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Research Interest

My research interests are on interaction with mobile and wearable devices, such as smartphones, smart-watches, interactive clothes and rings. These devices accompany us in nearly every situation of our daily life and thus are usually the link between us and the rest of the world. Interaction with such devices can occur at any given time, and should thus not be too intrusive or disturbing. Most of these devices are also very small, making it quite hard to use the classical paradigm of touch screen for both input and output.

Education

PhD

Subject : New interaction techniques for small mobile devices
Date of defense : April 2013
University : Télécom ParisTech
Research Team : VIA Team, Télécom ParisTech
Supervisors : Dr Eric Lecolinet, Pr Yves Guiard (now Professor Emeritus)
Thesis Committee : Pr Monique Noirhomme, Pr Laurence Nigay, Pr Géry Casiez, Dr Olivier Chapuis

Master

Name : Master in Computer Science by Research (MSc)
Subject : Conception of an adaptative coach
Date : September 2008
University : University of Lille 1
Research Team : NOCE Team, LIFL, University of Lille 1, France
Supervisor : Dr José Rouillard

Professional Experience

Current position

Position : Postdoctoral Researcher
University : School of Computing, National University of Singapore
Since : 03/12/2013

Previous positions

<i>From</i>	<i>Until</i>	<i>University</i>	<i>Position</i>
01/05/2013	30/10/2013	Télécom ParisTech	Postdoctoral researcher
01/10/2009	30/04/2013	Télécom ParisTech	PhD candidate
01/12/2008	30/06/2008	IBBT - University of Ghent (Belgium)	Research assistant
01/02/2008	30/06/2008	University of Lille 1	Intern
01/06/2007	31/07/2007	INRIA Lille	Intern

Publications

Thesis

1. **Simon T. Perrault**. 2013. Nouvelles Techniques d'Interaction pour les Dispositifs Miniaturisés de l'Informatique Mobile. PhD Thesis. 203 pages.

Submitted papers

2. Denys Matthies, **Simon T. Perrault**, and Shengdong Zhao. 2015. Botential : Localizing On-Body Gestures by Measuring Electrical Signatures on the Human Skin. Submitted to *the International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI '15)*. 10 pages.
3. Soon Hau Chua, **Simon T. Perrault**, Shengdong Zhao, and Denys Matthies. 2015. Positioning Glass : Investigating Display Positions of Monocular Optical Head Mounted Display. Submitted to *the International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI '15)*. 6 pages.

Refereed International Conference Papers

4. **Simon T. Perrault**, Eric Lecolinet, Yoann Bourse, Shengdong Zhao, and Yves Guiard. 2015. Physical Loci : Leveraging Spatial, Object and Semantic Memory for Command Selection. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*. 10 pages.
5. Jessalyn Alvina, **Simon T. Perrault**, Thijs Roumen, Shengdong Zhao, Maryam Azh, and Morten Fjeld. 2015. OmniVib : Towards Cross-body Spatiotemporal Vibrotactile Notifications for Mobile Phones. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*. 10 pages.
6. Thijs Roumen, **Simon T. Perrault**, and Shengdong Zhao. 2015. A Comparative Study of Notification Channels for Wearable Interactive Rings. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*. 4 pages.
7. Chen Chen, **Simon T. Perrault**, Shengdong Zhao, Wei Tsang Ooi. 2014. BezelCopy : An Efficient Cross-Application Copy-Paste Technique for Touchscreen Smartphones. In *Proceedings of the 2014 International Working Conference on Advanced Visual Interfaces (AVI '14)*. ACM, New York, NY, USA, 185-192.
8. Chen Chen, Soon Hau Chua, David Ching Wing Kei, **Simon T. Perrault**, and Shengdong Zhao. 2014. Eyes-Free Gesture Passwords Ū A Comparison of various Eyes-Free Input Methods. In *Proceedings of the Second International Symposium of Chinese CHI (Chinese CHI '14)*. ACM, New York, NY, USA, 89-92.
9. **Simon T. Perrault**, and Eric Lecolinet. 2013. Using Low-power Sensors to enhance Interaction on Wristwatches and Bracelets. In *Proceedings of Fifth International Conference on Mobile Computing, Applications and Services (Mobicase '13)*. Springer-Verlag, Berlin, Heidelberg, 261-264.

