

# Cedric Honnet

[honnet@mit.edu](mailto:honnet@mit.edu) // [www.honnet.eu](http://www.honnet.eu)

## ABSTRACT

With endless enthusiasm about interactivity and miniature wearables, I love to explore new technologies... I am deeply curious and always open for collaborations.

## Keywords

HCI, Miniature Embedded Systems, Manufacturing, eTextiles, 3d [Position | Motion | Touch] Sensing, [Ultra] Low Power, Wearables, Haptics, Arts & Science, Human Augmentation...

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## RESEARCH

Selected Publications - (Full list: [honnet.eu/#Academic](http://honnet.eu/#Academic))

- UIST 2024: *PortaChrome: A Portable Contact Light Source for Integrated Re-Programmable Multi-Color Textures*
- UIST 2023: *MagKnitic: Machine-knitted Passive and Interactive Haptics Textiles with Integrated Binary Sensing*
- IEEE ICRA 2023: *Laser-Etching Flexible Sensors for Robotic Touch Recognition*
- UIST 2023: *FibeRobo: Fabricating 4D Fiber Interfaces by Continuous Drawing of Temperature Tunable Liquid Crystal Elastomers*
- AHs 2022: *A Framework For Designing Augmented Human-Flora Interaction*
- UIST 2021: *MetaSense: Integrating Sensing Capabilities into Mechanical Metamaterial*
- IEEE AeroSpace 2021: *Feeling Through Spacesuits: Application of Space-Resilient E-Textiles to Enable Haptic Feedback on Pressurized Extravehicular Suits*
- CHI 2020: *PolySense: Augmenting Textiles with Electrical Functionality using In-Situ Polymerization*
- UIST 2020: *Sonoflex: Embroidered Speakers Without Permanent Magnets*
- TEI 2019: *Optimizing Pressure Matrices: Interdigitation and Interpolation Methods for Continuous Position Input*
- AH 2018: *HIVE Tracker: a tiny, low-cost, and scalable device for sub-millimetric 3D positioning*
- NIME 2017: *Designing a Multi-Touch eTextile for Music Performances*
- LM 2016: *Developing an Ecosystem for Interactive Electronic Implants*

## EXPERIENCE

### 2022: Samsung Research, USA

*Human-Computer Interactions & Embedded systems, Intern Think Tank Team: Touch Sensing, Haptics, Wearables...*

### 2019-2020: MIT - NeuroGEARS

*Human-Computer Interactions, Embedded systems*  
Deployed as visiting scientist in the Media Lab.  
3D positioning, Wearables...

### 2017-2020: Sorbonne University / CNRS, France

*Research Associate/Affiliate - Embedded systems*  
"Situated Analysis of HCIs in Smart Environments"

### 2016-2017: Carpe Noctem, International

*Research Engineering, Mentor*  
- Consulting about embedded systems, wearables, IOT and manufacturing in China, France, etc.  
- Visiting Researcher in UK, Denmark, Singapore, Portugal  
- Mentoring/teaching in grad schools, incubators...

### 2014-2016: Tangible Display, USA / France / China

*Co-founder - Research & Development Engineer*  
- Helped companies exploring various interactive solutions for their project (ex: Google Soli)  
- Designed interactive systems (hardware+software) with RFID, touch screens, depth cameras, eTextiles, wearable or IoT sensors such as the "Twiz": a BLE motion sensor with embedded 9 DoF fusion.

### 2012-2013: Sifteo, USA

*Embedded Systems Engineer & InterHacktivist*  
- Firmware and software: user interface (sound, graphics...), battery management, simulator, graphics controller...  
- Experimental interactive projects: gestures recognition, music control, audio communication system...

### 2010-2011: Sigma Designs - USA

*Research & Development Engineer, Trainee*  
Google's VP8 Video Decoder Porting on Custom Processor:  
- Firmware: memory management and execution acceleration  
- Hardware instruction customization for specific purposes such as arithmetic decoding or binary tree decoding

### 2008: Telecom ParisTech EE Research Labs - France

*Research & Development Engineer, Trainee*  
Evaluation of combinatorial components reliability using FPGA for massively parallel simulation of fault injection.

### 2007: Brunel University EE Research Labs - UK

*Research & Development Engineer, Trainee*  
Signal Restoration experimentations & Universal Software Radio Peripheral modules implementations.

