

# Vincent Cavez

## Curriculum Vitae

### Research Summary

I am a Postdoctoral Scholar in Human-Computer Interaction at Stanford University, where I work with Hari Subramonyam. I design and study interactive systems that enrich human activities, from creative practices to learning, while keeping interactions simple and fluid. My work draws on gesture, pen, and voice interaction, and I have a growing interest in theoretical models of interaction that capture how digital tools mediate and shape user activity. I built systems for music score writing, spreadsheet interaction on interactive surfaces, children's storytelling, spelling instruction, and physics learning through sketching. I received my Ph.D. in Computer Science from Paris-Saclay University, advised by Emmanuel Pietriga and Caroline Appert.

### Research Experience

- 2025–2026 **Postdoctoral Scholar**, *Stanford University, Graduate School of Education*, Stanford, USA.  
Host: Hari Subramonyam  
Designing AI-driven interactive tools for children's narrative language development through storytelling. Developing pedagogical program synthesis for interactive spelling instruction. Investigating how sketch-based interaction can support physics learning. Exploring theoretical models of interaction that capture how digital tools mediate and shape user activity. Designing tools for asynchronous designer-client collaboration.
- 2020–2025 **Doctoral Researcher**, *Inria Saclay, ILDA Team*, Paris-Saclay University, France.  
Advisors: Emmanuel Pietriga and Caroline Appert  
Designed and evaluated pen-based interactive systems for productivity and creativity on interactive surfaces, including novel interaction techniques for spreadsheets and music score writing.

### Education

- 2025 **PhD**, *Inria Saclay*, Paris-Saclay University, France.  
Computer Science (*Human-Computer Interaction*)  
Thesis: *Designing Pen-based Interactions for Productivity and Creativity*  
Advisors: Emmanuel Pietriga and Caroline Appert  
<https://theses.hal.science/tel-04986694>
- 2020 **Master's Degree**, Paris-Cité University, France.  
*Mathematical Engineering and Statistics - with high honours*  
Thesis: *Contributions to the development of an embedded object finder for the visually impaired*  
Advisors: Antonin Goude and Oscar De La Cruz
- 2019 **University Degree**, Paris-Saclay University, France.  
*Creation and Development of Innovative Start-ups*
- 2018 **Bachelor's Degree**, Paris-Saclay University, France.  
*Mathematics - Modelization Specialization*

### Publications

#### In Preparation & Under Review

- 2026 **Vincent Cavez**, Marielle Zheng, Momin Siddiqui, Abbie L Olszewski, Srirangaraj Setlur and  
UIST Hari Subramonyam. 2026.  
**Tellimations: Just-in-time Scene Element Animation for Supporting Children's Storytelling.** *In preparation.*