10. **Simon T. Perrault**, Eric Lecolinet, James Eagan, and Yves Guiard. 2013. Watchit : simple gestures and eyes-free interaction for wristwatches and bracelets. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13)*. ACM, New York, NY, USA, 1451-1460.
11. Halla B. Olafsdottir, Yves Guiard, Olivier Rioul, and **Simon T. Perrault**. 2012. A new test of throughput invariance in Fitts' law : role of the intercept and of Jensen's inequality. In *Proceedings of the 26th Annual BCS Interaction Specialist Group Conference on People and Computers (BCS-HCI '12)*. British Computer Society, Swinton, UK, UK, 119-126. **Best paper award**.
12. Yves Guiard, Halla B. Olafsdottir, and **Simon T. Perrault**. 2011. Fitt's law as an explicit time/error trade-off. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11)*. ACM, New York, NY, USA, 1619-1628.

Refereed National Conference Papers

13. **Simon T. Perrault**, Gilles Bailly, Yves Guiard, and Eric Lecolinet. 2011. Promesses et Contraintes de la Joaillerie Numérique Interactive : un Aperçu de l'État de l'Art. In *Proceedings of 23rd French Speaking Conference on Human-Computer Interaction (IHM '11)*. ACM, New York, NY, USA, Article 14, 4 pages.

Journal Articles

14. Halla B. Olafsdottir, Yves Guiard, Olivier Rioul, and **Simon T. Perrault**. 2012. A new Test of Throughput Invariance in Fitts' law : Role of the Intercept and of Jensen's Inequality. *Interfaces, 93(Winter2012)*. British Computer Society, Swinton, UK, UK, 119-126. Reedition of [11].

Misc (workshops, posters, etc...)

15. Lin Sun, **Simon T. Perrault**, and Eric Lecolinet. 2014. The Ring Ring : Drawing Attention through Light. In *Adjunct Proceedings of Chinese CHI '14*. 2 pages. (Poster)
16. Toni-Jan Keith Monserrat, Soon Hau Chua, Shengdong Zhao, and Simon T. Perrault. 2014. Bringing Videos aLIVE for Learning : Learning with Interactive Video Environment. In *CHI 2014 Workshop on "Learning Innovation at Scale"*. 5 pages. (Workshop)
17. Denys Matthies, **Simon T. Perrault**, Eric Lecolinet, and Shengdong Zhao. 2014. Peripheral Microinteraction For Wearable Computing. In *CHI 2014 Workshop on "Peripheral Interaction : Shaping the Research and Design Space"*, 4 pages. (Workshop)
18. **Simon T. Perrault**, Hind Gacem, Eric Lecolinet, and Yves Guiard. 2013. Augmenting digital jewelry with advanced display capacities. In *CHI 2013 Workshop on "Displays Take New Shape : An Agenda for Interactive Surfaces"*, 4 pages. (Workshop)
19. **Simon T. Perrault**. 2013. New Interaction Techniques for Small Mobile Devices. In *Journée Futur et Ruptures*. Institut Télécom. (Poster)
20. **Simon T. Perrault**, Sylvain Malacria, Eric Lecolinet, Yves Guiard. 2012. Watchit : Simple Gestures for Interacting with a Watchstrap, In *CHI '12 Extended Abstracts on Human Factors in Computing Systems (CHI EA '12)*. ACM, New York, NY, USA, 1467-1468. (Video)
21. **Simon T. Perrault**. 2012. New Interaction Techniques for Small Mobile Devices. In *Journée Futur et Ruptures*. Institut Télécom. **Best poster award**. (Poster)
22. **Simon T. Perrault**. 2011. Nouvelles techniques d'interaction pour les dispositifs miniaturisés de l'informatique mobile. In *Adjunct Proceedings of IHM '11*. 4 pages. (PhD Symposium)
23. Halla B. Olafsdottir, **Simon T. Perrault**, and Yves Guiard. 2011. Fitts' with a Twist : An Exploration of Scale Effects using a New Experimental Paradigm. In *14ème Congrès International de l'ACAPS (ACAPS '11)*. (Poster)

Awards

- *September 2012* : "Best paper award" at the BCS British HCI conference 2012 for the paper : A new Test of Throughput Invariance in Fitts' law : Role of the Intercept and of Jensen's Inequality (see [11]).
- *January 2012* : "Best poster award" at the 'Futur et Ruptures' presentation day for the poster : New Interaction Techniques for Small Mobile Devices (see [21]).

