

# OLLIE HANTON

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I am a lecturer (assistant professor) at the University of Bath working on **3D printing interactive devices**. My research vision is to develop materials, methods and tools to enable makers to personally fabricate free-form interactive devices. Through on-demand creation and configurability of form and function I aim to allow for new dimensions of computer interaction. I aspire to democratise the process of designing, prototyping and producing such devices and enable makers in the liberation of displays from their flat rectangular forms.

I hold an **HEA associate fellowship** for teaching which I obtained through my work as a supervisor of students and teaching assistant for Masters level courses with the award for the **Most Outstanding HEA Associate Fellow Portfolio 21/22**. My degrees in Maths (BSc) and Computer Science (MSc) give me a strong technical background, which I combine with industry experience working as a software developer.

## EDUCATION

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**Computer Science PhD in Human Computer Interaction** *November 2018 - April 2023*

School of Computer Science, University of Bristol.

**Thesis:** 'The Personal Fabrication of Irregularly Shaped Interactive Displays'

**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'.

## RELEVANT EMPLOYMENT

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**University of Bath - Lecturer (Teaching and Research)** *January 2023 - present*

- Course co-convenor and lecturer of modules:
  - 'Human Computer Interaction and User Experience' (170 students, 2nd year).
  - 'Human Computer Interaction Theory' (80 students, 3rd year & MSc) from (2022/23 until present).
- Pastoral responsibility as personal tutor for BSc and MSc students (2023 - present).
- Supervising of BSc students, MSc students and interns every year.
- Supervising of 3 PhD student (Teodora Dinca - secondary supervisor, Jack Dawson - primary supervisor, Chaoyi Wu - primary supervisor).
- Acquisition and management of £95,000 as PI, £93,000 as Co-I from October 2023 - October 2024.
- Lab management of bespoke lab space,
- Research group responsibilities: management of seminar series and management of internal review process.

**University of Bristol - Teaching Assistant** *September 2019 - present*

- HEA Associate Fellow qualification.
- MSc courses 'Computer Architecture', 'Interactive Devices', 'HCI theory' and 2nd year 'HCI in Society'.
- Marking of summative coursework for masters level 'Interactive Devices' and 'HCI in Society' courses.
- Supervision of student interns (Zichao Shen, 2020; Jonathan Lim, 2022; Torin Clarke, 2022).
- 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, including commendation for 'above and beyond' work.
- Responsible for code development, version control, testing, bug fixing and customer liaison.

## FURTHER WORK AND LEADERSHIP EXPERIENCE

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

May 2013 - June 2014

- 550+ hours part-time volunteering work coaching, teaching and mentoring teams and individual athletes.

### Placr Ltd, TransportAPI - Internship

July 2014, August 2015

- Building of a national geometry of transport links, processing of transport data and web design.

### Dulwich Storage Ltd - Administrative assistant

Intermittent 2010 - 2013

- Part-time - responsibilities included managing contractor invoices, accounts and webdesign.

## PEER REVIEWED PUBLICATIONS

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**DisplayFab: The State of the Art and a Roadmap in the Personal Fabrication of Free-Form Displays Using Active Materials and Additive Manufacturing.** *Hanton, O.; Fraser, M.; Roudaut, A.*  
**CHI 2024 Proceedings.**

**Tangible Explorations of Sonolithography.** *Child, O.; Hanton, O.; Kellet, C.; Sutton, M.; Drinkwater, B.; Fraser, M.*  
**TEI 2024 Proceedings.**

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

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

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

## ACHIEVEMENTS AND AWARDS

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- Winner of **Most Outstanding HEA Associate Fellow Portfolio 2021/22.**
- Finalist in STEM for Britain competition (2022).
- **Associate Fellow** of the Higher Education Academy qualification (2021).
- **Best Paper Honourable Mention** in CHI2020 conference proceedings (2020).
- Bristol 3-minute thesis runner-up - second place (2019).
- Bristol PLUS Award (2015) and Bristol Plus Outstanding Award (2015).

## ACADEMIC DEVELOPMENT AND ENGAGEMENT

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### Peer review and conference engagement:

- Associate Chair (MobileHCI 2021, CHI2022 LBW).
- Assistant to Subcommittee (CHI 2021 - ITDM B): management of Associate Chairs and quick/desk rejections.
- Session Chair CHI2022
- **34 peer reviews** (CHI 2024, ROBIO 2023, CHI 2023, IEEE VR 2023, UIST 2023, CHI 2022, DIS 2022, IMWUT 2022, CHI 2021, CSCW 2021, MobileHCI 2021, TEI 2021, CHI 2020, UIST 2020).  
Including **5 Special Recognitions** for Outstanding Reviews.

### Invited talks:

- Pervasive Media Studios 'Dorkbot' (March 2024)
- Cardiff University Human Factors Technology group (March 2024)

- Prosquared network launch talk and panel, at Bristol University (March 2023).
- 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).

**Community engagement:**

- University of Bath open days including school engagement.
- University of Bristol open days and sixth form research engagement day.
- Internal research talks such as Bristol's 2020 'SCEEM PhD conference'.
- Digital outreach to a wider maker community (e.g. 'Instructables' page with 12k+ views).
- 40+ external articles written about my research (e.g. 'E&T magazine' & 'TheEngineer.co.uk').

**FUNDING SECURED**

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- Accepted grant of **£95,000** as PI for the development of a 'Active material digital library'. - Accepted grant of **£93,000** as Co-I for the development of 'Robust digital device fabrication'. - Acceptance onto fully-funded EPSRC PhD studentship from University of Bristol, School of Computer Science.
- Brigstow seedcorn grant - 'Developing Digital Tattoos' project (**£5,000**).
- University of Bristol 'idea accelerator' grant for research equipment (3D printer) (**£968**).

**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.