

OLIVIER CHAPUIS, Ph.D. – Curriculum Vitae

CRHC CNRS

October 2021

Abstract

Ph.D. in Mathematics in 1994 from Université Paris 7 Diderot. Chargé de Recherche CNRS position in 1995. Had spent eight years at Institut Girard Desargues (CNRS & Université Lyon-I), working on model theory, group and field theory and algebraic complexity. Published articles in journals such as Journal of Algebra and Journal of Symbolic Logic.

Moved to Human-Computer Interaction and joined the InSitu team (LRI – Université Paris-Sud & CNRS, INRIA) in 2004, working on window management, pointing techniques, multiscale interaction, mobile devices, wall displays and collaborative interaction. Published articles and served as reviewer and associated chair in conferences such as CHI and UIST and received several best paper awards.

Currently head of the Human Centered Interaction department of the LISN, and member of the ILDA team (Inria Saclay, LISN). Was deputy head of the HCC team (LRI, 09/2013 – 12/2020), deputy director of the LRI (06/2017 – 12/2019), member of the executive team of the LRI (06/2014 – 06/2017), and co-head of the InSitu LRI team (08/2010 – 07/2012).

Web: <https://www.lisn.upsaclay.fr/~chapis/>

e-mail: olivier.chapis@lisn.upsaclay.fr

Phones: +33 (0)1 69 15 61 56 (office), +33 (0)6 82 06 82 78 (mobile)

Academic Positions

January 2021 - now: CNRS Research Scientist (CRHC) in Human Computer Interaction at LISN (Laboratoire Interdisciplinaire des Sciences du Numérique), Université Paris-Saclay.

- Head of the Human Centered Interaction department of the LISN, January 2021 - on going.
- Member of the ILDA team (Inria & LISN), January 2015 – ongoing.
- Promoted Chargé de Recherche Hors Classe, October 2020.

January 2004 - December 2020: CNRS Research Scientist (CRCN) in Human Computer Interaction at LRI (Laboratoire de Recherche en Informatique), Université Paris-Sud.

- Deputy head of the HCC LRI team, September 2013 – December 2020.
- Member and deputy head of the ILDA team (Inria & LRI), January 2015 – ongoing.
- Deputy director of the LRI, July 2017 – December 2019.
- Member of the executive team of the LRI, July 2014 – June 2017.
- Co-head of the InSitu team (Inria & LRI), August 2010 to July 2012.
- Member of the InSitu team, January 2004 – September 2014.

October 1995 - December 2003: CNRS Research Scientist (CRCN) in Mathematics at Institut Girard Desargues (now Institut Camille Jordan), Université Lyon 1.

- Started to moved to computer science around September 2002.
- Promoted CR1 in 1999.

Education

Octobre 1992 - Septembre 1995: Ph.D. in Mathematics at University Paris 7.

- Thesis defended on December 1994 [71].
- Mention très honorable avec félicitation du jury.

September 1990 - September 1991: DEA in mathematics (equivalent to a Master) “Logique Mathématique et Fondements de l’Informatique”, University Paris 7.

September 1986 - June 1990: Master’s degree in mathematics, University Paris 7.

Research Interests

My current research domain is Human-Computer Interaction (HCI). My works include the following topics:

- pointing, *e.g.*, Fitts’s law, techniques to facilitate pointing
- multi-scale navigation, *e.g.*, lenses, drag-mags, multi-user, applied to maps
- interaction techniques, *e.g.*, window management, direct manipulation, commands and memorization, engineering of window systems
- wall-sized displays, *e.g.*, multi-user interaction, input systems, data manipulation, tangible interaction
- combining wall-sized displays, AR, VR, mobile devices, tangibles, *etc.*
- applications to control rooms, data manipulation, and visualization
- methods: high-fidelity prototyping combined with lab experiment mainly quantitative, but not only

Before HCI, I did research in mathematics on the following topics:

- model theory of groups and in particular of free metabelian groups and solvable groups
 - decidability and undecidability results for systems of equations in groups
 - model theory of fields (real closed, algebraically closed)
 - algebraic complexity
-

Scientific Production

Since the beginning of my research activity I have published about 70 scientific articles. In mathematics, I have published 7 papers in the most “prestigious” journals of my research area, some of them still cited in 2021. In HCI, I have published 46 papers in the most “prestigious” journals and conferences of the field, including 18 papers at CHI the flagship HCI conference (3 best paper awards, 1 honorable mention award), 5 papers at UIST, 3 at ToCHI (the leading journal in HCI), 4 at ISS, a best paper award at VRST, *etc.*

This work led me to develop several software packages, from simple demonstrators to complete interactive systems. See the Software section page 8.

A full list of my publications is appended at the end of this CV.

