

Name : Perrault
Born: France
Nationality: French
Address: Singapore University of Technology and Design,
(SUTD),
8 Somapah Rd,
Singapore 487372
Phone Number: (+65) 8289 4678
E-mail address: perrault.simon@gmail.com

First Name: Simon
Gender : M

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 not be intrusive or disturbing. These devices are also very small, making it hard to use existing interaction paradigms.

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 G ry 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 Jos  Rouillard

Bachelor

Name: Bachelor in Computer Science (BSc)
Date : September 2006
University: University of Lille 1

Professional Experience

Current position

Position: Assistant Professor
University: Singapore University of Technology and Design (SUTD), Singapore

Since: 02/01/2019

Previous positions

From	Until	University	Position
01/07/2018	31/12/2018	KAIST, Daejeon, Korea	Visiting Professor
01/07/2015	31/12/2018	Yale-NUS College, Singapore	Assistant Professor
01/12/2013	30/06/2015	NUS-HCI Lab, National University of Singapore	Postdoctoral researcher
01/05/2013	30/10/2013	Télécom ParisTech	Postdoctoral researcher
01/10/2009	30/04/2013	Télécom ParisTech	PhD candidate
01/12/2008	30/06/2009	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. Ian K. Duncan, Shi Tingsheng, **Simon T. Perrault**, Michael T. Gastner. 2019. Task-Based Effectiveness of Interactive Contiguous Area Cartograms. *Submitted to IEEE Transactions on Visualization and Computer Graphics*, 11 pages.

Refereed First Tier Conference Papers

3. Sanju Menon, Weiyu Zhang, and **Simon Perrault**. 2020. Nudge for Deliberativeness: How Interface Features Influence Online Discourses. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '20)*. 13 pages. <https://doi.org/10.1145/3313831.3376646>
4. Pin Sym Foong, Charis Anne Lim, Joshua Wong, Chang Siang Lim, **Simon Tangi Perrault**, and Gerald Huat Choon Koh. 2020. "You Cannot Offer Such a Suggestion": Designing for Family Care-giver Input in Home Care Systems. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '20)*. 13 pages. <https://doi.org/10.1145/3313831.3376607>
5. **Simon T. Perrault**, and Weiyu Zhang. 2019. Effects of Moderation and Opinion Heterogeneity on Attitude towards the Online Deliberation Process. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '19)*. 12 pages. <https://doi.org/10.1145/3290605.3300247>
6. Quentin Roy, **Simon T. Perrault**, Shengdong Zhao, Richard C. Davis, Anuroop Pattena Vaniyar, Velko Vechev, Youngki Lee, and Archan Misra. 2017. Follow-My-Lead: Intuitive Indoor Path Creation and Navigation Using Interactive Videos. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*. 13 pages. <http://dx.doi.org/10.1145/3025453.3025976>
7. Marta Carcedo, Soon Hau Chua, **Simon T. Perrault**, Pawel Wozniak, Raj Joshi, Mohammad Obaid, Morten Fjeld, and Shengdong Zhao. 2016. HaptiColor: Interpolating Color Information as Haptic Feedback to Assist the Color Blind. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*. 12 pages. <http://dx.doi.org/10.1145/2858036.2858220>

8. **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)*. ACM, New York, NY, USA, 299-308. <http://dx.doi.org/10.1145/2702123.2702126>
9. 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)*. ACM, New York, NY, USA, 2487-2496. <http://dx.doi.org/10.1145/2702123.2702341>
10. 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)*. ACM, New York, NY, USA, 2497-2500. <http://dx.doi.org/10.1145/2702123.2702350>
11. **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. <http://doi.acm.org/10.1145/2470654.2466192>
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. <http://doi.acm.org/10.1145/1978942.1979179>

Journal Articles

13. Christopher Asplund, Takashi Obana, Parag Bhatnagar, Xun Quan Koh, **Simon Perrault**. 2020. It's All in the Timing: Principles of Transient Distraction Illustrated with Vibrotactile Tasks. To appear in ACM Transactions on Computer-Human Interaction, 23 pages. IF=2.227.
14. Zhu Kening, **Simon Perrault**, Taizhou Chen, Shaoyu Cai, Roshan L Peiris. 2019. A Sense of Ice and Fire: Exploring Thermal Feedback with Multiple Thermoelectric-cooling Elements on a Smart Ring. In *International Journal of Human-Computer Studies*, Volume 130, July 2019, 14 pages. IF=2.006. <https://doi.org/10.1016/j.ijhcs.2019.07.003>

