

# OLLIE HANTON

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I am a PhD student researching the **personal fabrication of displays** with a strong expertise in 3D printing, airbrushing and software development. My research vision is to develop ways to produce **free-form displays** that will allow improved interaction with computers. I am looking at leveraging different personal fabrication methods in order to **democratise display fabrication** and allow individual users to liberate displays from their flat rectangular forms.

My degrees in Maths and Computer Science give me a strong technical background, which I combine with commercial experience working as a software developer. I've been invited to talk about my research to multiple external research groups and I've held roles as a student supervisor and teaching assistant for Masters level courses.

## EDUCATION

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### Computer Science PhD in Human Computer Interaction

*November 2018 - present*

School of Computer Science, University of Bristol.

**Thesis:** 'Creating Free-form Interactive Devices Through Personal Display Fabrication'.

### Computer Science MSc (Distinction)

*2016 - 2017*

School of Computer Science, University of Bristol.

**Dissertation:** 'Creating Interactive Prototypes and Surfaces Using Capacitive Technology and 3D Printing'.

### Mathematics BSc (2:1)

*2012 - 2016*

School of Mathematics, University of Bristol.

**Dissertation:** 'The Mathematics Behind Google'.

## EMPLOYMENT AND EXPERIENCE

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### University of Bristol - Teaching Assistant (HEA Associate Fellow)

*2019-present*

- Teaching supporting masters courses 'Computer Architecture' and 'Interactive Devices' and 'HCI theory'.
- Marking of summative coursework for masters level students on 'Interactive Devices' course.
- Supervision of student intern (Zichao Shen) for a summer placement.
- Lead Teaching Assistant on 'HCI theory' course directly supporting lecturers and leading seminar groups.

### SciSys PLC - Software Developer

*February 2018 - October 2018*

- Full-time work on the development of an Android app using Xamarin, working in C# building off a C++ IOS codebase.
- Responsible for code development, version control, testing, bug fixing and customer liaison.

### University of Bristol Boat Club - Senior Women's Rowing Coach

*May 2013 - June 2014*

- Part-time volunteering work coaching, teaching and mentoring teams and individual athletes. 550+ hours carried out, with responsibilities such as budget management and program development.

### Placr - Intern

*July 2014, August 2015*

- Building of a national geometry of transport links, processing of transport data and web design. Initially a one month internship, but asked to return the following year.

### Dulwich Storage Ltd - Admin

*Intermittent 2010 - 2013*

- Part-time summer work with responsibilities of managing contractor invoices, accounts and webdesign.

## TECHNICAL STRENGTHS

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<b>Additive manufacturing methods</b>	3D printing (FDM, SLA), Airbrushing, Electronics Prototyping.
<b>Software &amp; Tools</b>	Blender, GIMP, FIJI, Android, Xamarin, OpenCV, JavaFX.
<b>Computer Languages</b>	Java, C#, R, MATLAB.

## PEER REVIEWED PUBLICATIONS

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*Hanton, O.; Shen, Z.; Fraser, M.; Roudaut, A.*, FabricatINK: Personal Fabrication of Bespoke Displays Using Electronic Ink from Upcycled E Readers. **CHI 2022 Proceedings**.

*Hanton, O.; Wessely, M.; Mueller, S.; Fraser, M.; Roudaut, A.*, ProtoSpray: Combining 3D Printing and Spraying to Create Interactive Displays with Arbitrary Shapes. **CHI 2020 Proceedings, Best Paper Honourable Mention**.

*Wessely, M.; Sethapakdi, T.; Castillo, C.; Snowden, J.C.; Hanton, O.; Qamar, I.P.; Fraser, M.; Roudaut, A. and Mueller, S.*, Sprayable User Interfaces: Prototyping Large-Scale Interactive Surfaces with Sensors and Displays. **CHI 2020 Proceedings**.

## ACHIEVEMENTS AND AWARDS

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- Finalist in STEM for Britain competition (2022 - finals still to be held).
- **Associate Fellow** of the Higher Education Academy qualification (2021).
- **Best Paper Honourable Mention** in CHI2020 conference proceedings (2020).
- Bristol 3-minute thesis runner-up (2019).
- Bristol PLUS Outstanding Award (2015).
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## ACADEMIC DEVELOPMENT AND ENGAGEMENT

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### Peer reviewing and conference engagement:

- Associate Chair (MobileHCI 2021, CHI2022 Late breaking work).
- Assistant to Subcommittee (CHI 2021: ITDM B): management of Associate chairs and quick/desk rejections.
- 22 peer reviews carried out for conferences (CHI 2022, MobileHCI 2021, CHI 2021, TEI 2021, UIST 2020, CHI 2020), with 3 Special Recognitions for Outstanding Reviews.

### Invited talks:

- Multimodal Computing and Interaction group at Saarland University (July 2021).
- Cardiff University Human Factors Technology group (October 2020).
- MIT's CHI fabrication event (May 2020).
- Bath CHI seminar series (May 2020).
- AMNET - Additive Manufacturing Network Symposium (March 2020).

### Press:

- 40+ articles written about my research in 8+ languages featured in venues such as '3Dprint.com', 'TheEngineer.co.uk', 'hackster.io', 'E&T magazine' and 'ACM tech news'.

### Community engagement:

- Talks carried out on my research for outreach, such as 'Bristol 3-Minute thesis' competition and Bristol's 2020 'SCEEM PhD conference'.
- Multiple University of Bristol Opendays and sixth form engagement days.
- Digital outreach to a wider maker community (e.g. 'Instructables' page with 12k+ views).

## FUNDING SECURED

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- Fully funded EPSRC PhD studentship from University of Bristol, School of Computer Science (**£45,000**).
- Brigstow seedcorn grant as a researcher on the 'Developing Digital Tattoos' project (**£5,000**).
- University of Bristol 'idea accelerator' grant for research equipment (3D printer) (**£968**).