Name : Perrault First Name: Simon

Born: France

Nationality: French Gender : M

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

## Research Interest

I am working in Human-Computer Interaction (HCI). My first research interest is on interaction with mobile and wearable devices (e.g. smartphones, smartwatches, 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.

My second research interest is on Civic Tech, where we design platforms to enable end users and citizens to provide feedback to stakeholders such as public agencies, governments or companies through online discussion. Specifically, my research aims at providing tools to increase the quality of the data produced during discussion phases. To do so, I leverage interface design, as well as natural language processing and machine learning. Our context of application for Civic ranges from discussion of political/social issues and urban planning.

## 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

#### 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.

### **Edited Proceedings**

- 2. Susanne Boll, and **Simon T. Perrault**. 2020. MobileHCI '20: 22nd International Conference on Human-Computer Interaction with Mobile Devices and Services, Oldenburg, Germany, October 5-9, 2020. ACM 2020, ISBN 978-1-4503-7516-0.
- 3. Susanne Boll, and **Simon T. Perrault**. 2020. MobileHCI '20: 22nd International Conference on Human-Computer Interaction with Mobile Devices and Services: Expanding the Horizon of Mobile Interaction, Extented Abstracts, Oldenburg, Germany, October 5-9, 2020. ACM 2020, ISBN 978-1-4503-8052-2.

### Refereed First Tier Conference Papers

- 4. Camellia Zakaria, Pin Sym Foong, Chang Siang Lim, Pavithren V. S. Pakianathan, Gerald Huat Choon Koh, **Simon Perrault**. 2022. Does Mode of Digital Contact Tracing Affect User Willingness to Share Information? A Quantitative Study. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '22)*. ACM, New York, NY, USA, Article 77, 1–18. https://doi.org/10.1145/3491102.3517595.
- 5. Weiyu Zhang, Tian Yang, and **Simon Perrault**. 2021. Nudge for Reflection: More than Just a Channel to Political Knowledge. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '21)*. 10 pages. https://doi.org/10.1145/3411764.3445274

- 6. 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
- 7. Pin Sym Foong, Charis Anne Lim, Joshua Wong, Chang Siang Lim, **Simon T. Perrault**, and Gerald Huat Choon Koh. 2020. "You Cannot Offer Such a Suggestion": Designing for Family Caregiver 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
- 8. 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
- 9. 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
- 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
- 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
- 12. 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
- 13. 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
- 14. 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
- 15. 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

- 16. Jie Gao, Kenny Tsu Wei Choo, Junming Cao, Roy Ka Wei Lee, **Simon Perrault**. 2023. CoAlcoder: Examining the Effectiveness of AI-assisted Collaborative Qualitative Analysis. In *ACM Transactions on Computer-Human Interaction*. To appear. https://arxiv.org/pdf/2304.05560.pdf
- 17. Kevin L. T. Fung, **Simon T. Perrault**, and Michael T. Gastner. 2023. Effectiveness of Area-to-Value Legends and Grid Lines in Contiguous Area Cartograms. In *IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG)*, to appear. https://doi.org/10.1109/TVCG.2023.3275925

- 18. Ka-Yan Fung, **Simon Tangi Perrault**, Lik-Hang Lee, Kwong-Chiu Fung, Shenghui Song. 2022. Can Students with Dyslexia Learn Independently? A Seven-Week Study of Chinese Character Learning in an Informal Learning Environment. In *IEEE Transactions on Learning Technologies*, 16 pages. IF=3.72. https://doi.org/10.1109/TLT.2022.3229016
- 19. Katherine Fennedy, Angad Srivastava, Sylvain Malacria, **Simon Perrault**. 2022. Towards a Unified and Efficient Command Selection Mechanism for Touch-Based Devices Using Soft Keyboard Hotkeys. In *ACM Transactions on Computer-Human Interaction*, Volume 29, Issue 1, 39 pages. IF=4.106. https://doi.org/10.1145/3476510
- 20. Katherine Fennedy, Jeremy Hartmann, Quentin Roy, **Simon T. Perrault**, Daniel Vogel. 2021. OctoPocus in VR: Using a Dynamic Guide for 3D Mid-Air Gestures in Virtual Reality. In *IEEE Transactions on Visualization and Computer Graphics*, Volume 27, Issue 4, 16 pages. IF=5.226. https://doi.ieeecomputersociety.org/10.1109/TVCG.2021.3101854
- 21. Ian K. Duncan, Shi Tingsheng, **Simon T. Perrault**, Michael T. Gastner. 2021. Task-Based Effectiveness of Interactive Contiguous Area Cartograms. In *IEEE Transactions on Visualization and Computer Graphics*, Volume 27, Issue 3, 17 pages. IF=4.558.https://doi.ieeecomputersociety.org/10.1109/TVCG.2020.3041745
- 22. 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. In *ACM Transactions on Computer-Human Interaction*, Volume 27, Issue 3, 29 pages. IF=3.147. https://doi.org/10.1145/3386358
- 23. 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=3.163. https://doi.org/10.1016/j.ijhcs.2019.07.003