- 2026 Xiaohan Peng and **Vincent Cavez**. 2026.  
 UIST **Cross-expertise Remote Early Prototyping Exchange**. *In preparation*.
- 2026 **Vincent Cavez**, Kashif Imteyaz and Anne-Flore Cabouat. 2026.  
 DIS **Structural Interaction: Shifting the Focus of User Interface Design**. *Under review, Provocations and Works in Progress*.
- Peer-Reviewed
- 2026 Xintian Fu, **Vincent Cavez**. 2026.  
 CHI EA **Opportunities to Support Musicians' Score-based Practice with Context-Specific Annotations on Tablet**. Extended Abstracts of the 2026 CHI Conference on Human Factors in Computing Systems (CHI EA '26), April 13–17, 2026, Barcelona, Spain.  
<https://dl.acm.org/doi/10.1145/3772363.3798332>
- 2026 Momin N. Siddiqui, **Vincent Cavez**, Sahana Rangasrinivasan, Abbie L Olszewski, Srirangaraj Setlur, Maneesh Agrawala and Hari Subramonyam. 2026.  
 IUI **Teaching Spell Checkers to Teach: Pedagogical Program Synthesis for Interactive Learning**. To appear in IUI '26: Proceedings of the 31st International Conference on Intelligent User Interfaces.  
<https://arxiv.org/abs/2512.12115>
- 2025 **Vincent Cavez**, Catherine Letondal, Caroline Appert and Emmanuel Pietriga. 2025.  
 CHI **EuterPen: Unleashing Creative Expression in Music Score Writing**. In CHI Conference on Human Factors in Computing Systems (CHI '25), April 26–May 01, 2025, Yokohama, Japan. ACM, New York, NY, USA, 16 pages.  
<https://doi.org/10.1145/3706598.3713488> (acceptance rate: 24.9%, 1249/5014)
- 2024 **Vincent Cavez**, Catherine Letondal, Emmanuel Pietriga, and Caroline Appert. 2024.  
 CHI **Challenges of Music Score Writing and the Potentials of Interactive Surfaces**. In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA, Article 728, 1–16.  
<https://doi.org/10.1145/3613904.3642079> (acceptance rate: 26.3%, 1060/4028)
- 2024 **Vincent Cavez**, Caroline Appert, and Emmanuel Pietriga. 2024. **Spreadsheets on Interactive Surfaces: Breaking through the Grid with the Pen**. ACM Trans. Comput.-Hum. Interact. 31, 2, Article 16 (April 2024), 33 pages.  
<https://doi.org/10.1145/3630097>

## Workshop Papers

- 2026 **Vincent Cavez**. 2026.  
 CHI WS **Structural Interaction for Generative User Interfaces**. In *Generative UI meets HCI*, Workshop at the CHI Conference on Human Factors in Computing Systems (CHI '26), April 13–17, 2026, Barcelona, Spain. CEUR Workshop Proceedings.  
[https://www.vincentcavez.com/pdf/Structural\\_Interaction\\_Gen\\_UI.pdf](https://www.vincentcavez.com/pdf/Structural_Interaction_Gen_UI.pdf)
- 2026 **Vincent Cavez**. 2026.  
 CHI WS **How Structure Mediates Creative Activity Traces**. In *Herding CATs: Making Sense of Creative Activity Traces*, Workshop at the CHI Conference on Human Factors in Computing Systems (CHI '26), April 13–17, 2026, Barcelona, Spain.  
[https://www.vincentcavez.com/pdf/Structural\\_Interaction\\_CAT.pdf](https://www.vincentcavez.com/pdf/Structural_Interaction_CAT.pdf)

## Posters

- 2026 **Teaching Spell Checkers to Teach: Pedagogical Program Synthesis for Interactive Learning**. LSTD@25, Stanford Graduate School of Education  
 LSTD@25 <https://www.vincentcavez.com/pdf/LSTDPoster.pdf>

2024 **Designing Pen-based Interactions for Productivity and Creativity.** RJC IHM 2024,  
RJC IHM AFIHM  
<https://www.vincentcavez.com/pdf/RJCPoster.pdf>

## Mentoring

- 10/2025–**Marielle Zheng**, *MSc, Learning Design and Technology*, Stanford University, USA.  
03/2026 AI-assisted storytelling for children with developmental language disorder
- 09/2025–**Anika Rajaram**, *High school intern, Harker School*, Stanford University, USA.  
present Learning mechanics through sketch-generated widgets
- 06/2025–**Momin Siddiqui**, *Visiting RA, Georgia Tech*, Stanford University, USA.  
01/2026 Spelling support for children with dyslexia via structured word inquiry
- 06/2025–**Kashif Imteyaz**, *Visiting PhD, Northeastern University*, Stanford University, USA.  
08/2025 Sketch-and-code approach for physics game development
- 05/2025–**Xintian Fu**, *MSc, HCI*, Paris-Saclay University, France.  
08/2025 Context-specific annotations for music score practice on tablet
- 02/2024–**Noémie Hanus**, *MSc, HCI*, Paris-Saclay University, France.  
08/2024 Itinerary-driven map navigation on mobile