Supervisions & Teaching

Ph.D. students

- Emmanuel Courtoux with C. Appert (2019-). “Collaborative tangible interaction for wall displays”. Ongoing. International publication: [1].
- Raphaël James with A. Bezrianos (2018-). “Environnements de réalité physique et augmentée utilisés dans l’analyse visuelle collaborative”. Ongoing. International publication: [4].
- Bruno Fruchard with Eric Lecolinet (2015-2018). “Techniques d’interaction exploitant la mémoire spatiale pour faciliter l’accès rapide aux commandes et aux données”. December 2018. International publications: [2, 5, 7, 11]. Post-doc at Saarland University (Germany), and then at Université de Lille.
- Arnaud Prouzeau with Anastasia Bezerianos (2014-2017). “Collaboration around wall displays in command and control contexts”. December 2017. International publications: [4, 6, 9, 10, 13]. Post-doc at Monash University (Melbourne, Australia), and then CR Inria (ISFP) at Bordeaux.
- Can Liu with M. Beaudouin-Lafon and E. Lecolinet (2012-2015). “Embodied Interaction for Data Manipulation Tasks on Wall-sized Displays”. December 2015. International publications: [12, 15, 20]. Post-doc at University College London (UK), and then Assistant Professor at City University of Hong Kong.
- Cyprien Pindat with E. Pietriga and C. Puech (2010-2013). “A content-aware design approach to multiscale navigation”. December 2013. International publications: [22, 25]. Startup (USA).
- Guillaume Faure with Michel Beaudouin-Lafon (2007-2011). “Sur le contexte spatial en gestion des fenêtres et interaction homme-machine”. International publications: [27, 35, 37]. December 2011. Engineer at Deezer.

Post docs

- Vit Rusnak with C. Appert et E. Pietriga. (Post-doc Inria). 2017.
- Daniel Spelmezan with C. Appert et E. Pietriga. (Post-doc Inria). 2011-2013.
- Ilaria Licardi with W. Mackay. (Post-doc Inria). 2010.

Master students

- Camille Dupré. “PhotoVR: Une application de tries collaboratif collocalisé”. May – July 2021.
- Juliette Fournis d’Albiat with E. Pietriga. “A Web-Based environment for Cluster-Driven Hight Resolution Wall Displays”. April – August 2021.
- Marzieh Rafiei. “Wall displays in Virtual Reality”. March - August 2019.
- Emmanuel Courtoux with C. Appert. “Tangible interaction for wall displays”. April - September 2019.

- Raphaël James with A. Bezerianos & Tim Dwyer. Studying collaboration using augmented reality and high-resolution Wall displays. April - September 2018.
- Robin Duraz with A. Bezerianos. Navigation multi-échelle sur mur d'écrans avec tablette. May - Juillet 2018.
- Reyhaneh Raissi with A. Bezerianos. "Multi-user Multi-selection on Tabletop". April - September 2017.
- Dylan Lebout with C. Appert. "Graphical interaction techniques for undo and redo"; January - March 2013.
- Stelios Frantzeskakis with A. Bezerianos. "Navigating large information spaces on wall displays using mobile devices". April - September 2012.
- Lei Chen with C. Appert. "Combining Pan-Zoom and Focus+Context for Multi-Scale Navigation on a Tablet". April - September 2012.
- Julien Altieri. "From a Laptop to a Wall-sized Display", April - July 2011.

Engineer

- Rémi Cardona, INRIA Ingénieur Jeune Diplômé, développement of Metisse [45]. 2007-2009.

Teaching

- 12 hours lectures. 3rd year Licence, Human Computer Interaction. Polytech, Univ Paris-Sud. 2015.
- 12 hours lectures. 3rd year Licence, Human Computer Interaction. Polytech, Univ Paris-Sud. 2011.
- 3 hours lectures on pointing, 2nd year Master "Computer Science". Univ Paris-Sud. 2010.
- 12 hours lectures and 12 hours guided classes. 3rd year Licence, Human Computer Interaction. Polytech, Univ Paris-Sud. 2010.
- 25 hours lectures. DEA in Mathematics. Algebraic complexity and models theory. University Lyon I. 1997.
- 3 × 64 hours guided classes. 1st year Licence, Basic Mathematics. University of Paris-Est Créteil. 1992-1994.

Seminars for Students

- Interaction Homme-Machine: une introduction et un panorama. *Séminaires SIESTE*, ENS Lyon. April 2016.
- Les thèmes émergents de l'IHM. Rencontres Jeunes Chercheurs en Interaction Homme Machine, *RJC IHM*. June 2013.

Research Management and Organization

- Head of the Human Centered Interaction department of the LISN (six teams, about 100 researchers with 39 permanents). January 2020 – ongoing.
- Deputy head of the HCC LRI team (three Inria teams, about 50 researchers with 14 permanents). September 2013 - December 2020.
- Deputy director of the LRI (about 250+ persons). July 2017 – December 2019.
- Member of the executive committee of the LRI, July 2014 – June 2017.
- Deputy head of the ILDA Inria-LRI/LISN team (12 researchers/engineers with 5 permanents). January 2015 - ongoing.
- Co-head of the InSitu LRI team (about 25 researchers with 7 permanents). August 2010 – July 2012.
- Member and Vice-President of the executive committee of Association Francophone d'Interaction Humain-Machine (AFIHM) <http://www.afihm.org/>. 2012 - 2016 (Vice-President 2014-2016).
- In charge of the relation with the Société Informatique de France for the AFIHM, 2016 – 2019.
- Member of the program committee of EquipEx Digiscope <http://www.digiscope.fr>. 2011 - 2020.
- Member of the lab council of the LRI (elected). 2010 - 2014.

