



Bruno FRUCHARD

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[in](#) linkedin | [portfolio](#) | [scholar](#)

EDUCATION

- PH.D. IN COMPUTER SCIENCE (FOCUS ON HUMAN-COMPUTER INTERACTION)** *Oct. 2015 - Sep. 2018*
TÉLÉCOM PARISTECH / UNIVERSITÉ PARIS-SACLAY, FRANCE
- M.SC. IN COMPUTER SCIENCE (FOCUS ON HUMAN-COMPUTER INTERACTION)** *Sep. 2013 - Sep. 2015*
UNIVERSITÉ PARIS-SACLAY, FRANCE
- B.Sc. IN COMPUTER SCIENCE** *Sep. 2010 - Sep. 2013*
UNIVERSITÉ PARIS-SACLAY, FRANCE

EXPERIENCE

- INRIA STARTING FACULTY POSITION** *Oct. 2022 - Now*
INRIA - LILLE ([EQUIPE PROJET LOKI](#)), FRANCE
- full-time researcher with teaching obligations
- POSTDOCTORAL RESEARCHER** *Aug. 2021 - Sep. 2022*
INRIA - LILLE ([EQUIPE PROJET LOKI](#)), FRANCE
- working with [Stéphane Huot](#), [Géry Casiez](#), [Sylvain Malacria](#) on the [PerfAnalytics](#) project
- POSTDOCTORAL RESEARCHER** *Feb. 2019 - Apr. 2021*
SAARLAND UNIVERSITY - [HCI LAB](#), GERMANY
- head of the team: [Jürgen Steimle](#)
 - worked on a variety of projects including psychophysical experiments [7, 13], developing design tools [7, 11, 14], designing ubiquitous interaction techniques [10], reflecting on critical designs [12] and designing DIY methods [5, 6]
 - supervision of M.Sc. theses and teaching assistant (see Teaching)
- PH.D. CANDIDATE** *Oct. 2015 - Sep. 2018*
TÉLÉCOM PARISTECH - UNIVERSITÉ PARIS-SACLAY, FRANCE
- supervision: [Eric Lecolinet](#), [Olivier Chapuis](#)
 - design of gestural interaction techniques leveraging spatial memory and evaluation of their usability through user studies [1, 8], studying memorization strategies for gestural interaction [2, 3, 4]
 - teaching assistant for several lectures (see Teaching)
- RESEARCH ASSISTANT** *Apr. 2015 - Sep. 2015*
UNIVERSITÉ PARIS-SACLAY, FRANCE
- Master's thesis
 - supervision: [Olivier Chapuis](#), [Emmanuel Pietriga](#)
 - development and evaluation of interaction techniques for map navigation on wall-displays
- RESEARCH ENGINEER** *Apr. 2013 - Jul. 2013*
LIMSI, FRANCE
- supervision: [Nicolas Sabouret](#)
 - development of a conversational AI with multi-scaled realism

PUBLICATIONS

18. **Bruno Fruchard**, Sylvain Malacria, Géry Casiez, and Stéphane Huot. User Preference and Performance using Tagging and Browsing for Image Labeling. In *2023 ACM CHI Conference on Human Factors in Computing Systems (CHI '23)*, Hambourg, Germany, April 2023b. doi: 10.1145/3544548.3580926. URL <https://hal.science/hal-04018549>
17. **Bruno Fruchard**, Cécile Avezou, Sylvain Malacria, Géry Casiez, and Stéphane Huot. A Case Study on the Design and Use of an Annotation and Analytical Tool Tailored To Lead Climbing. In *2023 CHI Conference on Human Factors in Computing Systems (CHI23)*, Hambourg, Germany, April 2023a. doi: 10.1145/3544549.3573876. URL <https://hal.science/hal-04018545>

