

# Lonni Besançon | Curriculum Vitæ

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## Research Interest and Focus

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My main focus lies in the intersection between human-computer interaction and interactive scientific visualization. My focus has been on bridging the gap between several novel interaction paradigms often used in scientific visualization (tactile interaction and tangible interaction). Overall, I am deeply interested by 3D interaction as well as all new interaction paradigms and their applications to specific scientific domains such as medicine or fluid dynamics. To validate my work, I have mainly relied on controlled experiments with users (domain experts or out-of-the-lab participants).

## Education

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- **Université Paris-Saclay** **Paris, France**  
*PhD in Human Computer Interaction* *2014–2017*
- **Université Paris-Sud** **Paris, France**  
*Master of Research in HCI* *2013–2014*
- **The University of Hong Kong** **Hong Kong**  
*Exchange Program* *2012–2013*
- **Polytech Paris-Sud** **Paris, France**  
*Diplome d'Ingénieur (Equivalent to Master of Engineering)* *2009–2014*

## Awards and Scholarships

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- 2018 **Second price of the prix de these GDR-IGRV** for my thesis "An Interaction Continuum for 3D Dataset Visualization".
- 2017 **Best Paper Honorable Mention Award** for "Pressure-Based Gain Factor for Mobile 3D Interaction using Locally-Coupled Devices" at the ACM CHI 2017 conference
- 2014 **Ph.D Scholarship** from the French government to start and complete my Ph.D project

## Teaching and Supervision

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### Student Supervision.....

04/2017–09/2017 Xiyao Wang: Master's thesis. Augmenting tactile interaction with pressure input.

06/2017–09/2017 Marie Cheng: research internship. Back of device pressure sensing for gain factor control.

### Teaching Experiences.....

2014–2017 Interactive Information Visualization (student projects and lab sessions). 12h per year

2016, 2017 Advanced Algorithms and Graph Theory (some lectures and all tutorials). 30h per year

2014–2017 Algorithms and Data Structures (tutorials). 15–20h per year.

2015 Computer Network and Security (tutorials). 20h

2014 Assembly Language (Tutorial). 4h.

## Community Service and Activities

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Despite my relatively short career in academia, I have reviewed for several conferences.

### Editorial Boards.....

Since 2018 International Journal of Virtual Reality

### Program Committees.....

VR Program Committee for IEEE VR Papers (2019)

IHM Program Committee for IHM Papers (2018)

Eurovis Program Committee for Eurovis Posters (2018)

Eurovis Program Committee for Eurovis Short Papers (2018)

### Reviewing for Grant Applications.....

ANR Programme Jeunes Chercheuses et Jeunes Chercheurs (2018)

### Reviewing for Journals.....

JCCH ACM Journal on Computing and Cultural Heritage (1 paper)

Consumer Electronic IEEE Consumer Electronic Journal, Special edition on Advanced Interaction and Virtual/Augmented Reality (1 paper)

TVCG IEEE Computer Society TVCG journal for VR 2018 (1 paper)

Springer Genetic Programming and Evolvable Machines, special issue on visualization.  
(1 paper)

#### Reviewing for Conferences/Symposia.....

- 3DUI 3 papers (2016, 2017)
- CHI 8 papers, 4 posters (2016–2019)
- ICMI 8 papers (2016–2018)
- EuroVis 2 papers, 2 posters (2018)
- IHM 4 papers (2017–2018)
- ISMAR 2 papers (2018)
- ISS 2 papers (2017)
- MobileHCI 3 posters (2018)
- NordiCHI 1 paper (2018)
- OzCHI 2 papers (2017)
- PacificVIS 1 paper (2019)
- SUI 3 papers (2016, 2018)
- TEI 4 papers, 2 posters (2018, 2019)
- UIST 1 paper (2018)
- VRST 2 paper, 2 posters (2017, 2018)
- VIS 3 papers (2018)
- VR 7 papers (2018, 2019)

## Dissemination

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#### Invited Talks.....

Talks from conference papers only appear in the publication list at the end of this document.

- 2018 "An Interaction Continuum for 3D Dataset Visualization", invited talk, JRV, Université Evry Val-d'Essone.
- 2018 "An Interaction Continuum for 3D Dataset Visualization", SigCHI Toulouse.
- 2018 "The Significant difference between p-values and confidence intervals", invited talk, Toulouse.
- 2018 "An Interaction Continuum for 3D Dataset Visualization", invited talk, Linköping University.

## Previous Employment

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- **Linköping University** **Norrköping, Sweden**  
*Postdoctoral Researcher* *Since May 2018*
- **Universite Paris Saclay** **Paris, France**  
*Teaching Assistant* *2014 – 2018*
- **Polytech Paris-Sud** **Paris, France**  
*Teaching Assistant* *2014 – 2018*
- **IRT System X** **Paris, France**  
*Research Engineer Intern* *March 2014 – September 2014*  
Design of the visual and sound HCI (Human Computer Interface) of a semi-autonomous car with the help of a sound designer. The HCI specifications were made thanks to a user-centered design as well as a state of the art and an analysis of the existing prototypes. Implementation of the HCI and its new components with engineers from Valeo onto a driving simulator. Evaluation of the HCI concept in order to refine the HCI specifications.
- **Thales Air System** **Thales Air Systems**  
*Software Developer Intern, Paris, France* *June 2013 – September 2013*  
Development of an application which also involved Ecole Centrale Paris in a research project, so as to define a method to help generating and evaluating new antennas' concepts using Bayes Nets, CSPs, and several Java APIs.
- **Generale de Sante** **Paris, France**  
*Network Engineer Intern* *May 2011 - July 2011*  
I developed a network monitoring system based on Nagios and using mainly FAN (Fully Automated Nagios) for a private hospital.