#### Other Refereed International Conference Papers

- 24. Bradley Rey, Kening Zhu, **Simon T. Perrault**, Sandra Bardot, Ali Neshati, Pourang Irani. 2022. Understanding and Adapting Bezel-to-Bezel Interactions for Circular Smartwatches in Mobile and Encumbered Scenarios. In *Proceedings of the ACM Human-Computer Interaction (PACM)*. 6, MHCI. Article 201 (September 2022), 28 pages. https://doi.org/10.1145/3546736
- 25. Olivia Seow, Cedric Honnet, Simon Perrault, and Hiroshi Ishii. 2022. Pudica: A Framework For Designing Augmented Human-Flora Interaction. In *Augmented Humans* 2022 (AHs 2022). ACM, New York, NY, USA, 40–45. https://doi.org/10.1145/3519391.3519394.
- 26. Quentin Roy, Simon T. Perrault, Katherine Fennedy, Thomas Pietrzak, Anne Roudaut. 2021. Understanding User Strategies When Touching Arbitrary Shapes. In *Proceedings of the 23rd International Conference on Mobile Human-Computer Interaction (Mobile HCI '21)*. ACM, New York, NY, USA, Article 9, 1–11. https://doi.org/10.1145/3447526.3472038.
- 27. Thi Ngoc Nguyen, Agustin Zuniga, Huber Flores, Hyowon Lee, **Simon Perrault**, Petteri Nurmi. 2021. Intelligent shifting cues: increasing the awareness of multi-device interaction opportunities. In *Proceedings of the 29th ACM Conference on User Modeling, Adaptation and Personalization (UMAP '21)*. ACM, New York, NY, USA, 213–223, 11 pages. https://doi.org/10.1145/3450613.3456839
- 28. Katherine Fennedy, Sylvain Malacria, Hyowon Lee, **Simon T. Perrault**. 2020. Investigating Performance and Usage of Input Methods for Soft Keyboard Hotkeys. In *Proceedings of the International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI '20)*. ACM, New York, NY, USA, 12 pages. https://dl.acm.org/doi/10.1145/3379503.3403552

- Lancelot Dupont, Christophe Jouffrais, Simon T. Perrault. 2020. Vibrotactile Feedback for Vertical 2D Space Exploration. In Proceedings of the 2020 International Conference on Advanced Visual Interfaces (AVI '20). ACM New York, NY, USA. 5 pages. https://dl.acm.org/doi/10.1145/3399715. 3399834
- 30. Atima Tharatipyakul, Kenny Choo, **Simon T. Perrault**. 2020. Pose Estimation for Facilitating Movement Learning from Online Videos. In *Proceedings of the 2020 International Conference on Advanced Visual Interfaces (AVI '20)*. ACM New York, NY, USA. 5 pages. https://dl.acm.org/doi/10.1145/3399715.3399835
- 31. 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
- 32. 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
- 33. 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
- 34. 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
- 35. 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, Berline, Heidelberg, 132-141. https://doi.org/10.1007/978-3-319-67687-6\_10
- 36. Soon Hau Chua, **Simon T. Perrault**, Shengdong Zhao, and Denys Matthies. 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
- 37. Denys Matthies, **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
- 38. 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
- 39. 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

- 40. **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.
- 41. 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**.

## **Book Chapters**

The book chapter below went through one round of peer review and one round of copywriting, with the book being a collaboration between researchers in multiple fields, including HCI, Communication, etc...

42. Gionnieve Lim, and **Simon T. Perrault**. 2023. Fact Checking Chatbot: A Misinformation Intervention for Instant Messaging Apps and an Analysis of Trust in the Fact Checkers. In: Soon, C. (eds) Mobile Communication and Online Falsehoods in Asia. Mobile Communication in Asia: Local Insights, Global Implications. Springer, Dordrecht. https://doi.org/10.1007/978-94-024-2225-2\_11

### Refereed National Conference Papers

43. 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

## Non-Computer Science/HCI Papers

This category lists papers published in non-CS or non-HCI venues, including: Communication (49), Geography (48), Teaching (45) or Architecture (46,47,44).