16. Rhett Dobinson, Marc Teyssier, Jürgen Steimle, and **Bruno Fruchard**. MicroPress: Detecting Pressure and Hover Distance in Thumb-to-Finger Interactions. In *Proceedings of the 2022 ACM Symposium on Spatial User Interaction (SUI 2022)*, pages 1–10, Online CA USA, France, December 2022. ACM. doi: 10.1145/3565970.3567698. URL <https://hal.science/hal-03850971> – honorable mention 🏆
15. Dennis Wittchen, Katta Spiel, **Bruno Fruchard**, Donald Degraen, Oliver Schneider, Georg Freitag, and Paul Strohmeier. TactJam: An End-to-End Prototyping Suite for Collaborative Design of On-Body Vibrotactile Feedback. In *Proceedings of the 16th International Conference on Tangible, Embedded, and Embodied Interaction (TEI 2022)*, pages 1–13, Daejeon, South Korea, February 2022. ACM. doi: 10.1145/3490149.3501307. URL <https://hal.science/hal-03564266>
14. **Bruno Fruchard**, Donald Degraen, Frederik Smolders, Emmanouil Potetsianakis, Seref Güngör, Antonio Krüger, and Jürgen Steimle. Weirding Haptics: In-Situ Prototyping of Vibrotactile Feedback in Virtual Reality through Vocalization. In *UIST '21: The 34th Annual ACM Symposium on User Interface Software and Technology*, pages 936–953, Virtual Event, United States, October 2021a. ACM. doi: 10.1145/3472749.3474797. URL <https://hal.science/hal-03515588>
13. **Bruno Fruchard**, Paul Strohmeier, Roland Bennewitz, and Jürgen Steimle. Squish This: Force Input on Soft Surfaces for Visual Targeting Tasks. In *2021 ACM CHI Virtual Conference on Human Factors in Computing Systems (CHI '21)*, CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, page 3445623, Yokohama (en ligne), Japan, May 2021b. ACM. doi: 10.1145/3411764.3445623. URL <https://hal.science/hal-03515535>
12. Marc Teyssier, Marion Koelle, Paul Strohmeier, **Bruno Fruchard**, and Jürgen Steimle. Eyecam: Revealing Relations between Humans and Sensing Devices through an Anthropomorphic Webcam. In *CHI '21: CHI Conference on Human Factors in Computing Systems*, pages 1–13, Yokohama, Japan, May 2021. ACM. doi: 10.1145/3411764.3445491. URL <https://hal.science/hal-03515488>
11. Narjes Pourjafarian, Marion Koelle, **Bruno Fruchard**, Sahar Mavali, Konstantin Klamka, Daniel Groeger, Paul Strohmeier, and Jürgen Steimle. BodyStylus: Freehand On-Body Design and Fabrication of Epidermal Interfaces. In *CHI '21: CHI Conference on Human Factors in Computing Systems*, pages 1–15, Yokohama Japan, Japan, May 2021. ACM. doi: 10.1145/3411764.3445475. URL <https://hal.science/hal-03550090>
10. Adwait Sharma, Michael A Hedderich, Divyanshu Bhardwaj, **Bruno Fruchard**, Jess McIntosh, Aditya Shekhar Nittala, Dietrich Klakow, Daniel Ashbrook, and Jürgen Steimle. SoloFinger: Robust Microgestures while Grasping Everyday Objects. In *CHI '21: CHI Conference on Human Factors in Computing Systems*, pages 1–15, Yokohama Japan, Japan, May 2021. ACM. doi: 10.1145/3411764.3445197. URL <https://hal.science/hal-03515523>