## Teaching

- 2024–2025 **Teaching Assistant - Design of Interactive Systems**, *M1–M2 HCI*, Paris-Saclay University.  
*Professor: Wendy Mackay*
- 2024–2025 **Teaching Assistant - Introduction to HCI**, *L2 CS*, Paris-Saclay University.  
*Professor: Michel Beaudouin-Lafon*
- 2022–2024 **Teaching Assistant - Winter School**, *M1 HCI*, Paris-Saclay University.  
*Professor: Vanessa Peña-Araya*
- 2015–2017 **Teaching Assistant - Mathematics**, *7th to 9th Grade*, Mondétour Middle School.  
*Teacher: Marie Decamps*

## Outreach

- 04/2026 **PreCHI Paris**, *Organizer, Session Chair*, Saclay, France.  
<https://sites.google.com/view/paris-pre-chi26/home>
- 02/2026 **Learning Sciences and Technology Design 25th Anniversary Conference**, *Poster*, Stanford, USA.  
<https://ed.stanford.edu/events/lstd-25>
- 11/2025 **ASHA Convention**, *Invited talk*, Washington DC, USA.  
<https://convention.asha.org/>
- 04/2025 **ParaCHI Paris**, *Organizer, Speaker, Session Chair*, Paris, France.  
<https://sites.google.com/view/para-chi-paris25>
- 02/2025 **VISVAR Research Group**, *Invited talk*, Stuttgart, Germany.
- 10/2024 **11th Young Researchers in Human-Computer Interaction Meeting**, *Poster*, Saint-Pierre-d'Oléron, France.  
<https://rjc2024.afihm.org/>
- 05/2024 **Foundation Interface Lab**, *Invited talk*, San Diego, USA.
- 02/2024 **Meetup of Junior Women in Maths and Computer Science**, *Animator*, Saclay, France.  
<https://filles-et-maths.fr/rjmi/>
- 12/2023 **2024 3MT® Paris-Saclay University Competition**, *Finalist*, Saclay, France.  
<https://www.universite-paris-saclay.fr/three-minute-thesis-competition-3mtr#home200832>

- 10/2023 **PreVis '23**, *Demo*, Saclay, France.  
<https://www.aviz.fr/Events/Previs2023>
- 12/2022 **LISN's HCI Department Day**, *Speaker*, Saclay, France.
- 06/2022 **LISN Ph.D. Days**, *Organizer, Speaker*, Saclay, France.

## Service

### Reviewing

- 2026 **C&C 2026**, *Reviewer*.
- 2026 **CHI 2026**, *Reviewer, Associate Chair*.
- 2025 **VIS 2025**, *Reviewer*.
- 2025 **CHI 2025**, *Reviewer*.
- 2024 **CHI 2024**, *Reviewer, Session Chair*.

### Elected Roles

- 2024–present **ACM SIGCHI Paris Chapter**, *Elected Webmaster*.
- 2024–2025 **Paris-Saclay University Council of the Doctoral School**, *Elected Representative*.
- 2024–2025 **Paris-Saclay University Pole Committee of the Doctoral School**, *Elected Representative*.
- 2024–2025 **Inria Saclay Center Committee**, *Elected Representative*.

## Funding

- 2025–2026 Stanford HAI Postdoctoral Fellowship. PI: Hari Subramonyam. \$80,000.
- 2021–2024 Inria CORDI-S Doctoral Fellowship.

## Awards & Honors

- 2026 **2 Special Recognition for Outstanding Reviews**, *CHI 2026*.
- 2024 **Special Recognition for Outstanding Review**, *CHI 2024*.

## Extra-Curricular

- Since 2010 Music composition: electronic and orchestral music, live performance, film soundtracks.  
<https://lordaaron.bandcamp.com/>

## Technical Skills

- Programming JavaScript (D3.js, React), Python (OpenCV, TensorFlow), R (Tidyverse), Swift, Go
- Design & Media Figma, Logic Pro X, Ableton Live, Adobe Premiere Pro, Final Cut Pro, Blender
- Languages French (native), English (fluent)

## Languages

- French **Native**
- English **Fluent**