

CHAT
WACHARAMANOTHAM
(Prof. Dr. rer. nat.)



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Experience highlight

**Assistant Professor at the People and Computing Lab,
University of Zurich**

(June 2016–present)

Research

Statistics is difficult, using statistics correctly is even more difficult! Chat research aim to make it easier to use statistics *correctly*. This ranges from guiding scientists in analyzing their data (**STATSPLOLER**) to guiding readers to interpret statistical reports (in progress).

During his doctoral study, Chat's research address inaccurate input on and over touch screens. The inaccuracy may originates from disability (e.g., hand tremor in **SWABBING**), the absence of haptic feedback on and above touch screens (**FINS** and **FINGERFLUX**), the distance between touch input and visual output (**INDIRECT TOUCH** and **HOW WE GESTURE**).

Teaching

Chat has five years of teaching experience as a teaching assistant. With Prof. Borchers, he redesigned a master-level research-focus course (**CURRENT TOPICS IN HCI, 2011–14**) as well as revise materials for basic HCI course (**DESIGNING INTERACTIVE SYSTEMS, 2010–12**) and **IPHONE APPLICATION PROGRAMMING** course (2013).

Mentoring

Chat supervised **FOUR BACHELOR'S THESES, THREE DIPLOMA'S THESES, AND SIX MASTER'S THESES**. Some of his students are pursuing a Ph.D. in HCI while others are successful in industries. Besides, he co-supervised two bachelor's theses, one diploma's thesis, and two master's theses with other mentors from both inside RWTH Aachen and other institutes.

Industrial projects

Chat was a part of a team that created **SILHOUETTES**, an interactive shadow game in the Germany-China Structure in EXPO, 2010, Shanghai. He also led a team working on an user interface design of a location-aware audio guide for the city of Aachen: **AIXPLOERER II**.

Selected Publications

C. Wacharamanotham, K. Subramanian, S. T. Völkel, and J. Borchers.

Statsplorer: Guiding Novices in Statistical Analysis. (CHI '15).

C. Wacharamanotham, K. Todi, M. Pye, and J. Borchers. **Understanding Finger Input Above Desktop Devices.** (CHI '14)

S. Voelker, C. Wacharamanotham, and J. Borchers. **An Evaluation of State Switching Methods for Indirect Touch Systems.** (CHI '13)

M. Weiss, C. Wacharamanotham, S. Voelker, and J. Borchers. **FingerFlux: Near-surface Haptic Feedback on Tabletops.** (UIST '11)

C. Wacharamanotham, J. Hurtmanns, A. Mertens, M. Kronenbuerger, J. Borchers, C. Schlick. **Evaluating Swabbing: a Touchscreen Input Method for Older Tremor Patients.** (CHI '11)

Education

2010 – 2016 **Doctoral study (Dr. rer. nat.)**

The Chair of Computer Science 10 (Media Informatics and Human–Computer Interactions), RWTH Aachen University, Germany

- Dissertation title: “Drifts, Slips, and Misses: Input Accuracy for Touch Surfaces”
- Overall grade: Magna Cum Laude

2007 – 2009 **Master in Informatics**

The University of Edinburgh and RWTH Aachen University

- Dissertation: “A Framework for Semi-automatic Data Update for a Curated Database” (Design and implement RDF-based framework for curating and maintaining metabolic networks)

2002 – 2005 **Bachelor in Computer Science**

Chulalongkorn University, Thailand

- Thesis: “A Study of Substring Search in Massive Databases” (Implement and evaluate algorithms for indexing and retrieval in a genome database)

2005 – 2006 **Research Assistant**

Natural Language Processing and Artificial Intelligent System Technology Laboratory, Kasetstart University, Thailand

- Develop linguistic treebank server and linguistic tree editor

2002 – 2004 **Student Assistant**

Natural Language Processing and Artificial Intelligent System Technology Laboratory, Kasetstart University, Thailand

- Develop a probabilistic context-free grammar parser for Thai language
- Develop a user interface for an agriculture web knowledge base.