9. Stéphane Safin, Marie Maitrallin, **Bruno Fruchard**, and Eric Lecolinet. Processus d'appropriation et de mémorisation de raccourcis gestuels sur trackpad : Etude longitudinale des stratégies et usages des utilisateurs et impact d'une aide visuo-sémantique. In *32eme conférence francophone sur l'interaction homme-machine*, 2021
8. **Bruno Fruchard**, Eric Lecolinet, and Olivier Chapuis. Side-Crossing Menus: Enabling Large Sets of Gestures for Small Surfaces. *Proceedings of the ACM on Human-Computer Interaction*, 4(ISS):189:1 – 189:19, November 2020. doi: 10.1145/3427317. URL <https://hal.science/hal-02955441>
7. Paul Strohmeier, Seref Güngör, Luis Herres, Dennis Gudea, **Bruno Fruchard**, and Jürgen Steimle. bARefoot: Generating Virtual Materials using Motion Coupled Vibration in Shoes. In *UIST '20: The 33rd Annual ACM Symposium on User Interface Software and Technology*, pages 579–593, Virtual Event, United States, October 2020a. ACM. doi: 10.1145/3379337.3415828. URL <https://hal.science/hal-03515550>
6. Cedric Honnet, Hannah Perner-Wilson, Marc Teyssier, **Bruno Fruchard**, Jürgen Steimle, Ana C Baptista, and Paul Strohmeier. PolySense: Augmenting Textiles with Electrical Functionality using In-Situ Polymerization. In *2020 CHI Conference on Human Factors in Computing Systems (CHI '20)*, CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems, page 3376841, Honolulu, HI, United States, April 2020. ACM. doi: 10.1145/3313831.3376841. URL <https://hal.science/hal-03515562>
5. Paul Strohmeier, Narjes Pourjafarian, Marion Koelle, Cedric Honnet, **Bruno Fruchard**, and Jürgen Steimle. Sketching On-Body Interactions using Piezo-Resistive Kinesiology Tape. In *2020 Augmented Humans International Conference (AHS '20)*, AHS '20: Proceedings of the Augmented Humans International Conference, page 3384774, Kaiserslautern, Germany, March 2020b. ACM. doi: 10.1145/3384657.3384774. URL <https://hal.science/hal-03515580>
4. **Bruno Fruchard**, Eric Lecolinet, and Olivier Chapuis. How Memorizing Positions or Directions Affects Gesture Learning? In *Proceedings of the 2018 International Conference on Interactive Surfaces and Spaces*, ISS '18, pages 107–114, Tokyo, Japan, November 2018c. ACM. doi: 10.1145/3279778.3279787. URL <https://hal.science/hal-01891436>
3. **Bruno Fruchard**, Eric Lecolinet, and Olivier Chapuis. Mémoire de Commandes : Positions Spatiales versus Gestes Directionnels. In AFIHM, editor, *30eme conférence francophone sur l'interaction homme-machine*, Articles Scientifiques, pages 92–99, Brest, France, October 2018b. URL <https://hal.archives-ouvertes.fr/hal-01899048>
2. **Bruno Fruchard**, Eric Lecolinet, and Olivier Chapuis. Impact of Semantic Aids on Command Memorization for On-Body Interaction and Directional Gestures. In *AVI 2018 - International Conference on Advanced Visual Interfaces*, Castiglione della Pescaia, Grosseto, Italy, May 2018a. ACM. doi: 10.1145/3206505.3206524. URL <https://hal.science/hal-01764757>

