. For this work I was awarded the 'best research' category in the 2018 inaugural AHRC-Wellcome Health Humanities Medal awards. In 2017 I was named as a Key Change Maker and Thought Leader in the British Council's Design for Disability and an Ageing Society a Review of the State of Play in the UK (UsCreates), and I was winner, jointly with Dr David Loudon, of the Nexus Life Sciences Award (West) 2011 for Innovation. In 2004 I received a Japan Foundation Research Fellowship for a Japan-based study Inclusive design and technologies in Japan, an ongoing research programme which ran with regular support from the Great Britain Sasakawa Foundation until 2014.

Review

I review for (*journals*) The Design Journal, Design Studies, Design for Health; and (*grant-awarding bodies*) UKRI COVID-19 call, AHRC, ESRC, EPSRC, Swedish Research Council for Health, Working Life & Welfare, and the Netherlands Organisation for Scientific Research.

Recent research grants

[DA Vinci](#) (Developing a visual identification method for people with cognitive impairment in institutional settings) THIS.Institute, Co-I. (PI Fitzsimons, PoCF) 2020-22. [VIPVis](#) (Veterinary Infection Prevention through Visualisation), AHRC Follow-on grant. PI, 2021, Grant Ref: AH/V001795/1. [Ultrasonic Glasgow](#), Royal Society of Edinburgh, Arts and Humanities Small Grant, PI. 2018-19, Grant Ref: 58483. [AMRSim](#), A Microbial Reality Simulator for Veterinary Training and Practice, AHRC AMR Theme 3b grant, PI, 2017-19, Grant Ref AH/R002088/1. [CREATE](#) (Collaborative Rehabilitation in Acute Stroke), NIHR Health Services and Delivery Research. Co-I (PI Jones, Kingston and St Georges), 2016-19, Grant Ref HS&DR - 13/114/95. [HAIVAIRN](#) (Healthcare Associated Infection Visualisation and Ideation Research Network) project, AHRC Network grant, PI, 2016-17, Grant Ref AH/N006429/1. [visionOn](#), staff training tool for the prevention of healthcare associated infections, AHRC Follow-on grant, PI, 2015-16, Grant Ref AH/M00628X/1. [SEED](#), Supporting Excellence in End of life care in Dementia, NIHR Programme Grant, Co-I (PI Robinson, Newcastle), 2013-18, Grant Ref RP-PG-0611-20005. [vis-invis](#), visualising the invisible: developing innovative approaches to visualisation to help NHS staff prevent and control healthcare associated infections, AHRC/SFC, A Healthier Scotland initiative, Partner (PI Macduff, Robert Gordon University), 2011-12. [mappmal](#), multidisciplinary approach to develop a prototype for the prevention of malnutrition in older people: products, people, places and procedures, ESRC New Dynamics of Ageing Programme, Co-I (PI Moynihan, Newcastle, 2008-11, Grant Ref RES-354-25-0001. Leading to [hospitalfoodie](#), a demonstration prototype for an innovative food and nutrition management system designed to address malnutrition issues in older hospital patients. [envisage](#), a means to promote independence by involving users in their physical rehabilitation through the use of visualisation methods, MRC Lifelong Health and Wellbeing programme, Co-I. (PI Rowe, Strathclyde), 2010-13, Grant Ref GO900583. [envision](#), innovation in envisioning dynamic biomechanical data to inform healthcare and design guidelines and strategy, ESRC New Dynamics of Ageing Programme, PI, 2007-09, Grant Ref RES-352-25-0005 [design+rehab](#), the use of design approaches to assist rehabilitation of spinal cord injuries patients conducted jointly with the Queen Elizabeth National Spinal Injuries Unit in Glasgow, supported by the Royal Society of Arts, PI. [InclusiveCAD](#), Integration of biomechanical and psychological parameters of functional performance of older adults into a new CAD package for inclusive design, EPSRC EQUAL (Extending QUALity of Life) initiative, Co-I (PI Nicol, Strathclyde), 2002-05, Grant Ref GR/R26856/01. [age+japan](#): Great Britain Sasakawa Foundation (GBSF) award - research into inclusive approaches to housing, 2014; GBSF Butterfield Awards - healthcare provision for ageing and disabled populations (2007-10); Japan Foundation Research Fellowship, Inclusive spaces: creating accessible products, environments and services for a dynamically ageing population, 2004; Royal Academy of Engineering Global Research Award, 2004.

Selected recent outputs

Full list of publications available at: [http:// radar.gsa.ac.uk/profile/197](http://radar.gsa.ac.uk/profile/197)

