

Jordan Tewell

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PROFESSIONAL STATEMENT

I am a Human-Computer Interaction academic working at the intersection of HCI with multisensory communication interfaces, wearable technology, and mixed reality. I apply my research expertise to investigate prototypes of new mixed reality interfaces that can enhance digital media experiences via perception and interaction with virtual content through multisensory (visual, audio, haptic, and smell) feedback.

EDUCATION

Ph.D., Computer Science City, University of London Thesis Title: <i>Augmenting Communication Technologies with Non-Primary Sensory Modalities</i>	2018
Masters, Entertainment Technology Carnegie Mellon University	2012
Bachelor of Science, Computer Science Youngstown State University	2009

EMPLOYMENT HISTORY

Research Fellow Apr 2017 – Apr 2018
City, University of London | London, United Kingdom

Worked on an EPSRC funded, ambient living home system that links sensors to a management application for people with dementia and Parkinson's disease. My responsibilities included researching literature, choosing appropriate hardware (Zigbee, Z-Wave, and Beacon sensors), implementing the system HUB (Home Assistant, InfluxDB, and Raspbian), system and user testing, and modeling user activities in the home using a naive Bayes approach.

- Delivered a smart home hub system which met the requirements of the project.
- Decreased equipment costs up to 80% by choosing cost-effective sensors.

Visiting Demonstrator Oct 2014 – Apr 2017
City, University of London | London, United Kingdom

Taught undergraduate lab courses in Java and game programming and marked exams, student projects, and undergraduate capstone reports.

- Gained valuable experience teaching in a university setting.
- Reduced workload on other staff members by volunteering to mark capstone reports.

Hardware and Software Engineer
Archtor Limited | London, United Kingdom

Jul 2015 – Jun 2016

Developed prototypes of a mechanical gaming keyboard with LCD screen keycaps for a startup. I was involved with all facets of the engineering: hardware, firmware, API, and assisted in designing the software UI used to customize the keyboard layout appearances. I also worked with the marketing team to promote and pitch the keyboard at events.

- Generated £5,000 investment seed money for the company from a successful pitch to London investors.
- Developed prototype in less than 12 months in time for Kickstarter campaign with minimal resources and investment.

Hardware and Software Engineer
FeelU Limited | London, United Kingdom

Nov 2013 – Jul 2014

Worked in a startup to develop Ring*U, a wearable toy for sharing intimacy over a distance. Designed the hardware and firmware based on the CC2540 chipset. Worked with our iOS engineer to facilitate Bluetooth connection with the ring for Apple devices and with the design team to ensure that the size requirements could be met. Also assisted in giving talks and demos to potential investors and interested audiences.

- Assisted in raising \$30,000 in investment seed money for the launch of the product.
- Developed prototype in less than 6 months in time for our angel investors' demo day event.

Visiting Researcher
Keio University | Tokyo, Japan

Apr 2013 – Jul 2013

Worked in the Keio Media Design Mixed Reality Lab on their digital taste and smell projects. Assisted in giving demonstrations at events and talks.

Visiting Researcher
JST-ERATO Igarashi Design Interface Project | Tokyo, Japan

Jan 2012 – Sep 2012

Worked on a novel control interface for room lighting utilizing a custom Android accessory. Wrote software using Java and collaborated with hardware engineering staff.

- Accepted paper was published and presented at a well known entertainment conference (ACE).

Game Programming Internship
Geisha Tokyo Entertainment | Tokyo, Japan

May 2011 – Aug 2011

Researched game engine technologies for the company's future multi-platform, mobile game development pipeline. Pitched and implemented a prototype of a smart phone game using CoronaSDK and Lua.

- Developed game prototype in 1 month to demonstrate Corona which was used in future projects in the company.

Game Programmer
Carnegie Mellon University | Osaka, Japan

Jan 2011 – May 2011, Aug 2011 – Dec 2011

Worked on two client projects as a Unity game programmer: 'Project NEST' for NEC Corporation, an interactive exhibit that envisioned personal transit thirty years in the future, and 'Oceanus' for GL Associates, a location-based experience shown at the 2012 World Expo in Yeosu, South Korea.

System Testing Engineer
Notify Technology | Canfield, Ohio

May 2010 – Aug 2010

Tested company product across mobile and server configurations according to test plans. Reported bugs, communicated with engineers, and used in-house tools to assist testing.

CONFERENCE PUBLICATIONS

Tewell, J., Bird, J. and Buchanan, G.R., 2017, May. The Heat is On: A Temperature Display for Conveying Affective Feedback. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (pp. 1756-1767). ACM.

Tewell, J., Bird, J. and Buchanan, G.R., 2017, May. Heat-Nav: Using Temperature Changes as Navigation Cues. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (pp. 1131-1135). ACM.

Choi, Y., **Tewell, J.**, Morisawa, Y., Pradana, G.A. and Cheok, A.D., 2014, November. Ring* U: a wearable system for intimate communication using tactile lighting expressions. In Proceedings of the 11th Conference on Advances in Computer Entertainment Technology (p. 63). ACM.

Pradana, G.A., Cheok, A.D., Inami, M., **Tewell, J.** and Choi, Y., 2014, March. Emotional priming of mobile text messages with ring-shaped wearable device using color lighting and tactile expressions. In Proceedings of the 5th Augmented Human International Conference (p. 14). ACM.

Cheok, A.D., **Tewell, J.**, Pradana, G.A. and Tsubouchi, K., 2013. Touch, Taste, and Smell: Multi-sensory Entertainment. In Advances in Computer Entertainment (pp. 516-518). Springer, Cham.

Tewell, J., Hashimoto, S., Inami, M. and Igarashi, T., 2012. GENIE: Photo-based interface for many heterogeneous led lamps. In Advances in Computer Entertainment (pp. 577-580). Springer, Berlin, Heidelberg.

JOURNAL PUBLICATIONS

Tewell, J., O'Sullivan, D., Maiden, N., Lockerbie, J., and Stumpf, S., 2019. Monitoring meaningful activities using small low cost devices in a smart home. In Personal and Ubiquitous Computing. Springer (TBA).

Tang, J.K. and **Tewell, J.**, 2015. Emerging human-toy interaction techniques with augmented and mixed reality. In Mobile Services for Toy Computing (pp. 77-105). Springer, Cham.

AWARDS AND PRIZES

2014 2nd Prize, City University London Entrepreneurship Doctoral Bootcamp

2014 2nd Prize, Pernod Ricard Hackathon
2013 Honoric Experts, Telefonica Hacking Bullipedia

PROFESSIONAL ACTIVITIES

Reviewer, 2018 Conference on Human Factors in Computing Systems, reviewed a Late Breaking Work on a thermal interactive intelligent agent, January 2018.

Reviewer, 2018 Nordic Conference on Human-Computer Interaction, reviewed a paper on a vehicle navigation system using thermal feedback, May 2018.

Reviewer, 2018 IEEE Transactions on Haptics, reviewed a paper on thermal referral perception, October 2018.

PROGRAMMING/TOOL SKILLS

C#, Java, C++, HTML, XML, Python, Eagle, Arduino, Bluetooth, Unity3D, Blender, Android, Raspberry Pi

REFERENCES

Dr. George Buchanan
University of Melbourne | Melbourne, Australia

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george.buchanan@unimelb.edu.au

Dr. Dympna O'Sullivan
National College of Ireland | Dublin, Ireland

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