

# James Scott Broadhead

HUMAN-COMPUTER INTERACTION · TECHNOLOGY AND SOCIETY · INFORMATION THEORY

Embedded and Networked Systems, EEMCS, TU Delft, Van Mourik Broekmanweg 6, 2628 XE Delft, Netherlands

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## Experience

### Delft University of Technology

MARIE SKŁODOWSKA-CURIE EARLY STAGE RESEARCHER

Delft, NL

Nov. 2019 – Present

- Early Stage Researcher (ESR) as part of the Horizon 2020 research and innovation programme ENLIGHT'EM
- Working on low-powered visible light communication IoT systems and battery-free sensor technology

### Nokia Bell Labs

VISITING RESEARCHER

Dublin, IE

Mar. 2020 – Jun. 2020

- Visiting researcher at Nokia Bell Labs, Dublin as part of project ENLIGHT'EM
- Working on improving the data freshness of mixed-memory intermittently powered sensor systems through optimised checkpointing

### Airbus Space and Defence

BACHELOR'S MAIN PROJECT

Stevenage, UK

Sep. 2017 – Jun. 2018

- Industry main project working with partners at Airbus Defence and Space to design a pre-phase A aerobot mission to Titan
- Specialising in the design of imaging and communication subsystems

## Education

### University of Leeds

MSc(Eng) DIGITAL COMMUNICATIONS NETWORKS: DISTINCTION

Leeds, UK

Sep. 2018 – Aug. 2019

### University of Oxford, St John's College

BA(Hons) PHYSICS: 2.1

Oxford, UK

Sep. 2015 – Jun. 2018

## Publications

- J. S. Broadhead and P. Pawełczak, "Data Freshness in Mixed-Memory Intermittently-Powered Systems" IEEE International Symposium on Information Theory (ISIT), 2021
- J. S. Broadhead, P. Pawełczak, "Position Paper: Why Intermittent Computing Could Unlock Low-Power Visible Light Communication" in Light up the IoT workshop, co-located with ACM MOBICOM, 2020

## Awards & Prizes

- 2019 **Best MSc Student Prize**, School of Electronic and Electrical Engineering, University of Leeds
- 2019 **AOSB Main Board Pass**, British Army Officer Selection
- 2018 **Head of School Excellence Award**, School of Electronic and Electrical Engineering, University of Leeds
- 2018 **Examiner's Commendation for Practical Work**, Department of Physics, University of Oxford
- 2018 **Gibbs Prize for BA Group Project Presentation**, Department of Physics, University of Oxford
- 2016 **Hem Mahindra Travel Scholar**, St John's College, University of Oxford

## Professional Affiliations

- 2021 **IEEE Student Member**
- 2021 **IEEE Information Theory Society Member**
- 2021 **IEEE Society on Social Implications of Technology Member**

## Skills

- Programming and IT** Proficient in: MATLAB, LaTeX, Microsoft Office Applications, Adobe Creative Cloud  
Experience with: Python, Java, XML, AMPL, ProtoPie, Arduino
- Leadership** ENLIGHT'EM Supervisory Board Member, St John's JCR Art Representative, Leeds to SK Leadership Programme
- Teaching** Tutor in A-Level Physics and Mathematics