1. **Bruno Fruchard**, Eric Lecolinet, and Olivier Chapuis. MarkPad: Augmenting Touchpads for Command Selection. In *Proceedings of the 35th international conference on Human factors in computing systems*, CHI '17, Denver, United States, May 2017. ACM. doi: 10.1145/3025453.3025486. URL <https://hal.science/hal-01437093>

SCIENTIFIC MANIFESTATIONS

- WORKSHOPS**
- [CollabJam](#), World haptics 2023 - Organizer
 - [Sustainable Haptic Design](#), CHI'22 - Organizer
 - [TactJam: a Collaborative Playground for Composing Spatial Tactons](#), TEI'21 - Organizer
 - [Motor Memory in HCI](#), CHI'20 - Organizer
 - [Workshop on Immersive Analytics](#), CHI'19 - Attendee
- POSTERS**
- Interaction Technique Exploiting Memorization to Facilitate Access to Commands, UEIS'17: New trends in User Expertise and Interactive Systems (2017)
 - Techniques d'Interaction Exploitant la Mémoire pour Faciliter l'Accès aux Commandes, IHM'17: Doctoral Consortium of the 29th international conference of the Association Francophone d'Interaction Homme-Machine
- DEMOS**
- Design and Fabrication of Body-Based Interfaces, CHI'23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems - *best demo* 🏆
 - Démonstration d'un outil d'annotation et d'analyse de vidéos d'escalade de difficulté, IHM'23: Extended Proceedings of the 34ème conférence Francophone sur l'Interaction Humain-Machine
 - Demo of PolySense: How to Make Electrically Functional Textiles, CHI'20: Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems
 - Démonstration de MarkPad : Augmentation du pavé tactile pour la sélection de commandes, IHM'17: Adjuction Proceedings of the 29th international conference of the Association Francophone d'Interaction Homme-Machine
 - Démonstration de MarkPad : Augmentation du pavé tactile pour la sélection de commandes, IHMIA'17: Journée Interaction Homme-Machine et Intelligence Artificielle

VOLUNTEERING

- ORGANIZATION** I helped organizing international conferences and events: I am social co-chair for the [ACM UIST'22](#) conference.
- CHAIRING** I have been on several Program Committees and Editorial Boards: ACM [ISS'19](#) [ISS'21](#) [ISS'22](#) [ISS'23](#) conferences, ACM [DIS'22](#) conference, [PerDis'20](#) conference, and [AHs'21](#) conference.
- REVIEWING** I have been reviewing for the following conferences:
- [ACM AHs'20 '21](#)
 - [ACM DIS'22](#)
 - [ACM CHI'18 '19 '20 '21 '22](#)
 - [IHM'18 '20 '21 '22](#)
 - [ACM IMX'24](#)
 - [ACM ISS'18 '19 '20 '21 '22 '23](#)
 - [ACM MobileHCI'19 '20 '21](#)
 - [ACM NordiCHI'18 '20](#)
 - [ACM TEI'18 '22](#)
 - [ACM UIST'19 '20 '21](#)
 - [EuroHaptics'24](#)
- And the following journals:
- [IJHCI](#)
 - [IEEE TAFFC](#)
 - [ACM ToCHI](#)

TEACHING

- TEACHING ASSISTANT**
- [IHM](#), Université de Lille (L3), 2022-2023
 - [Technologies Web](#), Université de Lille (L1), 2022-2023
 - [Introduction à l'Interaction Humain-Machine](#), IUT de Lille, 2022-2023
 - [HCI core lecture](#), Saarland University, Winter semester 2019-2020
 - [Développement d'applications interactives 2D, 3D, Mobile et Web](#), Télécom ParisTech, 2015-2018
 - [Interaction Homme-Machine](#), Télécom ParisTech, 2015-2018
 - [Paradigmes de programmation](#), Télécom ParisTech, 2015-2018
 - [Visualization](#), Télécom ParisTech, 2015-2018
- THESIS SUPERVISION**
- "Comparaison de vidéos d'escalade de vitesse par manipulation directe", Baptiste Kieffer, Stage de license (2022)
 - "Physics-based Interactions for Virtual Reality", Arsen Tabaku, Master thesis (2020)
 - "Design Space of Graphical User Interfaces for Body-based Interactions", Saumya Agarwal, Master thesis (2021)
 - "Microinteractions for Single-Handed Finger Input", Rhett Dobinson, Master thesis (2021)
 - "Human Actuation for Fast-Prototyping of Haptics in Virtual Reality", Ziqian "Charlie" Chen, Master thesis (2021)
 - "Effects of Damaging Plants in Human Plant Interactions", Patrick Speroff, Master thesis (2021)
- THESIS REVIEW** I reviewed numerous M.Sc. theses (#4) and B.Sc. theses (#10) from Saarland University