- 44. Cem Ataman, Bige Tuncer, and **Simon Perrault**. 2023. Textual Big Data Structures, Processing, and Analysis: Topic Modelling for Large-Scale Digital Participation Data. In INTERCONNECTIONS: Cocomputing beyond boundaries Proceedings of the 20th Conference on Computer-Aided Architectural Design (CAAD) Futures, Delft, the Netherlands.
- 45. Norman Tiong Seng Lee, Oka Kurniawan, Kenny Tsu Wei Choo, Matthieu De Mari, and **Simon Perrault**. 2022. Laboratory Activities for an Introductory Programming Course. In *Proceedings of the 2022 IEEE International Conference on Engineering, Technology & Education (TALE)*. To appear.
- 46. Cem Ataman, Pieter Hertogs, Bige Tuncer, and **Simon Perrault**. 2022. Multi-Criteria Decision Making in Digital Participation. In *Proceedings of the 40th Education and research in Computer Aided Architectural Design in Europe (eCAADe) Conference (eCAADE '22)*, pp 401-410. http://papers.cumincad.org/data/works/att/ecaade2022\_85.pdf
- 47. Cem Ataman, Bige Tuncer, and **Simon Perrault**. 2022. Asynchronous Digital Participation in Urban Design Processes: Qualitative Data Exploration and Analysis With Natural Language Processing. In Proceedings of the International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA '22), pp. 383-392. http://papers.cumincad.org/cgi-bin/works/Show?caadria2022\_139
- 48. Michael T. Gastner, **Simon T. Perrault**, and Chen-Chieh Feng. 2021. Balancing Shape Distortions and Contiguity in Cartograms. in *Abstracts of the International Cartography Association (ICA)*. https://doi.org/10.5194/ica-abs-3-87-2021

49. 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.

## Misc (workshops, posters, etc...)

- 50. Jie Gao, Xiayin Ying, Junming Cao, Yifan Yang, Pin Sym Foong, and **Simon Perrault**. 2022. Differences of Challenges of Working from Home (WFH) between Weibo and Twitter Users during COVID-19. In *Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22)*. ACM, NY, USA, Article 259, 1–7. https://doi.org/10.1145/3491101. 3519790.
- 51. Gionnieve Lim, and **Simon T. Perrault**. 2021. Local Perceptions and Practices of News Sharing and Fake News. In *Companion Publication of the 2021 Conference on Computer Supported Cooperative Work and Social Computing (CSCW '21)*. 4 pages. (Poster). https://doi.org/10.1145/3462204. 3481767
- 52. Hyunwoo Kim, Eun-Young Ko, Donghoon Han, Sung-Chul Lee, **Simon T. Perrault**, Jihee Kim, and 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
- 53. 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

## Grants

Project Name: Development of a computer programme to teach, evaluate and provide real-time feedback on

inhaler technique: a proof-of-concept study

Position: Principle Investigator on SUTD side (PI)

Grant Number: CGH-SUTD-HTIF-2022-001

Name of Funding Organization: CGH (Changi General Hospital) ×- SUTD

Project Duration: 03/2023 - 03/2025

Amount Awarded: Total: S\$233,460 (inc. S\$ 114,010 for SUTD)

Project Name: Designing mobile-friendly cartograms for visualising geospatial data

Position: Co-Principle Investigator (Co-PI)

Grant Number: T2EP20221-0020

Name of Funding Organization: Singapore Ministry of Education (Tier 2)

Project Duration: 08/2022 - 07/2025

Amount Awarded: S\$649,480

Project Name: EMBRACE: A System for Real-time Fall Risk Assessment, Stratification, Detection, and

Management

Position: Principle Investigator (PI) Grant Number: PIE-SGP-HC-2019-01 Project Duration: 10/2019 - 03/2023

Amount Awarded: S\$425,454

Project Name: New Interaction Techniques for Wearable Computing in the Wild

Position: Principle Investigator (PI) Grant Number: SRG-ISTD-2018-141

Name of Funding Organization: Singapore Ministry of Education (Tier 1)

Project Duration: 01/2019 - 01/2023

Amount Awarded: S\$100,000

Project Name: Interaction for Mobile and Wearable Computing

Position: Principle Investigator (PI) Grant Number: R-607-265-224-121

Name of Funding Organization: Singapore Ministry of Education (Tier 1)

Project Duration: 01/2015 - 12/2018

Amount Awarded: S\$60,000

Total Amount Awarded: S\$ 1,468,394 (1,015,000 euros)

### Awards

- 2016: "Honorable Mention" at the Computer Graphik Abend 2016<sup>1</sup>, category Impact on Society, for the paper: Botential: Localizing On-Body Gestures by Measuring Electrical Signatures on the Human Skin (see [37]).
- 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 [41]).
- January 2012: "Best poster award" at the 'Futur et Ruptures' presentation day for the poster: New Interaction Techniques for Small Mobile Devices (see [??]).