Funded Projects

- InterPlay (Interacting with Rich Display Ecosystems), funded by the French National Research Agency (ANR). Scientific coordinator. 2022 – 2026.
- Continuum (une immersion virtuelle au service de la science). Equipment of Excellence (EquipEx+). Participant. 2021 – ongoing.
- MemSpace (Interaction techniques using spatial memory to facilitate rapid access to commands and data). Funded by the DigiCosme LabEx. Participant. 2015 – 2018.
- MapMuxing (Multiplexage cartographique multi-dimensionnel), funded by the French National Research Agency (ANR). Participant 20%. 2014-2018.
- Air Quality Monitoring in Korean Metropolises on Ultra-high-resolution Wall Displays. Transfer project funded by the Korea Institute of Science and Technology Information (KISTI). Participant. 2017.
- Digiscope (Collaborative interaction with complex data and computation). Equipment of Excellence (EquipEx). Participant and member of the program committee. 2010 - 2020.
- DigiZoom (Navigation multi-échelle : des dispositifs mobiles aux murs d'écrans collaboratifs). Funded by the DigiCosme LabEx. Coordinator. 2012-2015.

- MLSN (Multi-Level Social Networks), funded by the French National Research Agency (ANR). Participant 20%. 2009-2012.
- WILD (Wall-sized Interaction with Large Datasets). Funded by RTRA Digiteo and Région Île-de-France, Domaine d'Intérêt Majeur "Logiciels et systèmes complexes". Participant. 2008-2012.
- iStar (Moteur Multi-Langage d'Interaction), funded by the French National Research Agency (ANR), 2007-2012. Participant 20%.

Evaluation of Research

Program Committee

- MobileHCI Program Committee Member, *ACM International Conference on Mobile Human-Computer Interaction*: 2021 & 2022.
- EICS Tech Notes Program Committee Member, *ACM SIGCHI Symposium on Engineering Interactive Computing Systems*: 2018 & 2019.
- IHM Program Committee Co-Chair, *Conférence Francophone d'Interaction Homme-Machine*: 2014.
- IHM Program Committee Member, *Conférence Francophone d'Interaction Homme-Machine*: 2013, 2015 and 2016.
- ACM CHI Program Committee Member, *ACM Conference on Human Factors in Computing*: 2010 and 2012.
- INTERACT Program Committee Member, *IFIP TC13 Conference in Human-Computer Interaction*: 2009 and 2013.
- Co-cahier of the 4ème Colloque Franco-Touranien de Théorie des Modèles, may 1997, CIRM, Luminy.

Reviewing

- ACM CHI, ACM UIST and IHM each year since 2006.
- ACM EICS in 2009/15/16, ACM ITS/ISS in 2010 and 2013-17, INTERACT in 2011, GI in 2011/17, NordiCHI in 2011, ACM MobileHCI in 2012 and 2014, IEEE VR in 2012/16/20, IEEE ISMAR 20.
- Reviewer for ACM ToCHI, IEEE TVCG, IJHCS, HCI, etc.
- Reviewer for ANR (Agence Nationale de la Recherche), the NSERC-CRSNG (Natural Sciences and Engineering Research Council of Canada) and the FNR (Luxembourg National Research Fund).

Hiring Committees

- University Lille I hiring committee. 2010.
- University Paris-Sud hiring committee for a special MCF position coupled with an Inria Chair. 2010.
- University Lyon I hiring committee. 1997-2001.

Ph.D. Jury Membership

- Examiner for Marc Baloup Ph.D. (“ ”, Université de Lille, Géry Casier, Thomas Pietrzak et Martin Hachet). 2021.
- Reviewer and Jury for Khanh Duy Le Ph.D. (“Designing to Support Workspace Awareness in Remote Collaboration using 2D Interactive Surfaces”, Chalmers University, Göteborg, Sweden, Morten Fjeld). 2019.
- Reviewer for Ulrich von Zadow Ph.D. (“Personalized interaction with high-resolution wall displays”, Technische Universität Dresden, Germany, Raimund Dachsel), 2018.
- Examiner for Lili Tong Ph.D. (“Designing and Analyzing Collaborative Activities in Multi-Surface Environments” , Université de Lyon et INSA, A. Youssef, G. Sébastien, S. Audrey, A. Tabard), 2017.
- Examiner for Jules Françoise Ph.D. (“Motion-Sound Mapping by Demonstration” , Université Pierre et Marie Curie, S. Hanneton & F. Bevilacqua), 2015.
- Reviewer for Simon Perrault Ph.D. (“Nouvelles Techniques d’Interaction pour les Dispositifs Miniaturisés de l’Informatique Mobile”, Télécom ParisTech, E. Lecolinet & Y. Guiard), 2013.
- Examiner for Xu Quan Ph.D. (“Contribution à l’étude et au développement de techniques de gestion de fenêtres”, Université Lille 1, G. Casiez & C. Chaillou), 2010.
- Examiner for de Deborah M. Raphael (“Comparaison de propriétés modèle-théoriques et de propriétés algébriques des groupes polycycliques-par-finis”, Université Paris Diderot, G. Sabbagh), 1996.

