Cati Vaucelle  
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Biography: Cati is a research assistant and PhD candidate at the Massachusetts Institute of Technology in the Tangible Media Group. Her extensive experience in electrical engineering and product design fosters her research on how our expectations of physical space are transformed by digital technology. She is fascinated by the spatial qualities of personal experience and explores the imaginary mechanics of recollection. She mines people's associative memory for elements in their life by creating expressive tools. She researches seamless sensory interventions that provide the wearers with the opportunity to use fashion as a supporting treatment.

Touch-Sensitive (2007)
Tangible Media Group, MIT Media Laboratory, Cambridge, Massachusetts, USA
with Yasmine Abbas

Keywords: apparel, wearable, haptic, massage therapy, sensory interface, fashion

The Touch-Sensitive apparel evolved from the observation that people need to soothe their bodies to protect themselves from everyday aggressions. The device consists of a matrix of clothing elements that allows transmission of tactile information through heat sensors, mechanically driven textual sensation and liquid diffusion. Its material is envisioned to detect the user's comfort level. Touch-Sensitive soothes and alleviates by detecting points of stress and delivering an electronically actuated massage.


Picture This (2007)
Tangible Media Group, MIT Media Laboratory, Cambridge, Massachusetts, USA
with Hiroshi Ishii

Keywords: children, toys, accessories, video, gesture, film assembly

Picture This is a new input device for video capturing and editing. Designed for young children, ages five and up, it allows them to craft compelling movies through the motion analysis of their interaction with toys. Picture This is both a doll hand bag and a doll audiovisual recorder. Children's favorite props alternatively serve as characters and camera men in a film. As children play with the toys to act out a story, they conduct algorithmic film assembly.

Tangible Media Group, MIT Media Laboratory, Cambridge, Massachusetts, USA, with Leonardo Bonanni, Hiroshi Ishii

Keywords: haptic, self-mutilation

Psychohaptics is a diverse set of touch modalities simulations that assist in the treatment of specific mental disorders. Based on the most promising touch-therapy protocols, haptic interfaces are implemented to support treatments at a local hospital. The interfaces include Cool Me Down: a flexible electronic cold wrap containing electronic heat pumps. Hurt Me: a wearable haptic device that generates controlled pain as a form of sensory grounding for persons with tendencies towards self-harm. Squeeze Me: a vest that simulates therapeutic holding. Touch Me: a system for the remote application of touch therapy similar to the Wilbarger Protocol.
Graduate School of Design, Harvard University &
MIT Media Laboratory, Cambridge,
Massachusetts, USA

Keywords: jewelry, fashion, aerial, satellite imagery

Aerial patterns of a city are transformed into jewelry. With the use of computer assisted drawing and computer fabrication GIS files from a location, e.g. a city, are imported and its shadows and interstices are engraved onto metal. These metal pieces become jewels. Each person could possess a distinctive jewel from his or her hometown.

Tap tap (2005)
Graduate School of Design, Harvard University &
MIT Media Laboratory, Cambridge,
Massachusetts, USA
with Leonardo Bonanni, Jeff Lieberman, Orit Zuckerman

Keywords: haptic, wearable, touch therapy, fashion design

Tap tap is a wearable haptic system that allows nurturing human touch to be recorded, broadcast and played back for emotional therapy. Contained in a convenient modular scarf the haptic input/output modules provide a personalized affectionate touch. Tap tap can be configured to record and play back a touch that is most meaningful to the each user. It is constructed from two layers of felt. An outer grey one and a pink layer that contains the haptic modules in specially designed pockets.
The interplay of electronic textiles and wearable technology, wearables for short, and fashion, design and science is a highly promising and topical subject. Offered here is a compact survey of the theory involved and an explanation of the role technology plays in a fabric or article of clothing. The practical application is explained in detail and numerous illustrations serve as clarification. Over 50 well-known designers, research institutes, companies and artists, among them Philips, Burton, MIT Media Lab, XS Labs, New York University, Hussein Chalayan, Cute Circuit or International Fashion Machines are introduced by means of their latest, often still unpublished, project, and a survey of their work to date. Given for the first time is a list of all the relevant information on research institutes, materials, publications etc. A must for all those wishing to know everything about fashionable technology.