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## EDUCATION

### 2020-2026: MIT, USA

#### PhD Program @ Media Lab + CSAIL

(Master: fast tracked - GPA: 5.0/5.0)

Responsive Environments + HCI Engineering

*Extracurricular: Kick Boxing + Brazilian jiu-jitsu*

### 2011: Telecom ParisTech (IPP), France

★ 1st French Engineering school ([Industry ranking](#))

**Master 2 - with honors** (Diplome d'ingenieur)

Computer Sciences: Embedded Systems & Robotics, New Media, Systems On Chip, Security

*Extracurricular: Robotics, Savate (French boxing)*

### 2009: Sorbonne University (ex-UPMC), France

★ 1st French university ([Research ranking](#))

**Master 1 - with honors** (Maitrise)

EECS with emphasis on Digital Electronics

*Extracurricular: Jujitsu, Sambo, Computer Science tutoring for students with disabilities*

### 2007: Brunel University, UK

**Bachelor - with honors**

EECS with emphasis on Digital Signal Processing

*Extracurricular: Judo, Thai Boxing*

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## LANGUAGES

- French: ILR Level 5 - Native proficiency
  - English: ILR Level 4 - Full professional proficiency
  - Spanish: ILR Level 3 - Professional working proficiency
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## DISTINCTIONS, AWARDS...

- 2024: MIT [Fast Company](#) Innovation Award
- 2023: MIT [MPP](#) grant for photovoltaic textiles
- 2022: MIT ML [Nagashima](#) Fellowship
- 2021: MetaSense - [Wildcard Prize](#) by Hack-a-Day (HaD)
- 2020: PolySense - [Wildcard Prize](#) by HaD
- 2020: Selected for the [Open Lab](#) with Google Arts
- 2019: [NYU-ITP](#) "instigator" fellowship
- 2019: HiveTracker - [Connected World](#): Best Project (HaD)
- 2018: HiveTracker - [HCI](#) Prize (HaD)
- 2017: French government research grant ([CIR](#))
- 2016: Mentor in art+tech accelerator ([MaDlab](#) UK.)
- 2015: [Google Soli](#) alpha development fellow
- 2015: [Forbes](#) featured my project Twiz!
- 2014: 1st place at Bemyapp factory [contest](#), SF, CA
- 2009: [Besse Foundation](#) Fellow (until 2011)
- 2005: Kenpokan France champion - [80 Kg category](#)
- 1997: [DMC](#) DJ championship (Fr): 8th final - 2nd youngest

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## EXTRA

### [Meta]Reviewing

- UIST: User Interface Systems and Technologies
- CHI: Human Factors in Computing Systems
- TEI: Tangible Embedded & Embodied Interaction
- NIME: New Interfaces for Musical Expression

### Mentoring / Teaching

- *What?* IoT, Wearables, Interaction, Music Tech...
- *Where?* Engineering Schools, Tech-Art Labs, Incubators...

### Collectives

- DataPaulette ([DataPaulette.org](#)): wearable / textile hackerspace - core member
- Noisebridge ([Noisebridge.org](#)): hackerspace - teachings electronics
- [Cumbia Rockers Allstars](#) ([Gatos Negros Prod.](#)): DJ in Cumbia-Fusion groups
- Telecom Robotics ([telecom-robotics.org](#)): Robotics competition society

### Art-Science Residencies & Exhibitions

- Austria 2020: ARS Electronica - [Topographie Digitale](#) exhibition
  - US - MA 2018: MIT Media Lab research residency about wearables & music (gave birth to [SonoFlex](#))
  - Singapore 2016: Media Lab Lasalle - visiting researcher: see [Digital Oxymorons](#) publication.
  - Denmark 2015: Copenhagen University, Human-Centred Computing - visiting researcher: [body-ui.eu](#)
  - France 2015: Fructus Animalis - art against programmed obsolescence : [project.honnet.eu/fructus-animalis](#)
  - Singapore 2014: Growell - explored wild animals camera-trap, DIY farm robotics...
  - Colombia 2012: [Plataforma - Bogota](#) (Interactive Art Lab): [project.honnet.eu/Resbala](#), etc.
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## REFERENCES

- David Merrill (Sifteo): [dMerrill\(a\)media.mit.edu](mailto:dMerrill(a)media.mit.edu)
- Ali Rizvi (Sigma Designs): [aRizvi\(a\)apple.com](mailto:aRizvi(a)apple.com)
- Alexis Polti: [Alexis.Polti\(a\)Telecom-ParisTech.fr](mailto:Alexis.Polti(a)Telecom-ParisTech.fr)
- Saeed Vaseghi: [Saeed.Vaseghi\(a\)Brunel.ac.uk](mailto:Saeed.Vaseghi(a)Brunel.ac.uk)