Other Refereed International Conference Papers

15. Quentin Roy, Camellia Zakaria, **Simon T. Perrault**, Mathieu Nancel, Wonjung Kim, Archan Misra, Andy Cockburn. 2019. A Comparative Study of Pointing Techniques for Eyewear Using a Simulated Pedestrian Environment. In *Proceedings of the 17th IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT 2019)*. Springer-Verlag, Berline, Heidelberg, 22 pages. https://doi.org/10.1007/978-3-030-29387-1_36
16. Sandra Bardot, Marcos Serrano, **Simon T. Perrault**, Shengdong Zhao, and Christophe Jouffrais. 2019. Investigating Feedback for Two-Handed Exploration of Digital Maps without Vision. In *Proceedings of the 17th IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT 2019)*. Springer-Verlag, Berline, Heidelberg, 20 pages. https://doi.org/10.1007/978-3-030-29381-9_19
17. Weiyu Zhang, **Simon Perrault**, and Sanju Menon. 2018. Designing Online Deliberative Processes and Technologies for Citizen Input to Policy Making. In *Proceedings at Digital Asia: Social Change, Engagement, and Voices, the 2018 Preconference of International Communication Association*. Prague, Czech Republic.

18. Velko Vechev, Alexandru Dancu, **Simon T. Perrault**, Quentin Roy, Morten Fjeld, and Shengdong Zhao. 2018. Movespace: on-body athletic interaction for running and cycling. In *Proceedings of the 2018 International Conference on Advanced Visual Interfaces (AVI '18)*. ACM, New York, NY, USA, Article 28, 9 pages. <https://doi.org/10.1145/3206505.3206527>
19. Qin Chen, **Simon T. Perrault**, Quentin Roy, and Lonce Wyse. 2018. Effect of temporality, physical activity and cognitive load on spatiotemporal vibrotactile pattern recognition. In *Proceedings of the 2018 International Conference on Advanced Visual Interfaces (AVI '18)*. ACM, New York, NY, USA, Article 25, 9 pages. <https://doi.org/10.1145/3206505.3206511>
20. Xiaojun Meng, Pin Sym Foong, **Simon T. Perrault**, and Shengdong Zhao. 2017. NexP: A Beginner Friendly Toolkit for Designing and Conducting Controlled Experiments. In *Proceedings of the 16th IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT 2017)*. Springer-Verlag, Berlin, Heidelberg, 132-141. https://doi.org/10.1007/978-3-319-67687-6_10
21. Soon Hau Chua, **Simon T. Perrault**, Shengdong Zhao, and Denys Matthes. 2016. Positioning Glass: Investigating Display Positions of Monocular Optical See-Through Head-Mounted Display. In *Proceedings of the Fourth International Symposium of Chinese CHI (Chinese CHI '16)*. 6 pages. <http://dx.doi.org/10.1145/2948708.2948713>
22. Denys Matthes, **Simon T. Perrault**, and Shengdong Zhao. 2015. Botential: Localizing On-Body Gestures by Measuring Electrical Signatures on the Human Skin. In *Proceedings of the International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI '15)*. ACM, New York, NY, USA, 207-216. <http://dx.doi.org/10.1145/2785830.2785859>
23. 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. <http://dx.doi.org/10.1145/2598153.2598162>
24. Chen Chen, Soon Hau Chua, David Ching Wing Kei, **Simon T. Perrault**, and Shengdong Zhao. 2014. Eyes-Free Gesture Passwords – 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. <http://dx.doi.org/10.1145/2592235.2592248>
25. **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.
26. 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.**

Refereed National Conference Papers

27. **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. <http://doi.acm.org/10.1145/2044354.2044372>

Misc (workshops, posters, etc...)

