

William Primett

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<http://wprimett.github.io>

Bio

William Primett is an Interaction Designer and Researcher based in Lisbon affiliated with the AffectTech consortium, pursuing the use of wearable technology for emotional understanding in consideration of mental health disorders. They are investigating new systems for expressive non-verbal communication using physiological data, advocating for non-representational and interpersonal biofeedback.

William's practice takes an interdisciplinary approach to designing expressive systems for immersive performance environments. Starting from their early work, building and performing with DIY musical instruments, and more recently taking influence from a range of physical disciplines, exploring the boundaries of embodied interaction modalities and their potential within real-world applications.

Experience



Early Stage Researcher - Affectech PhD Candidate

PLUX, Wireless Biosignals S.A.

Jun 2018 - May 2021 (3 years)

Thesis Title · Non-verbal Communication With Physiological Data, The Aesthetic Domain of Biodata and Neural Networks

- R&D to extend usability of BITalino R-IoT device
- Development of client-server program for prototyping sensor-based applications
- Solutions for device synchronisation over Wi-Fi networks

affectech.org



Visiting Researcher

M-ITI

May 2019 - Jul 2019 (3 months)

The second Moving Digits workshop took place on June 17-20, at Madeira Interactive Technologies Institute (M-ITI), Funchal, Portugal. It was an exploration and testing workshop, involving 10 international dancers. 9 project partner members (from M-ITI, HSD, STL, Tanzhaus NRW, University of Greenwich and Plux) also took part. <https://movingdigits.eu/workshop2/>



Visiting Researcher

KTH Royal Institute of Technology

Jan 2019 - Feb 2019 (2 months)

Preliminary research and development into novel actuation systems designed for somaesthetic awareness, initially user-tested during AffectTech biofeedback workshop.

Jung, A. et al., 2021, *Exploring Awareness of Breathing through Deep Touch Pressure*, in: Conference on Human Factors in Computing Systems (CHI'21)

Research Intern

Goldsmiths Digital

Jul 2017 - Dec 2017 (6 months)

Working with a team of Goldsmiths researchers to develop an interactive audio generation application (LSTM Synth) for high-profile musicians. The system uses deep learning technologies to predict audio frames from training examples, provided by a back catalogue of pre-recorded stems or from live audio input. The role also involved building and configuring a CUDA compatible workstation in the client's studio that could be used by our researches and the band members.

The project has since gained attention from the University of Durham, the University of Sussex, and Google Magenta, and also received funding the UK's Arts and Humanities Research Council (AHRC), providing support for the up-scaled MIMIC project. <https://www.doc.gold.ac.uk/blog/?p=2635>

Freelance Hardware Engineer

King's 20 Accelerator - GripBeats

Sep 2016 - May 2017 (9 months)

As part of the King's 20 accelerator programme, I joined a team of music technology innovators to design and develop usable prototypes to be used in early pitches and demos to raise funding. Since gaining support from the Stefan Allesch-Taylor Scholarship, HKSTP and the Soyoye Technology Innovation Prize, the company have been able to outsource their production overseas whilst continuing research and development.

Publications

1. *Biosensing and Actuation—Platforms Coupling Body Input-Output Modalities for Affective Technologies*. *MPDI Sensors* (2020)
2. *How do dancers want to use interactive technology? Appropriation and layers of meaning beyond traditional movement mapping*. In *Proceedings of the 9th International Conference on Digital and Interactive Arts* (2019)

Education



NOVA School of Science and Technology

Doctor of Philosophy - PhD, Biomedical/Medical Engineering

2018 - 2021



Instituto Superior Técnico

Advanced Studies Diploma in Computer Science and Engineering

2019 - 2019

Doctoral Exchange Program

Completed PhD Course in Advanced Topics in Human-Computer Interaction:



Goldsmiths, University of London

MSci, Creative Computing

2014 - 2018

Research Interests: HCI, Interactive Machine Learning, Performance Technology, Audio-Visual Composition