Invited Talks

- Multi-user interaction on wall displays, *Public lectures on interactive design*, Chalmers University – Göteborg, November 2019.
- Interaction multi-utilisateurs sur mur d’écrans, *Journée du GT I2C du CRISAL*, Université de Lille, June 2019.
- Expressive and multi-user interaction, desktops, wall displays and beyond, *Dresden Talks on Interaction & Visualization*, May 2018.
- Monitoring Air Quality in Korea’s Metropolises on Ultra-High Resolution Wall-Sized Displays (with E. Pietriga), *Asia Data Week 2017*, November 2017.
- L’équipement d’excellence Digiscope: un réseau de plateformes pour la visualisation interactive, *CNRS Innovatives Big Data Forum*, Paris, France, October 2016.
- Interaction Homme-Machine: une introduction et un panorama. *Séminaires SIESTE*, ENS Lyon. April 2016.
- Les thèmes émergents de l’IHM. Rencontres Jeunes Chercheurs en Interaction Homme Machine, *RJC IHM*. June 2013.
- Collaborative Interaction on Wall-sized Displays. *Digiteo-Digicosme Scientific Council*. Saclay, June 2013.

- Images subliminales pour interagir ?. *Unithé ou café*, Inria. December 2009.
- Classes de complexité non uniforme au-dessus d'une structure. *Séminaire général de Logique*. Univ Paris 7. November 2000.
- Non uniform complexity classes over a structure. *Workshop in models theory and computer science*, Edimbourg (Ecosse). Septembre 2000.
- Saturation and stability in the theory of computation over the reals. *Séminaire de l'équipe Algo du LRI*. Univ Paris-Sud. 1999.
- Introduction to complexity theory over infinite structures. *17ème Journées sur les Arithmétiques Faibles, JAF17*, Clermont-Ferrand. February 1999.
- On free metabelian groups. *3ème Colloque franco-kasakh de théorie des modèles*. Almaty (Kazakhstan). June 1994.

Software

Main Developer

- WallTokens (With E. Courtoux & C. Appert), abstract tangible for collaborative interaction with wall display applications,
<https://walltokens.lisn.upsaclay.fr/>
- Smarties, An input system for collaborative wall display applications,
<http://smarties.lri.fr/>
- Metisse (with N. Roussel), Windowing system to explore inovative window management techniques,
<http://insitu.lri.fr/metisse/>.
- WmTrace, Logging and visualizing user's window management activity,
<http://www.lri.fr/~chapuis/software/wmtrace/>

Participations

- MarkPad (B. Fruchard et E. Lecolinet), Augmenting Touchpads for Command Selection,
<https://brunofruchard.com/projects/markpad>
- ZVTM (E. Pietriga et al.), Zoomable Visual Transformation Machine,
<http://zvtm.sourceforge.net/>

Publications

Documents and videos available at <http://www.lisn.upsaclay.fr/~chapis/publications/>.

In the field of Human Computer Interaction, conferences are considered the primary method of publication. The ACM CHI and UIST conferences are particularly selective and are considered journal level work by the ACM/SIGCHI. See <http://dx.doi.org/10.1145/1743546.1743569>.

Refereed Papers in Major International Conference Proceedings and Journals

- [1] Courtoux Emmanuel, Appert Caroline & Chapuis Olivier. WallTokens: Surface tangibles for vertical displays. In *Proceedings of the international conference on Human factors in computing systems*, CHI '21. ACM, May 2021. [DOI](#) [HAL](#) [VIDEO](#)
- [2] Fruchard Bruno, Lecolinet Eric & Chapuis Olivier. Side-crossing menus: Enabling large sets of gestures for small surfaces. *Proceedings of the ACM on Human-Computer Interaction*, 4, ISS, November 2020. [DOI](#) [HAL](#) [VIDEO](#)
- [3] Brasier Eugenie, Chapuis Olivier, Ferey Nicolas, Vezien Jeanne & Appert Caroline. ARPads: Mid-air indirect input for augmented reality. In *International Symposium on Mixed and Augmented Reality*, ISMAR '20, 453 – 464. IEEE, November 2020. [DOI](#) [HAL](#) [VIDEO](#)
- [4] James Raphaël, Bezerianos Anastasia, Chapuis Olivier, Dwyer Tim, Cordeil Maxime & Prouzeau Arnaud. Personal+Context navigation: Combining AR and shared displays in network path-following. In *Proceedings of Graphics Interface*, GI '20. CHCCS/SCDHM, May 2020. [DOI](#) [HAL](#) [VIDEO](#)
- [5] Fruchard Bruno, Lecolinet Eric & Chapuis Olivier. How memorizing positions or directions affects gesture learning? In *Proceedings of the 2018 International Conference on Interactive Surfaces and Spaces*, ISS '18, 107–114. ACM, November 2018. (AR: 26.7%). [DOI](#) [HAL](#)
- [6] Prouzeau Arnaud, Bezerianos Anastasia & Chapuis Olivier. Awareness techniques to aid transitions between personal and shared workspaces in multi-display environments. In *Proceedings of the 2018 International Conference on Interactive Surfaces and Spaces*, ISS '18, 291–304. ACM, November 2018. (AR: 26.7%). [DOI](#) [HAL](#) [VIDEO](#)
- [7] Fruchard Bruno, Lecolinet Eric & Chapuis Olivier. Impact of semantic aids on command memorization for on-body interaction and directional gestures. In *Proceedings of the International Working Conference on Advanced Visual Interfaces*, AVI '18, 14:1–14:9. ACM, May 2018. (AR: 25%). [DOI](#) [HAL](#) [VIDEO](#)
- [8] Rusnak Vit, Appert Caroline, Chapuis Olivier & Pietriga Emmanuel. Designing coherent gesture sets for multi-scale navigation on tabletops. In *Proceedings of the 36th international conference on Human factors in computing systems*, CHI '18, 142:1–142:12. ACM, April 2018. (AR: 25%). [DOI](#) [HAL](#) [VIDEO](#)
- [9] Prouzeau Arnaud, Bezerianos Anastasia & Chapuis Olivier. Evaluating multi-user selection for exploring graph topology on wall-displays. *IEEE Transactions on Visualization and Computer Graphics*, 23, 8, 1936–1951, August 2017. [DOI](#) [HAL](#) [VIDEO](#)
- [10] Prouzeau Arnaud, Bezerianos Anastasia & Chapuis Olivier. Trade-offs between a vertical shared display and two desktops in a collaborative path-finding task. In *Proceedings of Graphics Interface 2017*, GI '17, 214–219. CHCCS, May 2017. (AR: 40%). [DOI](#) [HAL](#) [VIDEO](#)

