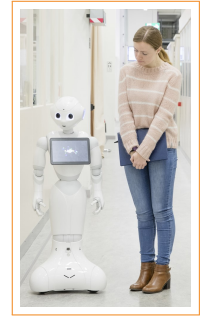


Katie Winkle

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Keywords: Human Robot Interaction; Socially Assistive Robots; Robots in Society; Ethical Robotics

Education & Research Activities

2019- **Research Associate in Responsible Robotics**, University Of the West of England.

Undertaking research and development in data logging and explainer systems, specifically development and testing an Ethical Black Box (the robot equivalent of a flight data recorder), together with a system that can access data logs to generate human understandable explanations of what the robot did and why. Working with the project team and industrial project partners on the design and enactment of mock accidents, and the processes of post accident analyses

2015- **EPSRC PhD in Robotics and Autonomous Systems**,
University of Bristol and University of the West of England.

- Thesis title: "Social Influence in HRI: with Application to Socially Assistive Robots" supervised by Dr Paul Bremner, Prof Ute Leonards, Prof Praminda Caleb-Solly & Dr Ailie Turton. Additional close collaboration with Dr Severin Lemaignan.
- PhD research highlights:
 - Contributed to literature on co-/participatory design methods for robot design/development having worked closely with healthcare professionals
 - Interdisciplinary work drawing particularly on social and persuasion psychology, healthcare and behaviour change
 - Designed and undertaken multiple HRI studies e.g. on social robot behaviour and persuasiveness, robot emotion portrayal and robot deception
 - Conducted significant 9 week 'gym robot' study investigating the use of human-in-the-loop supervised machine learning to generate autonomous, socially-complex assistive robot behaviour
- Active member of the ECHOS (HRI), Assistive Robotics and Robot Ethics research groups at Bristol Robotics Laboratory contributing to group activities and collaborating on additional research projects beyond independent PhD activities

2011-2015 **MEng Mechanical Engineering**, *First Class Honours*, University Of Bristol.

Supervision & Teaching Experience

2019- **MSc Student Supervision**, Currently co-supervising two MSc Robotics students with Dr Severin Lemaignan on the 'RoboPets' project; investigating use of machine learning in generating social behaviours for the Vektor robot in a cafe environment.

2017-2018 **University Teaching Associate**, *University of Bristol*,
Full delivery & administration of the Robotic Systems computer science unit to cover lecturer sabbatical inc. lecturing, running labs and student assessment at undergraduate and postgraduate level. Received positive student feedback:

"Lecturing quality of PHD students was excellent especially considering their relative newness to running the course. Katie was particularly good and is perhaps one of the best lecturers in the university at the moment"

"The lecture Katie prepared herself about social robotics was excellent".

- 2016-2018 **University Teaching Assistant**, *University of Bristol*,
Ran and assessed Robotics MSc reading groups, provided lab support, solution preparation and marking across engineering and computer science units including: Introduction to Computer Programming, Robotic Systems, Bio-Inspired Artificial Intelligence & Thermodynamics.
- 2013-2015 **Teaching Assistant**, *Bristol Children's Hospital*, University of Bristol.
Part of the 'Students in Schools' outreach programme run by the Widening Participation department. Worked predominantly one-to-one with children of all ages teaching maths, science, DT and IT. Also provided mentoring and pastoral support to adolescent patients

Additional Training

- 2017 Summer school on Social Human Robot Interaction; Portugal
2017 Introduction to Fundamentals of AI & Machine Learning Course; Women's Tech Hub Bristol
2016 FARSCOPE SETSquared Enterprise Course; University of Bristol

Honors, Awards, Scholarships & Grants

- 2019 Alumni Travel Grant £550 *University of Bristol*
2018 M H Joseph Prize (recognising outstanding academic excellence) £2000 awarded by the *British Federation of Women Graduates*
2018 Best Paper Award *International Conference on Human-Robot Interaction*
2016 Undergraduate Visionary Award *Institution of Mechanical Engineers*
2014-2019 PhD Robotics Doctoral Studentship *EPSRC: FARSCOPE Centre for Doctoral Training*
2011-2015 Undergraduate Scholarship *Institution of Mechanical Engineers*
2011-2015 Women in Engineering Scholarship *Jaguar Land Rover*

