

Philippa Mothersill

MEng - MA - MSc - DIC - SM

www.pipmothersill.com / pip@mit.edu / +1 (617) 510 3702

Product Designer / Design Researcher

My experience in industry and academia provides me with a unique set of skills to research and create novel products that enhance our communication through the design of physical objects.

DESIGN & INNOVATION

- Human-centered design
- Concept generation & development
- Multi-disciplinary collaboration
- Prototyping (visual & electro-mechanical)
- Adobe creative suite
- Solidworks, Rhino
- Arduino, Processing, Python

RESEARCH

- User research techniques
- Qualitative & quantitative study methods
- Extensive literature knowledge

COMMUNICATION

- Published papers and articles
- Presentations, demos, panels and talks
- Teaching classes & workshops

Work Experience

Sept 2012 - **MIT MEDIA LAB (Cambridge, USA)**

present: *Research Assistant in Object-Based Media group*

Through research that connects product design theory, cognitive science, and computational design, I investigate the ways in which we perceive and embody meaning in the design of physical artefacts and explore how we can integrate that knowledge into computational processes and tools that everyone can use to create new communicative objects.

Key Projects & Responsibilities:

- Design Data: tools and methods to collect design perception data and link it to computational design properties at a large scale
- Emotive Modeler CAD tool: applying my research into emotive form perception to develop a more intuitive CAD interface
- Student community building: EmbodiedPotentials reading group creator, PhD retreat program co-organiser
- Supervised undergraduate research assistants on several projects
- Built and presented demos of in-progress and finished projects

Sept 2009 - **GILLETTE R&D (Reading, UK)**

Jul 2012: *Design Engineer in Venus Innovation & Strategic Opportunities groups*

Leading upstream design work for large projects, inc. design research and strategy, creating product design language, and designing and testing functional prototypes. Additional work included leading improvement of organisation's design capability through internal system development and external collaborative projects.

Key Responsibilities:

- Foundational design research into form and material perception and application to product development
- Exploratory user research and prototype testing studies
- Innovation tools and methods developed to enhance creativity and quality in design process

Publications

- Mothersill, P., & Bove Jr, V. M. (2015). EmotiveModeler. *interactions*, 22(6), 14-15.
- Mothersill, P., & Bove Jr, V. M. (2015). The EmotiveModeler: An Emotive Form Design CAD Tool. In *CHI Extended Abstracts* (pp. 339-342).
- Perovich, L., Mothersill, P., Broutin Farah, J. Awakened Apparel: Embedded Soft Actuators for Expressive Fashion and Functional Garments *In Proceedings of the 8th int'l conference on Tangible, embedded, and embodied interaction*
- Cranor, D., & Mothersill, P. (2011, October). Prototype hacking: succinct physical communication for design and business. *In Proceedings of the Second Conference on Creativity and Innovation in Design* (pp. 363-364). ACM.

Invited Talks

- June 2016: **DESIGN RESEARCH SOCIETY CONFERENCE 2016 (Brighton, UK)**
Design Research for Computational Design lecture and workshop (pending)
- Jun 2015: **SOLID CONFERENCE 2015 (San Fransisco, USA)**
Communication Through the Language of Design lecture and workshop
- Nov 2014: **RETHINK FOOD 2014 (Napa Valley, USA)**
Values-Forward Food panel

Teaching

- Spring 2016: **MIT TEACHING & LEARNING LAB** - Kaufman Teaching Certificate qualification
- Spring 2016: **MIT ARCHITECTURAL DESIGN** - Design Objects (teaching assistant)
- Jan 2014: **MIT MEDIA LAB** - Fabrication from Fabric intensive workshop (co-teacher)

Competitions & Awards

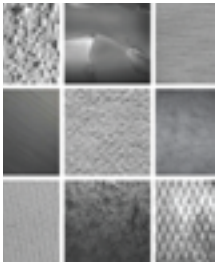
- James Dyson Foundation Bursary for Spectate project, Royal College of Art (2009)
- Royal Commission of the Exhibition of 1851 Design Studentship (2008-09)

Education

- Sept 2014 - present: **MIT MEDIA LAB (Cambridge, USA)**
PhD student in Object-Based Media group
- Sept 2012 - Aug 2014: **MIT MEDIA LAB (Cambridge, USA)**
Masters in Media Arts and Sciences (SM)
Thesis title: The Form of Emotive Design
- Oct 2007 - July 2009: **ROYAL COLLEGE OF ART (London, UK)**
Masters in Industrial Design Engineering (MA)
Thesis title: The Material Choice - Innovations in Textile Applications
- Oct 2007 - July 2009: **IMPERIAL COLLEGE (London, UK)**
Masters in Mechanical Engineering (MSc)
Thesis title: Spectate
- Oct 2003 - July 2007: **UNIVERSITY OF BRISTOL (UK)**
Masters in Aeronautical Engineering (MEng, First class honours)

Portfolio Summary 2008 - 2016

From design taxonomies, to CAD tools, to shape-changing materials, to product design and architectural concepts, my work explores ways in which we can enhance communication through the design of physical objects. Click on the project titles to read more...



[Design Data \(2015-16\)](#)

Tools to map our tactile, perceptual and psychological experiences to the material and formal design properties of objects



[Emotive Modeler \(2014\)](#)

A CAD tool that uses only descriptive adjectives and emotions to design objects whose forms communicate emotive character



[Awakened Apparel \(2013\)](#)

Awakened Apparel is a shape-changing skirt that uses novel material technology to integrate soft actuators into clothing



[aireForm \(2013\)](#)

aireForm is a pneumatically actuated shape-changing garment inspired by the silhouettes that enhance the female form



[Birds of a Feather \(2013\)](#)

Birds of a Feather is an audio-visual ornithological guide that reunites the colours and sounds of birds with their taxonomies



[Drink, Make, Feast \(2013\)](#)

Drink, Make Feast was a creative immersive eating experience that formed one of the Acts in the MIT Media Lab Other Festival Feast



[How to Make \(Almost\) Anything \(2013\)](#)

How I made (almost) anything, from circuit board milling to laser cutting to CNC machining to embedded processing



[Poesis \(2013\)](#)

Poesis is a board game inspired by Dada found poetry and Japanese Renga where players collectively create expressive verse



[Prototype Hackery \(2011\)](#)

Prototype Hackery is a series of workshops which shares ideas about how to make simple prototypes to communicate ideas



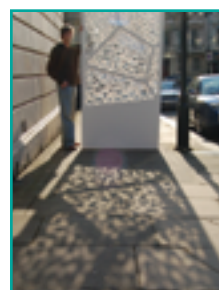
[Spectate \(2009\)](#)

Spectate is a product that enhance users experience of remote viewing events through emotionally affective tactile interactions



[Replenish \(2009\)](#)

Replenish is a system and set of products designed to make reusing and refilling containers economical for manufacturers and convenient for consumers



[Folium \(2008\)](#)

Folium is a solar energy harvesting lighting concept for architectural panels inspired by the patterns of light in nature