- [11] Fruchard Bruno, Lecolinet Eric & Chapuis Olivier. MarkPad: Augmenting touchpads for command selection. In *Proceedings of the 35th international conference on Human factors in computing systems*, CHI '17, 5630–5642. ACM, May 2017. (AR: 25%). [DOI](#) [HAL](#) [VIDEO](#)
- [12] Liu Can, Chapuis Olivier, Beaudouin-Lafon Michel & Lecolinet Eric. CoReach: Cooperative gestures for data manipulation on wall-sized displays. In *Proceedings of the 35th international conference on Human factors in computing systems*, CHI '17, 6730–6741. ACM, May 2017. (AR: 25%). [DOI](#) [HAL](#) [VIDEO](#)
- [13] Prouzeau Arnaud, Bezerianos Anastasia & Chapuis Olivier. Towards road traffic management with forecasting on wall displays. In *Proceedings of the 2016 International Conference on Interactive Surfaces and Spaces*, ISS '16, 119–128. ACM, November 2016. (AR: 27.3%). [DOI](#) [HAL](#) [VIDEO](#)
- [14] Pietriga Emmanuel, del Campo Fernando, Ibsen Amanda, Primet Romain, Appert Caroline, Chapuis Olivier, Hempel Maren, Muñoz Roberto, Eyheramendy Duerr Susana, Jordan Andres & Dole Hervé. Exploratory visualization of astronomical data on ultra-high-resolution wall displays. In *Proceedings of the Astronomical Telescopes and Instrumentation conference: Software and Cyberinfrastructure for Astronomy III*, SPIE 9913. SPIE, June 2016. [DOI](#) [HAL](#)
- [15] Liu Can, Chapuis Olivier, Beaudouin-Lafon Michel & Lecolinet Eric. Shared interaction on a wall-sized display in a data manipulation task. In *Proceedings of the 34th international conference on Human factors in computing systems*, CHI '16, 2075–2086. ACM, May 2016. (AR: 23.2%). [DOI](#) [HAL](#) [VIDEO](#)
- [16] Appert Caroline, Chapuis Olivier, Pietriga Emmanuel & Lobo María-Jesús. Reciprocal drag-and-drop. *ACM Transactions on Computer-Human Interaction*, 22, 6, 36 pages, September 2015. [DOI](#) [HAL](#) [VIDEO](#)
- [17] Nancel Mathieu, Pietriga Emmanuel, Chapuis Olivier & Beaudouin-Lafon Michel. Mid-air pointing on ultra-walls. *ACM Transactions on Computer-Human Interaction*, 22, 5, 62 pages, August 2015. [DOI](#) [HAL](#)
- [18] Alvina Jessalyn, Appert Caroline, Chapuis Olivier & Pietriga Emmanuel. Routelens: Easy route following for map applications. In *Proceedings of the International Working Conference on Advanced Visual Interfaces*, AVI '14, 125–128. ACM, May 2014. (AR: 28.5%). [DOI](#) [HAL](#)
- [19] Chapuis Olivier, Bezerianos Anastasia & Frantzeskakis Stelios. Smarties: An input system for wall display development. In *Proceedings of the 32nd international conference on Human factors in computing systems*, CHI '14, 2763–2772. ACM, April 2014. (AR: 22.8%). [DOI](#) [HAL](#) [VIDEO](#)
- [20] Liu Can, Chapuis Olivier, Beaudouin-Lafon Michel, Lecolinet Eric & Mackay Wendy. Effects of display size and navigation type on a classification task. In *Proceedings of the 32nd international conference on Human factors in computing systems*, CHI '14, 4147–4156. ACM, April 2014. **Best Paper Award**. (AR: 22.8%). [DOI](#) [HAL](#) [VIDEO](#)
- [21] Spelmezan Daniel, Appert Caroline, Chapuis Olivier & Pietriga Emmanuel. Controlling widgets with one power-up button. In *Proceedings of the 26th ACM Symposium on User Interface Software and Technology*, UIST '13, 71–74. ACM, October 2013. (AR: 20%). [DOI](#) [HAL](#) [VIDEO](#)