March – May **Student Intern**

2005

ExxonMobil Affiliate, Thailand

- Design and implement human resource database subsystem
- Administer SAP system

Work experience

June 2016 – **Assistant Professor of Interaction Design**

Present

People and Computing Lab, University of Zurich, Switzerland

- Conduct research projects in Human–Computer Interactions
- Teach introductory course in Human–Computer Interactions
- Mentor Bachelor’s and Master’s thesis students

November 2015 – **Research Assistant (transitional position)**

May 2016

People and Computing Lab, University of Zurich, Switzerland

- Conduct research projects in Human–Computer Interactions
- Teach introductory course in Human–Computer Interactions
- Mentor Bachelor’s and Master’s thesis students

- 2010 – 2015 **Research Assistant**
 The Chair of Computer Science 10 (Media Informatics and Human–Computer Interactions), RWTH Aachen University, Germany
- Conduct research projects in Human–Computer Interactions
 - Teach introductory and advanced course in Human–Computer Interactions
 - Mentor Bachelor’s and Master’s thesis students
 - Design, implement, and evaluate interactive systems for industry projects
- March – December 2009 **Student Assistant**
 The Chair of Computer Science 10 (Media Informatics and Human–Computer Interactions), RWTH Aachen University, Germany
- Design and implementation of projects in Cocoa and iPhone
 - Location tracking for Aixplorer—location-aware audio guide for Aachen town hall
 - Personal Orchestra: Digital music conducting exhibition at Haus der Musik, Vienna
- March – October 2009 **Student Assistant**
 The Department of Medical Informatics, Division of Medical Image Processing and the Chair of Computer Science 6, RWTH Aachen University, Germany
- Extend image retrieval framework for automatic assessment of bone age from x-ray images
- 2005 – 2006 **Research Assistant**
 Natural Language Processing and Artificial Intelligent System Technology Laboratory, Kasetstart University, Thailand
- Develop linguistic treebank server and linguistic tree editor
- 2002 – 2004 **Student Assistant**
 Natural Language Processing and Artificial Intelligent System Technology Laboratory, Kasetstart University, Thailand
- Develop a probabilistic context-free grammar parser for Thai language
 - Develop a user interface for an agriculture web knowledge base.
- March – May 2005 **Student Intern**
 ExxonMobil Affiliate, Thailand
- Design and implement human resource database subsystem
 - Administer SAP system

Awards & recognitions

- 2013 **Nominated for the Teaching award**
 The Computer Science Department, RWTH Aachen University, Germany
- For iPhone Programming class in winter semester 2013
 - One of the five candidates from the entire teaching assistants in the Department of Computer Science through nominations by students in that semester
 - The award is organized by student council (Fachschaft I/1)
- 2010 – 2013 **B-IT Research School Scholarship**
 Bonn-Aachen International Center for Information Technology Foundation (B-IT), Germany
- A full scholarship for Ph.D. study

2008 – 2009 **Erasmus Mundus Scholarship**

The European Commission

- A full scholarship for M.Sc. study

2003 – 2005 **Junior Science Talent Project Scholarship**

Thailand National Science and Technology Development Agency

- A full scholarship for B.Sc. study

Professional engagements

2011 – present **Reviewer for scientific publications in HCI conferences**

- CHI 2011–16
- ITS 2014-15
- SUI 2013–15
- C&C 2015
- UIST 2012–15
- MobileHCI 2013–16
- TVX 2014–15
- GI 2013
- UbiComp 2015–16
- DIS 2012,2016
- CHI Play 2014–15
- APCHI 2012

2014 – present **Co-moderator of CHI-JOBS mailing list**

ACM SIGCHI mailing list for job opportunities announcements

2016 **Associate chair** DIS 2016 (Technological Innovation subcommittee)

2010 – 2012 **Student volunteer**

DIS 2010, UIST 2011, UIST 2012 conference

2012 – 2013 **Elected student representative**

B-IT Research School Students, RWTH Aachen University and The University of Bonn

2007 **Elected student representative**

European Master in Informatics students, The University of Edinburgh

2005 **Selected student representative for joining AC21 Student World Forum**

2002 – 2005 **Member of student union, Faculty of Science, Chulalongkorn University**

European Master in Informatics students, The University of Edinburgh

- 2002: member of editorial division
- 2003 chief editor
- 2004 support staff
- 2005 chief of evaluation

Complete List of Publications

Peer-reviewed archival conference papers

Simon Voelker, Kjell Ivar Øvergård, [Chat Wacharamanotham](#), and Jan Borchers. 2015. **Knobology Revisited: A Comparison of User Performance between Tangible and Virtual Rotary Knobs**. In *Proceedings of the ACM International Conference on Interactive Tabletops and Surfaces (ITS '15)*. ACM, New York, NY, USA, 35–38.