28. Hyunwoo Kim, Eun-Young Ko, Donghoon Han, Sung-Chul Lee, **Simon T. Perrault**, Jihee Kim, Juho Kim. 2019. Crowdsourcing Perspectives on Public Policy from Stakeholders. In *CHI '19 Extended Abstracts on Human Factors in Computing Systems (CHI EA '19)*. 6 pages. (Poster). <https://doi.org/10.1145/3290607.3312769>
29. Sarthak Ghosh, Hyeong Cheol Kim, Yang Cao, Arne Wessels, **Simon T. Perrault**, and Shengdong Zhao. 2016. Ringteraction: Coordinated Thumb-index Interaction Using a Ring. In *CHI '16 Extended Abstracts on Human Factors in Computing Systems (CHI EA '16)*. 8 pages. (Poster). <https://doi.org/10.1145/2851581.2892371>
30. Steven Houben, **Simon Perrault**, and Marcos Serrano. 2015. Bonjour! Greeting Gestures for Collocated Interaction with Wearables. In Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct (MobileHCI '15). ACM, New York, NY, USA, 1146-1152. (Workshop). <http://dx.doi.org/10.1145/2786567.2794347>
31. **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). <http://dx.doi.org/10.1145/2212776.2212489>
32. **Simon T. Perrault**. 2012. New Interaction Techniques for Small Mobile Devices. In *Journée Futur et Ruptures*. Institut Télécom. **Best poster award**. (Poster)

Awards

- 2016: "Honorable Mention" at the Computer Graphik Abend 2016¹, category Impact on Society, for the paper: Botential: Localizing On-Body Gestures by Measuring Electrical Signatures on the Human Skin (see [22]).
- 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 [26]).
- January 2012: "Best poster award" at the 'Futur et Ruptures' presentation day for the poster: New Interaction Techniques for Small Mobile Devices (see [32]).

Research Advising

Since 2013, I trained the following students:

- 5 undergraduate students
- 12 master students
- 4 PhD students

Currently, I am advising:

- Katherine FENNEDY, PhD Student, since 07/2019
- GAO Jie, PhD Student, since 09/2019

¹<https://www.igd.fraunhofer.de/presse/aktuelles/herausragende-wissenschaftliche-publikationen-auf-dem-computer-graphik-abend-2016>

- Atima THARATIPYAKUL, PhD student, since 11/2019
- NGUYEN Thi Ngoc, PhD student, since 11/2019
- Nurhadi AHMAD, Master student, since 09/2019
- Pavithren S/o V S PAKIANATHAN, Master student, since 11/2019
- ANG You Shan, Master student, since 09/2019

Academic Service

Conference Organization

General Chair for the International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI), 2020.

Publication Chair for the Australian Conference on Human-Computer-Interaction (OzCHI) 2019.

Co-organizer of the ACM SIGCHI Southeast Asia Summer School, 2019. General Co-chair for the 2017 International Conference on Deliberation and Decision Making Interdisciplinary Perspectives on Civic Tech (DDM), 2017.

Interactivity Co-chair for the ACM Conference on Interactive Surfaces and Spaces (ISS), 2017.

Program Chair for the international Workshop on Sensor-based Activity Recognition and Interaction (iWOAR), 2016.

Poster Co-chair of Chinese CHI 2014.

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

Program Committee (Associate Chair/Editor)

Associate Chair (Papers) for ACM Conference on Human Factors in Computing Systems (CHI) 2016, 2019-2020.

Associate Chair (Work in Progress/Late Breaking Works) for the ACM Conference on Human Factors in Computing Systems (CHI) 2015-2020.

Associate Chair (Emerging Technologies) for the ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia (SIGGRAPH Asia), 2018.

Associate Chair (Interactive Posters) for the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2018-2019.

Associate Chair (Papers) for the International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI) 2016, 2018.

Associate Chair (Papers) for the ACM International Conference on Interactive Surfaces and Spaces (ISS) 2019.

Associate Chair for the International Conference on Human-Agent Interaction (HAI) 2016-2017.

Committee Member for the international Workshop on Sensor-based Activity Recognition and Interaction (iWOAR) 2015-2017.

Associate Chair for the Conférence francophone sur l'Interaction Homme-Machine (IHM) 2015.

Associate Chair for the 12th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2015).

Committee Member for the Designing Tools For Crafting Interactive Artifact - Workshop at SIGGRAPH Asia 2014.

Associate Chair for Chinese CHI 2014.

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)*: 2012-2020.
- *ACM User Interface Software and Technology Symposium (UIST)*: 2013-2019.
- *ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*: 2015, 2018.
- ACM Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI): 2013-2018.
- IFIP TC.13 International Conference on Human-Computer Interaction (Interact): 2017.
- ACM International conference on Tangible, Embedded and Embodied Interaction (TEI): 2016.
- ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp): 2015-2016.
- International Symposium on Wearable Computers (ISWC): 2015.
- ACM Conference on Interactive Surfaces and Spaces (ex Interactive Tabletops and Surfaces) (ISS, ex ITS): 2012, 2014, 2016-2017.
- ACM Symposium on Spatial User Interaction (SUI): 2013, 2016.
- ACM Augmented Human Conference (AH): 2017.
- ACM Conférence francophone sur l'Interaction Homme-Machine (IHM, french speaking conference): 2011, 2013-2015.