- [22] Pindat Cyprien, Pietriga Emmanuel, Chapuis Olivier & Puech Claude. Drilling into complex 3d models with gimlenses. In *Proceedings of the 19th ACM Symposium on Virtual Reality Software and Technology*, VRST '13, 223–230. ACM, October 2013. **Best Paper Award**. (AR: 25%). [DOI](#) [HAL](#) [VIDEO](#)
- [23] Spelmezan Daniel, Appert Caroline, Chapuis Olivier & Pietriga Emmanuel. Side pressure for bidirectional navigation on small devices. In *Proceedings of the 15th International Conference on Human-Computer Interaction with Mobile Devices and Services*, Mobile-HCI '13, 11–20. ACM, August 2013. (AR: 22%). [DOI](#) [HAL](#) [VIDEO](#)
- [24] Nancel Mathieu, Chapuis Olivier, Pietriga Emmanuel, Yang Xing-Dong, Irani Pourang & Beaudouin-Lafon Michel. High-precision pointing on large wall displays using small handheld devices. In *Proceedings of the 31th international conference on Human factors in computing systems*, CHI '13, 831–840. ACM, May 2013. (AR: 20%). [DOI](#) [HAL](#) [VIDEO](#)
- [25] Pindat Cyprien, Pietriga Emmanuel, Chapuis Olivier & Puech Claude. JellyLens: Content-aware adaptive lenses. In *Proceedings of the 25th annual ACM symposium on User interface software and technology*, UIST '12, 261–270. ACM, October 2012. (AR: 22%). [DOI](#) [HAL](#) [VIDEO](#)
- [26] Appert Caroline, Chapuis Olivier & Pietriga Emmanuel. Dwell-and-Spring: Undo for direct manipulation. In *Proceedings of the 30th international conference on Human factors in computing systems*, CHI '12, 1957–1966. ACM, May 2012. (AR: 23%). [DOI](#) [HAL](#) [VIDEO](#)
- [27] Ghomi Emilien, Faure Guillaume, Huot Stéphane, Chapuis Olivier & Beaudouin-Lafon Michel. Using rhythmic patterns as an input method. In *Proceedings of the 30th international conference on Human factors in computing systems*, CHI '12, 1253–1262. ACM, May 2012. **Best Paper Award**. (AR: 23%). [DOI](#) [HAL](#) [VIDEO](#)
- [28] Beaudouin-Lafon Michel, Chapuis Olivier, Eagan James, Gjerlufsen Tony, Huot Stéphane, Klokose Clemens, Mackay Wendy, Nancel Mathieu, Pietriga Emmanuel, Pillias Clément, Primet Romain & Wagner Julie. Multisurface interaction in the WILD room. *IEEE Computer*, 45, 4, 48–56, April 2012. [DOI](#) [HAL](#) [VIDEO](#)
- [29] Chapuis Olivier & Dragicevic Pierre. Effects of motor scale, visual scale and quantization on small target acquisition difficulty. *ACM Transactions on Computer-Human Interaction*, 18, 3, 13:1–13:32, July 2011. [DOI](#) [HAL](#)
- [30] Liccardi Ilaria, Chapuis Olivier, Au Yeung Ching-Man & Mackay Wendy. Redundancy and collaboration in wikibooks. In *Proceedings of the 13th IFIP TC13 Conference in Human-Computer Interaction – LNCS 6946*, INTERACT '11, 215–232. Springer-Verlag, September 2011. (AR: 27.5%). [DOI](#) [HAL](#)
- [31] Huot Stéphane, Chapuis Olivier & Dragicevic Pierre. TorusDesktop: Pointing via the backdoor is sometimes shorter. In *Proceedings of the 29th international conference on Human factors in computing systems*, CHI '11, 829–838. ACM, May 2011. (AR: 27%). [DOI](#) [HAL](#) [VIDEO](#)
- [32] Nancel Mathieu, Wagner Julie, Pietriga Emmanuel, Chapuis Olivier & Mackay Wendy. Mid-air pan-and-zoom on wall-sized displays. In *Proceedings of the 29th international conference on Human factors in computing systems*, CHI '11, 177–186. ACM, May 2011. **Best Paper Award**. (AR: 27%). [DOI](#) [HAL](#) [VIDEO](#)