[Chat Wacharamanotham](#), Krishna Subramanian, Sarah Theres Völkel, and Jan Borchers. 2015. **Statsplorer: Guiding Novices in Statistical Analysis**. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15)*. ACM, New York, NY, USA, 2693–2702. DOI=10.1145/2702123.2702347 <http://doi.acm.org/10.1145/2702123.2702347>

Florian Heller, Stefan Ivanov, [Chat Wacharamanotham](#), and Jan Borchers. 2014. **FabriTouch: exploring flexible touch input on textiles**. In *Proceedings of the 2014 ACM International Symposium on Wearable Computers (ISWC '14)*. ACM, New York, NY, USA, 59–62. DOI=10.1145/2634317.2634345 <http://doi.acm.org/10.1145/2634317.2634345>

[Chat Wacharamanotham](#)*, Kashyap Todi*, Marty Pye*, and Jan Borchers. 2014. **Understanding finger input above desktop devices**. In *Proceedings of the 32nd annual ACM conference on Human factors in computing systems (CHI '14)*. ACM, New York, NY, USA, 1083–1092. DOI=10.1145/2556288.2557151 <http://doi.acm.org/10.1145/2556288.2557151>

Simon Voelker*, [Chat Wacharamanotham](#)*, and Jan Borchers. 2013. **An evaluation of state switching methods for indirect touch systems**. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13)*. ACM, New York, NY, USA, 745–754. DOI=10.1145/2470654.2470759 <http://doi.acm.org/10.1145/2470654.2470759>

Simon Voelker, Malte Weiss, [Chat Wacharamanotham](#), and Jan Borchers. 2011. **Dynamic portals: a lightweight metaphor for fast object transfer on interactive surfaces**. In *Proceedings of the ACM International Conference on Interactive Tabletops and Surfaces (ITS '11)*. ACM, New York, NY, USA, 158–161. DOI=10.1145/2076354.2076384 <http://doi.acm.org/10.1145/2076354.2076384> (Best note award)

Malte Weiss, [Chat Wacharamanotham](#), Simon Voelker, and Jan Borchers. 2011. **FingerFlux: near-surface haptic feedback on tabletops**. In *Proceedings of the 24th annual ACM symposium on User interface software and technology (UIST '11)*. ACM, New York, NY, USA, 615–620. DOI=10.1145/2047196.2047277 <http://doi.acm.org/10.1145/2047196.2047277> (Best demo award 3rd place)

[Chat Wacharamanotham](#), Jan Hurtmanns, Alexander Mertens, Martin Kronenbuerger, Christopher Schlick, and Jan Borchers. 2011. **Evaluating swabbing: a touchscreen input method for elderly users with tremor**. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11)*. ACM, New York, NY, USA, 623–626. DOI=10.1145/1978942.1979031 <http://doi.acm.org/10.1145/1978942.1979031>

[Chatchavan Wacharamanotham](#), Mukda Suktarachan, Asanee Kawtrakul. **The Development of Web-based Annotation System for Thai Trebank**, In *Proceedings of the Seventh International Symposium on Natural Language Processing (SNLP2007)*, Bangkok, Thailand, 2007.

*: Equal authorship

Book chapter

Alexander Mertens, [Chat Wacharamanotham](#), Jan Hurtmanns, Martin Kronenbuerger, Peter H. Kraus, Arndt Hoffmann, Christopher Schlick, and Jan Borchers. **Model Based Processing of Swabbing Movements on Touch Screens to Improve Accuracy and Efficacy for Information Input of Individuals Suffering from Kinetic Tremor**. *Human – Computer Systems Interaction: Backgrounds and Applications 2: Advances in Intelligent and Soft Computing*, 98:503–522, August 2012.

