Cedric Honnet

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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...

RESEARCH

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

- UIST 2023: *MagKnitic: Machine-knitted Passive and Interactive Haptics Textiles with Integrated Binary Sensing* - Y. Luo, J. Zhu, K. Wu, C. Honnet, S. Mueller, W. Matusik
- IEEE ICRA 2023: *Laser-Etching Flexible Sensors for Robotic Touch Recognition* - C. Honnet, Y. Zhu, M. Nisser, C. Liu, B. Kim, J. Hun Seol, J. Lee, D. Rus, S. Mueller
- AHs 2022: *A Framework For Designing Augmented Human-Flora Interaction* - O. Seow, C. Honnet, S. Perrault, H. Ishii
- UIST 2021: *MetaSense: Integrating Sensing Capabilities into Mechanical Metamaterial* - J. Gong*, O. Seow*, C. Honnet*, J. Forman, S. Mueller
- IEEE AeroSpace 2021: *Feeling Through Spacesuits: Application of Space-Resilient E-Textiles to Enable Haptic Feedback on Pressurized Extravehicular Suits* - S. Payra, I. Wicaksono, J. Cherston, C. Honnet, V. Sumini, J. Paradiso
- 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
- UIST 2020: *Sonoflex: Embroidered Speakers Without Permanent Magnets* - Thomas Preindl, C. Honnet, A. Pointner, R. Aigner, J. Paradiso, M. Haller
- 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
- 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
- NIME 2017: *Designing a Multi-Touch eTextile for Music Performances* - M. Donneaud, C. Honnet, P. Strohmeier
- LM 2016: *Developing an Ecosystem for Interactive Electronic Implants* - P. Strohmeier, C. Honnet, S. Von Cyborg

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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
Dispatched 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.

EDUCATION

2020-2026: MIT, USA

PhD Program @ CSAIL + Media Lab
(Master: fast tracked - GPA: 5.0/5.0)
HCI Engineering + Responsive Environments
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

LANGUAGES

- French: ILR Level 5 - Native proficiency
- English: ILR Level 4 - Full professional proficiency
- Spanish: ILR Level 3 - Professional working proficiency

DISTINCTIONS, AWARDS...

- 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 - Inch Contest: 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

EXTRA

[Meta]Reviewing

- UIST: User Interface Systems and Technologies
- CHI: Human Factors in Computing Systems
- TEI: Tangible Embedded & Embodied
- 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.

REFERENCES