- [33] Chapuis Olivier & Roussel Nicolas. UIMarks: Quick graphical interaction with specific targets. In *Proceedings of the 23rd annual ACM symposium on User interface software and technology*, UIST '10, 173–182. ACM, October 2010. (AR: 18%). [DOI](#) [HAL](#) [VIDEO](#)
- [34] Appert Caroline, Chapuis Olivier & Pietriga Emmanuel. High-precision magnification lenses. In *Proceedings of the 28th international conference on Human factors in computing systems*, CHI '10, 273–282. ACM, April 2010. (AR: 22.5%). [DOI](#) [HAL](#) [VIDEO](#)
- [35] Faure Guillaume, Chapuis Olivier & Beaudouin-Lafon Michel. Acquisition of animated and pop-up targets. In *Proceedings of the 12th IFIP TC13 Conference in Human-Computer Interaction – LNCS 5727*, INTERACT '09, 372–385. Springer-Verlag, September 2009. (AR: 29%). [DOI](#) [HAL](#)
- [36] Chapuis Olivier, Labrune Jean-Baptiste & Pietriga Emmanuel. DynaSpot: Speed-dependent area cursor. In *Proceedings of the 27th international conference on Human factors in computing systems*, CHI '09, 1391–1400. ACM, April 2009. **Honorable Mention Award**. (AR: 24.5%). [DOI](#) [HAL](#) [VIDEO](#)
- [37] Faure Guillaume, Chapuis Olivier & Roussel Nicolas. Power tools for copying and moving: Useful stuff for your desktop. In *Proceedings of the 27th international conference on Human factors in computing systems*, CHI '09, 1675–1678. ACM, April 2009. (AR: 24.5%). [DOI](#) [HAL](#) [VIDEO](#)
- [38] Appert Caroline, Chapuis Olivier & Beaudouin-Lafon Michel. Evaluation of pointing performance on screen edges. In *Proceedings of the working conference on Advanced visual interfaces*, AVI '08, 119–126. ACM, May 2008. (AR: 27%). [DOI](#) [HAL](#)
- [39] Chapuis Olivier & Roussel Nicolas. Copy-and-paste between overlapping windows. In *Proceedings of the 25th international conference on Human factors in computing systems*, CHI '07, 201–210. ACM, April 2007. (AR: 21.5%). [DOI](#) [HAL](#) [VIDEO](#)
- [40] Guiard Yves, Du Yangzhou & Chapuis Olivier. Quantifying degree of goal directedness in document navigation: Application to the evaluation of the perspective-drag technique. In *Proceedings of the 25th international conference on Human factors in computing systems*, CHI '07, 327–336. ACM, April 2007. (AR: 21.5%). [DOI](#) [HAL](#)
- [41] Mackay Wendy, Appert Caroline, Beaudouin-Lafon Michel, Chapuis Olivier, Du Yangzhou, Fekete Jean-Daniel & Guiard Yves. Touchstone: Exploratory design of experiments. In *Proceedings of the 25th international conference on Human factors in computing systems*, CHI '07, 1425–1434. ACM, April 2007. (AR: 21.5%). [DOI](#) [HAL](#)
- [42] Stuerzlinger Wolfgang, Chapuis Olivier, Phillips Dusty & Roussel Nicolas. User interface façades: Towards fully adaptable user interfaces. In *Proceedings of the 19th annual ACM symposium on User interface software and technology*, UIST '06, 309–318. ACM, October 2006. (AR: 22.5%). [DOI](#) [HAL](#) [VIDEO](#)
- [43] Du Yangzhou, Chapuis Olivier, Guiard Yves & Beaudouin-Lafon Michel. Assisting target acquisition in perspective views. In *Proceedings of the 20th British CHI Group Annual Conference on HCI*, BCS-HCI '06, 135–150. BCS - Springer, September 2006. (AR: 25%). [DOI](#) [HAL](#)

- [44] Guiard Yves, Chapuis Olivier, Du Yangzhou & Beaudouin-Lafon Michel. Allowing camera tilts for document navigation in the standard gui: a discussion and an experiment. In *Proceedings of the working conference on Advanced visual interfaces*, AVI '06, 241–244. ACM, May 2006. (AR: 25%). [DOI](#) [HAL](#)
- [45] Chapuis Olivier & Roussel Nicolas. Metisse is not a 3D desktop! In *Proceedings of the 18th annual ACM symposium on User interface software and technology*, UIST '05, 13–22. ACM, October 2005. (AR: 19%). [DOI](#) [HAL](#) [VIDEO](#)

In Mathematics

- [46] Chapuis Olivier, Hrushovski Ehud, Koiran Pascal & Poizat Bruno. La limite des théories de courbes génériques. *Journal of Symbolic Logic*, 67, 1, 24–34, 2002. [DOI](#)
- [47] Chapuis Olivier & Koiran Pascal. Saturation and stability in the theory of computation over the reals. *Annals of Pure and Applied Logic*, 99, 1, 1–49, 1999. [DOI](#)
- [48] Chapuis Olivier & Koiran Pascal. Definability of geometric properties in algebraically closed fields. *Mathematical Logic Quarterly*, 45, 4, 533–550, 1999. [DOI](#)
- [49] Chapuis Olivier. On the theories of free solvable groups. *Journal of Pure and Applied Algebra*, 131, 1, 13–24, 1998. [DOI](#)
- [50] Chapuis Olivier. \forall -free metabelian groups. *Journal of Symbolic Logic*, 62, 1, 159–174, 1997. [DOI](#)
- [51] Chapuis Olivier. From "metabelian Q-vector spaces" to new ω -stable groups. *Bulletin of Symbolic Logic*, 2, 1, 84–93, 1996. [DOI](#)
- [52] Chapuis Olivier. Universal theory of certain solvable groups and bounded ore group rings. *Journal of Algebra*, 176, 2, 368–391, 1995. [DOI](#)
- [53] Chapuis Olivier. Variétés de groupes et m-identités. *Compte Rendu de l'Academie des Sciences (Série I, Mathématique)*, 316, 15–17, 1993.

Refereed Papers in National Conference Proceedings

- [54] Fruchard Bruno, Lecolinet Eric & Chapuis Olivier. Mémorisation de commandes: Positions spatiales versus gestes directionnels. In *Proceedings of the 30th international conference of the Association Francophone d'Interaction Homme-Machine*, IHM '18, 92–99. ACM, October 2018. [DOI](#) [HAL](#)
- [55] Faure Guillaume, Chapuis Olivier & Beaudouin-Lafon Michel. Perception de la profondeur en gestion de fenêtres. In *Proceedings of the 22th international conference of the Association Francophone d'Interaction Homme-Machine*, IHM '10, 149–152. ACM, September 2010. (AR: 42%). [DOI](#) [HAL](#)
- [56] Chapuis Olivier. Gestion des fenêtres: Enregistrement et visualisation de l'interaction. In *Proceedings of the 17th international conference of the Association Francophone d'Interaction Homme-Machine*, IHM '05, 255–258. ACM, September 2005. (AR: 51%). [DOI](#) [HAL](#)