## References

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- Tobias ISENBERG (thesis supervisor)  
Inria, Saclay-Ile-de-France  
Batiment 660, Rue Noetzlin, Gif-sur-Yvette, France  
email: tobias.isenberg@inria.fr
- Jean-Daniel FEKETE (team leader at Aviz)  
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- Mehdi AMMI (thesis co-supervisor)  
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email: mehdi.ammilimsi.fr
- Aurelien MAX (teaching coordinator)  
Limsi/CNRS  
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## Publications

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In the field of Human Computer Interaction (HCI), publications at top-tier conferences are of highest impact due to their rigorous review processes and low acceptance rates (20-25%). The top-tier conference covering all areas of HCI is ACM CHI – the SIGCHI Conference on Human Factors in Computing Systems (~3000 attendees). For Information Visualization, IEEE VIS is the top publication venue (~1200 attendees). Articles accepted at VIS are published in the journal Transactions on Visualization and Computer Graphics

### Major Conferences and Journals.....

- Tanja Blascheck, **Lonni Besançon**, Anastasia Bezerianos, Bongshin Lee, Petra Isenberg. Glanceable Visualization: Studies of Data Comparison Performance on Smartwatches. *IEEE Transactions on Visualization and Computer Graphics, Institute of Electrical and Electronics Engineers*, 2018
- **Lonni Besançon**, Mehdi Ammi, and Tobias Isenberg. Pressure-Based Gain Factor Control for Mobile 3D Interaction using Locally-Coupled Devices. *In CHI 2017 - ACM CHI Conference on Human Factors in Computing Systems*, pages 1831–1842, ACM, New York, May 2017.
- **Lonni Besançon**, Paul Issartel, Mehdi Ammi, and Tobias Isenberg. Hybrid tactile/tangible interaction for 3D data exploration. *IEEE Transactions on Visualization and Computer Graphics*, 23(1):881–890, January 2017.
- **Lonni Besançon**, Paul Issartel, Mehdi Ammi, and Tobias Isenberg. Mouse, Tactile, and Tangible Input for 3D Manipulation. *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)*, pages 4727–4740, ACM, New York, May 2017.

### Smaller Conferences.....

- **Lonni Besançon**, Amir Semmo, David Biau, Bruno Frachet, Virginie Pineau, El Hadi Sariali, Rabah Taouachi, Tobias Isenberg and Pierre Dragicevic. Reducing Affective Responses to Surgical Images through Color Manipulation and Stylization. *In Proceedings of Expressive 2018* Aug 17 - 19, 2018, Victoria, British Columbia, Canada.
- Xiyao Wang, **Lonni Besançon**, Mehdi Ammi, Tobias Isenberg. Navigation Tactile 3D Augmentee pour Mobiles. *In Journées Visu 2018, EDF Lab, Palaiseau, France*, Mai 2018.
- Tanja Blascheck, **Lonni Besançon**, Anastasia Bezerianos, Bongshin Lee, Petra Isenberg. Perception des visualisations sur smartwatch. *In Journées Visu 2018, EDF Lab, Palaiseau, France*, Mai 2018.
- **Lonni Besançon** and Pierre Dragicevic. The Significant Difference between p-values and Confidence Intervals. In Patrick Girard and Thierry Duval, editors, *29ème conférence francophone sur l'Interaction Homme-Machine*, page 10, Poitiers, France, August 2017. AFIHM. Alt.IHM.
- **Lonni Besançon**, Paul Issartel, Mehdi Ammi, and Tobias Isenberg. Interactive 3D Data Exploration Using Hybrid Tactile/Tangible Input. *In Journées Visu 2017, Rueil-Malmaison, France*, June 2017.
- Paul Issartel, **Lonni Besançon**, Florimond Guéniat, Tobias Isenberg, and Mehdi Ammi. Preference between allocentric and egocentric 3D manipulation in a locally coupled configuration. *In Proc. SUI*, pages 79–88, New York, 2016. ACM.

- Paul Issartel, **Lonni Besançon**, Tobias Isenberg, and Mehdi Ammi. A tangible volume for portable 3D interaction. In *Proceedings of the International Symposium on Mixed and Augmented Reality*, Los Alamitos, 2016. IEEE Computer Society.

#### Workshops.....

- Tanja Blascheck, Anastasia Bezerianos, **Lonni Besançon**, Bongshin Lee, Petra Isenberg. Preparing for Perceptual Studies: Position and Orientation of Wrist-worn Smartwatches for Reading Tasks. In *Proc. Data Visualization on Mobile Devices, ACM CHI*, 2018, Montreal, Canada.

#### Extended Abstracts.....

- Mickael Sereno, Mehdi Ammi, Tobias Isenberg, and **Lonni Besançon**. Tangible brush: Performing 3D selection with portable and position-aware devices. In *IEEE VIS Poster Compendium*, October 2016
- Mickael Sereno, Mehdi Ammi, Tobias Isenberg, and **Lonni Besançon**. Hybrid Tactile/Tangible Interaction for 3D Selection. In *29ème conférence francophone sur l'Interaction Homme-Machine*, page 6 , Poitiers, France, August 2017.
- Xiyao Wang, **Lonni Besançon**, Mehdi Ammi, and Tobias Isenberg. Augmenting Tactile 3D Data Exploration With Pressure Sensing. *IEEE VIS 2017*, October 2017. Poster.

#### Thesis.....

- **Lonni Besançon**. An Interaction Continuum for 3D Dataset Visualization. PhD Thesis, 2018