Work-in-progress articles and posters (peer-reviewed, non-archival)

Nur Al Huda Hamdan, Florian Heller, [Chat Wacharamanotham](#), Jan Thar, and Jan Borchers. **Grabrics: A Foldable Two-Dimensional Textile Input Controller**. In CHI '16 EA: Extended Abstracts of 2016 ACM SIGCHI Conference on Human Factors in Computing, May 2016. (To appear)

Florian Heller, Simon Voelker, [Chat Wacharamanotham](#), and Jan Borchers. 2015. **Transporters: Vision & Touch Transitive Widgets for Capacitive Screens**. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems* (CHI EA '15). ACM, New York, NY, USA, 1603-1608.

Sukeshini A. Grandhi, [Chat Wacharamanotham](#), Gina Joue, Jan O. Borchers, and Irene Mittelberg. 2013. **How we gesture towards machines: an exploratory study of user perceptions of gestural interaction**. In *CHI '13 Extended Abstracts on Human Factors in Computing Systems* (CHI EA '13). ACM, New York, NY, USA, 1209-1214.

Alexander Mertens, [Chatchavan Wacharamanotham](#), Jan Hurtmanns, Niels Huck, Jörg Schulz, Jan Borchers, Christopher Schlick, and Martin Kronenbuerger. **SWABBING: Touchscreen-basierte Mensch-Rechner-Interaktion für Personen mit Tremorerkrankungen des Hand-Arm-Apparats** (P438), In: *Abstract-CD des 84. Kongresses der Deutschen Gesellschaft für Neurologie 2011*, 2, Wiesbaden, pharma service, Hannover 2011, 1-2.

alt.chi (peer-reviewed, non-archival)

Christian Corsten, [Chat Wacharamanotham](#), and Jan Borchers. 2013. **Fillables: everyday vessels as tangible controllers with adjustable haptics**. In *CHI '13 Extended Abstracts on Human Factors in Computing Systems* (CHI EA '13). ACM, New York, NY, USA, 2129-2138.

Demos (peer-reviewed, non-archival)

Philipp Wacker, [Chat Wacharamanotham](#), Daniel Spelmezan, Jan Thar, David A. Sánchez, René Bohne, and Jan Borchers. **VibroVision: An On-Body Tactile Image Guide for the Blind**. In CHI '16 EA: Extended Abstracts of 2016 ACM SIGCHI Conference on Human Factors in Computing, May 2016. (To appear)

Workshop papers (peer-reviewed, non-archival)

[Chat Wacharamanotham](#), Dennis Kehrig, Alexander Mertens, Christopher Schlick, and Jan Borchers. **Designing a Touchscreen Web Browser for People with Tremors**. In *CHI 2013 Workshop on Mobile Accessibility*, Paris, France, April 2013.

Tongyan Ning, Jörg Müller, Robert Walter, Gilles Bailly, [Chat Wacharamanotham](#), Florian Alt, and Jan Borchers. **No Need to Stop: Menu Techniques for Passing by Public Displays**. In *CHI 2011 Workshop on Large Displays in Urban Life: from Exhibition Halls to Media Facades*, Vancouver, Canada, May 2011.

[Chatchavan Wacharamanotham](#), Jonathan Meyer, Jonathan Diehl, and Jan Borchers. **The Interactive Bracelet: An input device for bimanual interaction**. In *Mobile HCI 2010 Workshop on Ensembles of On-Body Devices*, Lisbon, Portugal, September 2010.

Doctoral consortium (juried, non-archival)

[Chat Wacharamanotham](#). 2014. **Making bare hand input more accurate**. In *CHI '14 Extended Abstracts on Human Factors in Computing Systems* (CHI EA '14). ACM, New York, NY, USA, 307-310.

Theses

[Chatchavan Wacharamanotham](#). **Drifts, Slips, and Misses: Input Accuracy for Touch Surfaces**. Doctoral Thesis, RWTH Aachen University, Aachen, Germany, February 2016.

[Chatchavan Wacharamanotham](#). **Using semantic web technologies for data update**, Master's Thesis, School of Informatics, University of Edinburgh, 2009.

[Chatchavan Wacharamanotham](#). **A study of substring search in massive databases**, Bachelor's Thesis, Faculty of Science, Chulalongkorn University, 2005.