- [57] Roussel Nicolas & Chapuis Olivier. Metisse: un système de fenêtrage hautement configurable et utilisable au quotidien. In *Proceedings of the 17th international conference of the Association Francophone d'Interaction Homme-Machine*, IHM '05, 279–282. ACM, September 2005. (AR: 51%). [DOI](#) [HAL](#) [VIDEO](#)

Refereed Posters, Demos, Work in Progress and Workshop Papers

- [58] Fruchard Bruno, Prouzeau Arnaud, Chapuis Olivier & Lecolinet Eric. Leveraging body interactions to support immersive analytics. In *CHI 2019 workshop on Immersive Analytics*, ImmAna '19, May 2019. [URL](#) [HAL](#)
- [59] Fruchard Bruno, Lecolinet Eric & Chapuis Olivier. Démonstration de MarkPad: Augmentation du pavé tactile pour la sélection de commandes. In *Adjuction Proceedings of the 29th international conference of the Association Francophone d'Interaction Homme-Machine, Démonstration*, IHM '17. AFIHM, August 2017. [URL](#) [HAL](#)
- [60] Prouzeau Arnaud, Bezerianos Anastasia & Chapuis Olivier. Visual immersion in the context of wall displays. In *Proceedings of the 2016 ACM Companion on Interactive Surfaces and Spaces (Immersive Data Analytics)*, ISS Companion '16, 33–39. ACM, November 2016. [DOI](#) [HAL](#)
- [61] Françoise Jules, Chapuis Olivier, Hanne-ton Sylvain & Bevilacqua Frédéric. Soundguides: Adapting continuous auditory feedback to users. In *Proceedings of the 34th international conference on Human factors in computing systems, Extended Abstracts*, CHI EA '16, 2829–2836. ACM, May 2016. (AR: 43.4%). [DOI](#) [HAL](#) [VIDEO](#)
- [62] Prouzeau Arnaud, Bezerianos Anastasia & Chapuis Olivier. Surveillance du trafic routier avec un mur d'écrans. In *Proceedings of the 27th international conference of the Association Francophone d'Interaction Homme-Machine, Travaux en Cours*, IHM TeC '15. ACM, October 2015. [DOI](#) [HAL](#)
- [63] Bezerianos Anastasia, Isenberg Petra, Chapuis Olivier & Willett Wesley. Perceptual affordances of wall-sized displays for visualization applications: Color. In *CHI Workshop on Interactive, Ultra-High-Resolution Displays*, 6 pages, May 2013. [URL](#)
- [64] Besacier Guillaume, Vernier Frédéric, Chapuis Olivier & Roussel Nicolas. Redirection d'applications existantes et nouvelles interactions pour des usages collaboratifs co-localisés sur une table interactive. In *Proceedings of the 19th international conference of the Association Francophone d'Interaction Homme-Machine*, IHM '07, 271–274. ACM, November 2007. [DOI](#) [HAL](#)
- [65] Guiard Yves, Beaudouin-Lafon Michel, Du Yangzhou, Appert Caroline, Fekete Jean-Daniel & Chapuis Olivier. Shakespeare's complete works as a benchmark for evaluating multiscale document navigation techniques. In *Proceedings of the 2006 AVI workshop on BEyond time and errors*, BELIV '06, 1–6. ACM, May 2006. [DOI](#) [HAL](#)

Technical Reports and Dissemination

- [66] Chapuis Olivier. Les murs d'écrans interactifs. In Bouzeghoub M., Daafouz J. & Jutten C., editors, *Vers le cyber-monde: Humain et numérique en interaction*. CNRS Ed., 2021 [HAL](#).

- [67] Pietriga Emmanuel, del Campo Fernando, Ibsen Amanda, Primet Romain, Appert Caroline, Chapuis Olivier, Hempel Maren, Muñoz Roberto, Eyheramendy Duerr Susana, Jordan Andres & Dole Hervé. Ultra-high-resolution walls for visualizing very large datasets. SPIE Newsroom, May 2016. [DOI](#)
- [68] Chapuis Olivier & Dragicevic Pierre. Small targets: Why are they so difficult to acquire? Technical Report 1508, LRI, Univ. Paris-Sud, France, December 2008. 10 pages.
- [69] Chapuis Olivier, Blanch Renaud & Beaudouin-Lafon Michel. Fitts' law in the wild: A field study of aimed movements. Technical Report 1480, LRI, Univ. Paris-Sud, France, December 2007. 11 pages. [URL](#)

Editorial Work

- [70] Casiez Géry, Pietrzak Thomas, Chapuis Olivier & Conversy Stéphane, editors. *Proceedings of the 26th Conference Francophone sur l'Interaction Homme-Machine*, IHM '14. ACM, 2014. [URL](#) [HAL](#)

Thesis

- [71] Chapuis Olivier. *Contributions à la théorie des groupes résolubles: elliptisme et théorie (universelle) du premier ordre*. Thèse de doctorat, Université Paris 7, Paris, France, Décembre 1994. [URL](#)
- [72] Chapuis Olivier. Problème de Tarski pour les groupes polynilpotents et les groupes nilpotents divisibles. Master's thesis, Université Paris 7, Paris, France, Septembre 1991.