Journal Peer Reviewing

International Journal on Human-Computer Studies (IJHCS): 2013, 2016.
IEEE Pervasive Computing: 2017.

French speaking Association of Human Computer Interaction

Between 2011 and 2013, I was the vice-secretary of the "Association Francophone d'Interaction Homme-Machine²" (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.

Teaching

As an Assistant Professor at Yale-NUS, I am currently teaching and responsible for the following modules. I designed each module from scratch, myself:

- YCS 3232 - Object Oriented Programming (Java, software engineering). 5 MC course. 2017.
- YSC 3207 - Principles and Tools of Software Development (C, Java). 5 MC course. 2015, 2016.
- YSC 3217 - Programming Operating Systems, Interfaces and eXtras (C). 5 MC course. 2016, 2017, 2018.
- YCC 2131/2135 - Foundations of Science (Introduction to Wearable Computers). 5 MC course. 2015, 2016.

²See http://afihm.org/association/320/conseil_d_administration.php (in french)

- YSC 3226 - Designing Interactive Systems. 5 MC course. 2017, 2018.

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

- *January 2020*: "Human vs. Computer Systems: Challenges in HCI Research". Research Presentation, King Mongkut's University of Technology North Bangkok, Thailand.
- *December 2018*: "Online Deliberation and Other Wearable Tales". Research Presentation, Korean Advanced Institute of Science and Technology (KAIST), South Korea.
- *April 2018*: "Investigating haptic feedback for wearable devices". Research Presentation, University of Glasgow, United Kingdom.
- *March 2018*: "Towards 'Ecological Validity' for Interaction with Wearable Computers". Research Presentation, Polytechnic University of Hong Kong, Hong Kong SAR.
- *March 2018*: "Towards 'Ecological' Validity for Interaction with Wearable Computers". Research Presentation, University of Melbourne, Australia.
- *December 2017*: "Interaction with wearable computers: Challenges and perspectives". Invited Talk, City University of Hong Kong, Hong Kong.
- *October 2017*: "Designing Interaction with Wearable Computers". Guest Lecture at Singapore University of Social Sciences (SUSS), Singapore.
- *September 2017*: "Wearable and Mobile Computing in Asia, for the World", Invited Talk, Mumbai, India.
- *August 2017*: "Using wearable devices everyday... tomorrow". Invited Talk, CITEC-I2R Mixed Reality for Human Enhancement Workshop, NUS, Singapore.
- *November 2016*: "Interaction with wearable computers: Challenges and perspectives". Research Presentation, Yale-NUS MCS Seminar, Singapore.
- *August 2016*: "Designing Interaction with Wearable devices for Everyday life Scenarios". Research Presentation, NUS - Communications and New Media Department, Singapore.
- *June 2016*: "Human Perception of External Stimuli in Wearable Computing", Research Presentation, Singapore HCI seminar, Singapore.
- *May 2016*: "Interaction with Wearable Computers: Challenges and Perspectives". Guest Lecture at Fudan University, Shanghai, China.
- *September 2015*: "Interaction with Wearable Computers: Challenges and Perspectives". Keynote at 9th International Conference on Information & Communication Technology and Systems (ICTS 2015), Surabaya, Indonesia.

- *December 2014*: "OmniVib: Towards Cross-body Spatiotemporal Vibrotactile Notifications for Mobile Phones". Research presentation, Télécom ParisTech, France.
- *September 2014*: "Interactions Techniques for Wearable Computers". Research Presentation, Advanced Robotic Center, Singapore.
- *January 2014*: "New Interaction Techniques for Small Mobile Devices". Research Presentation, Keio-NUS CUTE Center, Singapore.
- *June 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 G ry Casiez, Univ. Lille 1, France. E-mail: gery.casiez@univ-lille.fr
- Associate Professor Shengdong Zhao (Associate Professor), School of Computing, National University of Singapore. E-mail: zhaosd@comp.nus.edu.sg
- Professor Morten Fjeld, t2i Interaction Laboratory, Chalmers University of Technology, Gothenburg, Sweden. E-mail: fjeld@chalmers.se