Scientific Impact & Dissemination Activities

- Mar 2019 Co-organised second iteration of "What Could Go Wrong Workshop" at HRI (Daegu)
Oct 2018 Invited Speaker - Designing Persuasive Robots (Ethically): South West of England Robotics Network (Bristol)
Apr 2018 Invited speaker - Social Robotics for Rehabilitation: Association of Chartered Physiotherapists Interested in Neurology AGM (Bristol)
Mar 2018 Co-organised and led "What Could Go Wrong Workshop" at HRI (Chicago)
Feb 2018 Demonstration at EPSRC Science for a Successful Nation Showcase (London)
Feb 2018 Poster presentation at Society for Rehabilitation Research Meeting (Bristol)
Aug 2017 Invited speaker - Robots for Assisted Living: Langbuisson Long Term Care Conference (Bristol)
May 2017 Invited speaker and workshop lead - Robots for Assisted Living: Associated Retirement Community Operators Conference (London)
May 2017 Invited speaker - Social Robots in Therapy: Softbank Robotics (Paris)

Academic Citizenship:

- HRI 2020 Organising Committee - Pioneers General Chair
- Reviewer for conferences SORR 2018; RO-MAN 2018; ICMI 2018; HRI 2019
- Reviewer for journals *Frontiers in Neurorobotics*, *Transactions on Human-Robot Interaction*, *International Journal of Social Robotics*
- Member of Bristol Robotics Laboratory seminar organisation committee

Public Engagement:

- Spoke on robot attachment at "Telling Stories About Robots" event, We the Curious July 2018
- Robot demonstration at London Science Museum Lates Robot Takeover May 2017
- Interviewed for an EPSRC video on women in engineering: <https://youtu.be/A8Cqtf94C0A>

- Profiled for The Guardian on behalf of the IMechE: <https://amp.theguardian.com/careers/2017/nov/28/how-i-got-totally-hooked-on-robotics>
- **STEM outreach highlights:**
 - Co-ran robotics open day at 'The Old Library' Bristol community centre June 2019
 - Organised and led a programming day utilising robots developed within my FARSCOPE cohort at Abbeywood Community School April 2017
 - Organised, designed and led robotics a day of robotics activities at Watermore Primary School June 2016

Publications

- **K. Winkle**, A. vanMaris, "Social Influence and Deception in Socially Assistive Robotics" *accepted for presentation at the 2019 International Conference on Robot Ethics and Standards*, London, UK 2019
- **K. Winkle**, S. Lemaignan, P. Caleb-Solly, U. Leonards, A. Turton and P.Bremner, "Effective Persuasion Strategies for Socially Assistive Robots" in *Proceedings of the 2019 ACM/IEEE International Conference on Human-Robot Interaction*, Daegu, South Korea 2019, pp. 277-285.
- **K. Winkle**, P. Caleb-Solly, A. Turton and P.Bremner, "Mutual Shaping in the Design of Socially Assistive Robots: A Case Study on Social Robots for Therapy." *International Journal of Social Robotics* (2019) pp. 1-20.
- **K. Winkle** "Social Influence in HRI with Application to Social Robots for Rehabilitation" in *Proceedings of the 2019 ACM/IEEE International Conference on Human-Robot Interaction*, Daegu, South Korea 2019, pp. 754-756.
- **K. Winkle**, P. Caleb-Solly, A. Turton and P.Bremner, "Social Robots for Engagement in Rehabilitative Therapies: Design Implications from a Study with Therapists" in *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction*, Chicago, USA 2018, pp. 289-297 **Awarded Best Paper in Theory and Methods in HRI**
- **K. Winkle**, P. Caleb-Solly, A. Turton and P.Bremner, "Patient engagement with rehabilitative therapy programmes: Therapist strategies and affecting influences" *Proceedings of SRR*, Bristol 2018, *Clinical Rehabilitation* 2018, 32 (10): pp. 1414-1415
- **K. Winkle**, "Social Robots for Motivation and Engagement in Therapy," in *Proceedings of the 19th ACM International Conference on Multimodal Interaction*, Glasgow, UK, 2017, pp. 614-617.
- **K. Winkle** and P. Bremner, "Investigating the real world impact of emotion portrayal through robot voice and motion," in *2017 26th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, Lisbon, Portugal 2017, pp. 627-634.