Research Advising

- *09/14 - now* : Sarthak GHOSH (BSc) and Arnout Erik WESSELS (MSc). 6 months and 1 year internship. Co-advised with Dr Shengdong ZHAO.
- *04/14 - 08/14* : Jessalyn ALVINA (MSc). 5 months internship. Co-advised with Dr Shengdong ZHAO. Published a long paper (10 pages) at CHI 2015 [5].
- *04/14 - 07/14* : Thijs ROUMEN (MSc). 4 months internship. Co-advised with Dr Shengdong ZHAO. Published a note (4 pages) at CHI 2015 [6].
- *06/13 - 09/13* : Lin SUN, first year of Master student, 3 months internship. Co-advised with Dr Eric LECOLINET. Presented a poster at Chinese CHI 2014 [15].

Academic Service

Conference Peer Reviewing

I have been reviewing for HCI related conferences since 2011. The following list includes conference for which I reviewed long or short research papers. First tier conferences are in bold.

- ***ACM Conference on Human Factors in Computing Systems (CHI) : 2012-2015.***
- ***ACM User Interface Software and Technology Symposium (UIST) : 2013-2014.***
- ***ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) : 2015-.***
- *ACM Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI) : 2013-2015.*
- *ACM Conference on Interactive Tabletops and Surfaces (ITS) : 2012, 2014.*
- *ACM Conférence francophone sur l'Interaction Homme-Machine (IHM, french speaking conference) : 2011, 2013-2014.*

Journal Peer Reviewing

Reviews for the International Journal on Human-Computer Studies (IJHCS) : 2013.

Proceedings Editor

Co-editor of the Adjunct Proceedings of Chinese CHI 2014.

Program Committee

Poster co-chair for Chinese CHI 2014. Program Committee member for the 12th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2015).

Conference Committee

Associate Chair for the Work in Progress for the ACM Conference on Human Factors in Computing Systems (CHI) 2015.

Associate Chair for Chinese CHI 2014.

Student Volunteer

Student Volunteer for the CHI 2013 program committee meeting in 2013. The CHI PC Meeting lasts for 2 full days and involves more than 250 committee members.

French speaking Association of Human Computer Interaction

Between 2011 and 2013, I was the vice-secretary of the "Association Francophone d'Interaction Homme Machine"¹ (French speaking association of Human Computer Interaction), which gathers most of the french speaking HCI researchers in Europe and Canada. During that period, I was in charge of a grant program that paid the conference registration at CHI 2013 for 29 student members of the association.

Collaborations

- Collaboration with Dr Gilles BAILLY (TU Berlin, Germany) for a survey on digital jewelry, published at the french HCI conference (IHM) in 2011.
- Collaboration with Pr Morten FJELD (Chalmers University, Sweden) for the OmniVib project [5].

Teaching

During my PhD, I was a TA at Télécom ParisTech. I taught for students between the last year of Bachelor and last year of Master for a total of 264.5 hours of practical work and 51.5 hours of tutorials. Here is a summary of some of the modules I taught :

- INF 104 - C Language and Operating Systems (last year of Bachelor) : 87.5 hours.
- INF 723 - JAVA Language JAVA (last year of Master) : 62.5 hours.
- PROJLOG - Software Project (last year of Bachelor) : 73.5 hours.
- INF 222 - Modelisation using UML (first year of Master) : 21 hours.

Invited Talks

- *04/12/2014* : "OmniVib : Towards Cross-body Spatiotemporal Vibrotactile Notifications for Mobile Phones". Research presentation, Télécom ParisTech, France.
- *05/09/2014* : "Interactions Techniques for Wearable Computers". Research presentation, Advanced Robotic Center, Singapore.
- *22/01/2014* : "New Interaction Techniques for Small Mobile Devices". Research presentation, Keio-NUS CUTE Center, Singapore.
- *19/06/2012* : "Miniaturization and interaction : the challenges of mobile computing". PhD Seminar, Télécom ParisTech, France.

References

- Professor Emeritus Yves Guiard, Laboratoire de traitement et de communication de l'information (LTCI), UMR CNRS 5141, Télécom ParisTech, France. E-mail : yves.guiard@telecom-paristech.fr
- Professor Géry Casiez, Univ. Lille 1, France. E-mail : gery.casiez@lifl.fr
- Dr Shengdong Zhao (Assistant Professor), School of Computing, National University of Singapore. E-mail : zhaosd@comp.nus.edu.sg

1. See http://afihm.org/association/320/conseil_d_administration.php (in french)