# Research Advising

Since 2013, I trained or am training the following students:

- 6 undergraduate students
- 18 master students
- 7 PhD students

Currently, I am advising:

- YEO Shun Yi, PhD student (Computer Science), since 08/2021, sole advisor.
- GAO Jie, PhD Student (Computer Science), since 09/2019, sole advisor.
- Gionnieve LIM, PhD Student (Computer Science), since 04/2020, sole advisor.
- Cem ATAMAN (Architecture), PhD Student, since 05/2021, co-advised with Prof Bige Tuncer.

The following PhD students graduated:

• NGUYEN Thi Ngoc, PhD student, Advised from 11/2019 to 08/2021, sole advisor after previous advisor left SUTD.

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

- Katherine FENNEDY, PhD Student, from 07/2019 to 08/2021, sole advisor after previous advisor left SUTD.
- Atima THARATIPYAKUL, PhD student, from 09/2019 to 07/2020, sole advisor after previous advisor left SUTD.

### Academic Service

### Conference Organization

- Late-Breaking Work Chair for the ACM Conference on Human Factors in Computing Systems (CHI), 2022.
- 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 the the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2021-2023.
- Associate Chair (Papers) for the ACM Conference on Human Factors in Computing Systems (CHI) 2016, 2019-2023.
- Associate Chair (Work in Progress/Late Breaking Works) for the ACM Conference on Human Factors in Computing Systems (CHI) 2015-2021, 2023.
- Associate Chair (Papers) for the IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT), 2021.
- Member of the Editorial Board for the ACM PACM HCI Journal, ex-International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI), 2021.
- Member of the Editorial Board for the ACM PACM HCI Journal, ex-ACM International Conference on Interactive Surfaces and Spaces (ISS), 2020.
- Associate Chair (Interactive Posters) for the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2018-2019, 2022.
- Associate Chair (Emerging Technologies) for the ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia (SIGGRAPH Asia), 2018.

- 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 SIG-GRAPH 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): 2012-2021.
- ACM User Interface Software and Technology Symposium (UIST): 2013-2019.
- ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW): 2015, 2018-2019, 2021-2023.
- ACM International Joint Conference on Pervasive and Ubiquitous Computing (Ubi-Comp): 2015-2016.
- 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, 2021.
- ACM International conference on Tangible, Embedded and Embodied Interaction (TEI): 2016, 2021.
- 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, 2019-2020.
- 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, 2019.

#### 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-Machine" (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**

Since I joined SUTD, I taught the following courses:

- 10.009 The Digital World (introduction to computing and programming in Python). 12 credits course. 2019-2020.
- 10.014 Computational Thinking for Design (introduction to programming). 6 credits course. 2021.
- 10.020 Data Driven World (programming and algorithms). 12 credits course. 2021.
- 50.003 Elements of Software Construction (software engineering and concurrency). 12 credits course. 2020, 2022.
- Capstone (final year project with companies). 24 credits course on 2 terms. 2019.
- 50.006 User Interface Design and Implementation. 12 credit course. 2021-2022.
- 50.051 Programming Language Concepts. 12 credit course. 2023.

At SUTD, 12 credits amount to 5 hours of presence in class for 12 full weeks.

As an Assistant Professor at Yale-NUS, I taught and was responsible for the following modules. I designed each of the following courses from scratch:

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

At Yale-NUS, 5 MC amount to 3 hours of presence in class for 13 weeks.

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**

- June 2023: "HCI in Singapore: A Summary", Invited Keynote, SIGCHI Bangkok HCI Retreat, Bangkok, Thailand.
- June 2023: "The Role(s) of AI as an Agent Between Users", Research Presentation, Korean Advanced Institute of Science and Technology (KAIST), Korea.
- October 2022: "Making Sense of Data in Civic Tech Initiatives". Research Presentation, Université Grenoble Alpes, France.
- October 2022: "Improving Qualitative Coding with AI and NLP". Research Presentation, Université Lyon 1, France.
- June 2020: "Publication Visibility". Invited Presentation, Road2CHI Writing Webinar, SIGCHI Malaysia online event.
- January 2020: "Human vs. Computer Systems: Challenges in HCI Research". Research Presentation, King Mongkut's University of Technology North Bangkok, Thailand.
- May 2019: "Interaction Design for Mobile & Wearable Computing". Research Presentation, Zhejiang University of Technology, China.
- 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
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