- Clarke, D.J., Gombert-Waldron K., Honey, S., Cloud G.C., Harris R., **Macdonald, A.**, McKeivitt C., Robert G., Jones, F. (2021). Co-designing organisational improvements and interventions to increase inpatient activity in four stroke units in England; a mixed-methods process evaluation using Normalisation Process Theory. [BMJ Open](#).
- Macdonald, A.**, et al. (2020). Addressing Infection Risk in Veterinary Practice through the Innovative Application of Interactive 3D Animation Methods. *The Design Journal*. [ISSN 1460-6925](#)
- Jones, F., Gombert-Waldron, K., Honey, S., Cloud, G., Harris, R., **Macdonald, A.**, McKeivitt, C., Robert, G. and Clarke, D. (2020). *Using co-production to increase activity in acute stroke units: the CREATE mixed-methods study*. Health Services and Delivery Research, 8 (35). [ISSN 2050-4349](#)
- Macdonald, A.S.** (2020). Co-design: a democratising force for improving experience and future intervention in healthcare delivery? In: P. Crawford, B. Brown & A. Charise (eds), *Companion to the Health Humanities*. Taylor & Francis.
- Macdonald, A. S.** (ed.) (2019). [Ultrasonic Glasgow](#): a celebration of The Glasgow School of Art's contribution to the history and development of medical obstetrics ultrasound. Glasgow School of Art.
- Macdonald, A.S.** (2018). In: Walker, A. (ed.). Evaluating the visualisation of dynamic biomechanical data for healthcare and design, *New Dynamics of Ageing 1*. 12: 235-256. University of Bristol, Policy Press.
- Moynihan, P., Methven, L., Teal, G., Bamford, C. & **Macdonald, A.S.** (2018). In: Walker, A. (ed.). Combating malnutrition in hospitals, *New Dynamics of Ageing 2*. 10: 177-196. University of Bristol, Policy Press.
- Macdonald, A.S.**, Neves, S., McLellan, E., Poole, M., Harrison-Dening, K., Tucker, S., Bamford, C. & Robinson. (2018). Co-designing new resources to support better quality end of life care with people with dementia and family carers. *Journal of Dementia Care*. 26(1) January/February; 28-31.
- Macdonald, A.S.** (2017). Negotiating design in sceptical territory: lessons from healthcare. In: R. Cooper and E. Tsekleves (eds), *Design for Health*, 17: 319- 335. Farnham: Gower.
- Macdonald, A.S.**, Macduff, C., Loudon, D. & Wan, S. (2017). Evaluation of a visual tool co-developed for training hospital staff on the prevention and control of the spread of healthcare associated infections. *Infection, Disease & Health*. DOI: 10.1016/j.idh.2017.06.002
- Robert, G. & **Macdonald, A.S.** (2017). Co-design, organisational creativity and quality improvement in the healthcare sector: 'designerly' or 'design-like'? In: D. Sangiorgi and A. Prendiville (eds), *Designing for service: contemporary issues and novel spaces*. London: Bloomsbury. 9: 117-130.
- Ballinger, C., Loudon, D., Taylor, A. & **Macdonald, A.S.** (2016). Rehabilitation professionals' perceptions of the use of new visualisation software tools with people with stroke, *Disability and Rehabilitation: Assistive Technology*, 11(2): 139-149.
- Loudon, D., Taylor, A. & **Macdonald, A.S.** (2014). The use of qualitative design methods in the design, development and evaluation of virtual technologies for healthcare: stroke case study. In Ma, M., Jain, L., A. & Anderson, P. (eds.) *Virtual and Augmented Reality in Healthcare 1*. Springer-Verlag, Berlin Heidelberg. 371-390.
- Macdonald, A.S.** (2013). The inner resource: enabling the designer within us all - a case study. [The Design Journal, 16\(2\): 175-196](#).
- Macdonald, A.S.**, Teal, G., Bamford, C., and Moynihan, P.J. (2012). *Hospitalfoodie: an inter-professional case study of the redesign of the nutritional management and monitoring system for vulnerable older hospital patients*.
- Research supervision: SEDA qualified for Supervising Postgraduate Research:** Primary Supervisor for PhD students mainly researching and developing the application of design-led research approaches within the ageing, health and care, and inclusive design fields, including: [Sondos Rawas](#): 'An Ethnographic Approach to a Design-led Enquiry into Cross Cultural Inhabitation' (Completed 2021). [Gemma Wheeler](#) 'An investigation of the relevance and integration of contemporary design approaches into spinal cord injury rehabilitation' (PhD, Awarded 2018, AHRC Collaborative Doctoral Award). [Gayle Rice](#): 'A practical exploration into the use and effect of visual communication tools in social work practice'. (PhD, Awarded 2016). [Sandra Neves](#) 'Enjoy your meal: design tools and strategies to improve the post-stroke mealtime experience in rehabilitation'. PhD (Awarded 2015, funded by the Fundacao para a Ciencia e a Tecnologia, Portugal). [Ji-Wei Wu](#) 'Improving the understanding of the innate abilities and coping strategies of visually impaired people: an analysis and modelling of the variables and their spatial navigational abilities'. (PhD, Awarded 2014). [Andy McDonald](#): 'Craft customisation: an investigation into the use of generative systems and physical interfaces to develop co-design experiences that enhance the value of digitally printed textile products'. (PhD, Awarded 2014, AHRC doctoral award). [David Loudon](#): Towards a design tool for visualizing the functional demand placed on older adults by everyday living tasks (PhD, Awarded 2010). [Chris Lim](#): Age and generation effects: handling complex user interfaces and implications for inclusive design (PhD, Awarded 2008).
- PhD / MPhil External Examiner:** Umea Institute of Design, Sweden; Sheffield Hallam University, UK; Aarhus School of Architecture University, Denmark; Loughborough University, UK; University of Dundee, Duncan of Jordanstone School of Design, UK; TUDelft Industrial Design Department, The Netherlands; La Trobe University, Australia.