

# Cedric Honnet

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## ABSTRACT

With endless enthusiasm about interactivity, new media and the arts, I love to explore innovative technologies... I am profoundly curious and always open for collaborations.

## Keywords

HCI, Embedded Systems, Interhacktion design, Arts, Robotics, IoT, 3d [Position | Motion | Touch] Sensing, Manufacturing, [Ultra] Low Power, Wearables, Haptics, eTextiles, etc.

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## RESEARCH

### Publications

Papers available online: [honnet.eu/#Academic](http://honnet.eu/#Academic)

- CHI 2020: *PolySense: Augmenting Textiles with Electrical Functionality using In-Situ Polymerization* - C. Honnet, H. Perner Wilson, M. Teyssier, B. Fruchard, J. Steimle, A.C. Baptista, P. Strohmeier
- UbiComp 2019: *HiveTracker: 3d Positioning for Ubiquitous Embedded Systems* - C. Honnet, G. Lopes
- TEI 2019: *Optimizing Pressure Matrices: Interdigitation and Interpolation Methods for Continuous Position Input* - P. Strohmeier, V. Hakansson, C. Honnet, D. Ashbrook, K. Hornbaek
- CHI 2018: *IN-TOUCH: To improve haptic experiences in VR and AR, we must first improve tracking* - P. Strohmeier, C. Honnet
- AH 2018: *HIVE Tracker: a tiny, low-cost, and scalable device for sub-millimetric 3D positioning* - D. Quinones, G. Lopes, D. Kim, C. Honnet, D. Moratal, A. Kampf
- TEI 2018: *Designing eTextiles for the Body: Shape, Volume and Motion* - R. Freire, P. Strohmeier, C. Honnet, J. Knibbe, S. Brueckner
- NIME 2017: *Designing a Multi-Touch eTextile for Music Performances* - M. Donneaud, C. Honnet, P. Strohmeier
- MOCO 2017: *Digital Oxymorons: From ordinary to expressive objects using tiny wireless IMUs* - A. Schlegel, C. Honnet
- TEI 2017: *Second Skin: An Exploration of eTextile Stretch Circuits on the Body* - R. Freire, C. Honnet, P. Strohmeier
- LM 2016: *Developing an Ecosystem for Interactive Electronic Implants* - P. Strohmeier, C. Honnet, Samppa Von Cyborg

## EXPERIENCE

### 2020-20xx: MIT, USA

*Research Associate - Embedded systems*  
Media Lab - ResEnv: 3D positioning, Haptics, eTextiles.

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

*Research Associate - Embedded systems*  
"Situating Analysis of HCIs in Smart Environments."

### 2016-2017: Carpe Noctem, International

*Research Engineer, Trainer, Mentor*  
- Consulting about embedded systems, wearables, IOT and manufacturing in China, France, etc.  
- Visiting Researcher in UK, Denmark, Singapore, Portugal  
- Teaching in engineering schools, hackerspaces, incubators...  
(see Publications and Logs: [honnet.eu/#Logs](http://honnet.eu/#Logs))

### 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*  
- Worked on various elements of the firmware and software: user interface (sound, graphics...), battery management, simulator, graphics controller, bootloader reliability, etc.  
- Experimental interactive projects: Implemented a gestures recognition system using the MIT-GRT Toolkit, added a MIDI interface to control music software, and developed an audio communication system to send data to smartphones.

### 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

### 2011: Telecom ParisTech, 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: Telecom 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...

- 2019: NYU-ITP "instigator" fellowship
- 2019: Connected World Contest: best project prize (HaD)
- 2018: Square Inch Contest: best project prize (HaD)
- 2018: Human-Computer Interface Prize (Hack-a-Day)
- 2017: French government research grant (CIR)
- 2016: Mentor in art+tech accelerator (MaDlab Manchester)
- 2015: Google Soli alpha developer program
- 2015: Forbes featured my project Twiz!
- 2014: 1st place at Bemyapp factory hackathon, SF, CA
- 2009: Besse Foundation Fellow (till 2011)
- 2005: Kenpoken France champion - 80 Kg category
- 1997: DMC DJ championship (Fr): 8th final - 2nd youngest

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## EXTRA

### Reviewing

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

### Teaching / Training / Mentoring

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

### Collectives

- DataPaulette ([DataPaulette.org](#)): wearable / textile hack-space - core member
- Noisebridge ([Noisebridge.org](#)): hackerspace - electronics and tinkering teachings
- Cumbia Rockers Allstars and Kombo Clan Destino ([GatosNegrosProd.com](#)): DJ in Cumbia-Fusion groups
- Telecom Robotics ([telecom-robotics.org](#)): Robotic competition society

### Art / Science Residencies

- 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 - [project.honnet.eu/Resbala](#) // [project.honnet.eu/Fusion](#)

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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)