

# Mike Schaekermann

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OVERVIEW	My research focuses on developing methods to capture and utilize the structure of ambiguous classification problems in the context of human-centered machine learning and human-AI collaboration. My work has a special focus on medical data analysis.	
EDUCATION	<b>Ph.D. Candidate</b> , Computer Science University of Waterloo, ON, Canada Advisors: Edith Law and Kate Larson	2016 - 2020 (expected)
	<b>Bachelor of Science in Engineering</b> , Media Informatics Salzburg University of Applied Sciences, Austria Thesis Supervisor: Lennart Nacke	2014
	<b>Staatsexamen</b> (equivalent to Bachelors), Medicine University of Marburg, Germany	2011
AWARDS & HONOURS	<b>Google PhD Fellowship</b> (\$45,000/year) <b>Best Paper, ACM CSCW</b> <b>Graduate Excellence Scholarship</b> (\$5,000) — UWaterloo <b>David R. Cheriton Graduate Scholarship</b> (\$10,000) — UWaterloo <b>International Doctoral Student Award</b> (\$11,760/year) — UWaterloo <b>Amazon Web Services Research Grant</b> (\$7,000) — Amazon <b>Merit-based Scholarship</b> — Salzburg University of Applied Sciences <b>Engineering Scholarship</b> — Economic Chamber of Salzburg <b>Nominee for the German National Academic Foundation</b>	2018-2020 2018 2017 2016 2016 2016 2014 2013 2009
CONFERENCE PAPERS	<b>Ambiguity-aware AI Assistants for Medical Data Analysis.</b> Schaekermann, M., Beaton, G., Sanoubari, E., Lim, A., Larson, K., & Law, E. <b>CHI'20</b> . Honolulu, HI.  <b>Expert Discussions Improve Comprehension of Difficult Cases in Medical Image Assessment.</b> Schaekermann, M., Cai, C. J., Huang, A. E., & Sayres, R. <b>CHI'20</b> . Honolulu, HI.  <b>Understanding Expert Disagreement in Medical Data Analysis through Structured Adjudication.</b> Schaekermann, M., Beaton, G., Habib, M., Lim, A., Larson, K., & Law, E. <b>CSCW'19</b> . Austin, TX.  <b>Trusted AI and the Contribution of Trust Modeling in Multiagent Systems.</b> Cohen, R., Schaekermann, M., Liu, S., & Cormier, M. <b>AAMAS'19</b> . Montréal.  <b>Resolvable vs. Irresolvable Disagreement: A Study on Worker Deliberation in Crowd Work.</b> Schaekermann, M., Goh, J., Larson, K., & Law, E. <b>CSCW'18</b> . New York City, NY. [Best Paper Award]	

**Curiously Motivated: Profiling Curiosity with Self-Reports and Behaviour Metrics in the Game Destiny.** Schaekermann, M., Ribeiro, G., Wallner, G., Kriglstein, S., Johnson, D., Drachen, A., & Nacke, L. E. **CHI PLAY'17**. Amsterdam, NL.

**Online Bayesian Transfer Learning for Sequential Data Modeling.** Jaini, P., Chen, Z., Carbajal, P., Law, E., Middleton, L., Regan, K., Schaekermann, M., Trimponias, G., Tung, J., & Poupart, P. **ICLR'17**. Toulon, France.

**Testing Incremental Difficulty Design in Platformer Games.** Wehbe, R. R., Mekler, E. D., Schaekermann, M., Lank, E., & Nacke, L. E. **CHI'17**. Denver, CO.

## JOURNAL PAPERS

**Remote Tool-Based Adjudication for Grading Diabetic Retinopathy.** Schaekermann, M., Hammel, N., Terry, M., Ali, T. K., Liu, Y., Basham, B., Campana, B., Chen, W., Ji, X., Krause, J., Corrado, G. S., Peng, L., Webster, D. R., Law, E., & Sayres, R. **Translational Vision Science & Technology**. 2019.

**Smartphone EEG and remote online interpretation for children with epilepsy in the Republic of Guinea: Quality, characteristics, and practice implications.** Williams, J., Cisse, F.A., Schaekermann, M., Sakadi, F., Tassiou, N.R., Hotan, G., Bah, A.K., Hamani, A.B.D., Lim, A., Leung, E.C.W., Fantaneanu, T.A., Milligan, T., Khatri, V., Hoch, D., Vyas, M., Lam, A., Cohen, J., Vogel, A., Law, E., & Mateen, F. **Seizure**. 2019.

**Deep Learning and Glaucoma Specialists: The Relative Importance of Optic Disc Features to Predict Glaucoma Referral in Fundus Photographs.** Phene, S. and Dunn, C. and Hammel, N. and Liu, Y. and Krause, J. and Kitade, N. and Schaekermann, M. and Sayres, R. and Wu, D. and Bora, A. and Semturs, C. and Misra, A. and Huang, A. and Spitze, A. and Medeiros, F. and Maa, A. and Gandhi, M. and Corrado, G. and Peng, L., & Webster, D. **Ophthalmology**. 2019.

## WORKSHOP PAPERS & ABSTRACTS

**crowdEEG: A Platform for Structured Consensus Formation in Medical Time Series Analysis.** Schaekermann, M., Beaton, G., Habib, M., Lim, A., Larson, K., & Law, E. 8th Workshop on Interactive Systems in Healthcare (WISH) at **CHI'19**. Glasgow, UK.

**Capturing Expert Arguments from Medical Adjudication Discussions in a Machine-readable Format.** Schaekermann, M., Beaton, G., Habib, M., Lim, A., Larson, K., & Law, E. 2nd Workshop on Subjectivity, Ambiguity and Disagreement (SAD) in Crowdsourcing at **WebConf'19**. San Francisco, CA.

**Utilizing a wearable smartphone-based EEG for pediatric epilepsy patients in the resource poor environment of Guinea: A prospective study.** Williams, J., Cisse, F.A., Schaekermann, M., Sakadi, F., Tassiou, N.R., Bah, A.K., Hamani, A.B.D., Lim, A., Leung, E.C.W., Fantaneanu, T.A., Milligan, T., Khatri, V., Hoch, D., Vyas, M., Lam, A., Hotan, G., Cohen, J., Law, E., & Mateen, F. Annual Meeting of the American Academy of Neurology **AAN'19**. Philadelphia, PA.

**Expert Disagreement in Sequential Labeling: A Case Study on Adjudication in Medical Time Series Analysis.** Schaekermann, M., Lim, A., Larson, K., & Law, E. 1st Workshop on Subjectivity, Ambiguity and Disagreement (SAD) in Crowdsourcing at **HCOMP'18**. Zurich, Switzerland.

**Resolvable vs. Irresolvable Ambiguity: A New Hybrid Framework for Dealing with Uncertain Ground Truth.** Schaekermann, M., Law, E., Williams, A. C., & Callaghan, W. Workshop on Human-Centered Machine Learning at **CHI'16**. San Jose, CA.

**CONFERENCE WORKSHOPS ORGANIZED** **Subjectivity, Ambiguity and Disagreement in Crowdsourcing.** Co-chaired with Chris Welty, Lora Aroyo, Praveen Paritosh, Anca Dumitrache, Jennimaria Palomaki, Alex Quinn, Olivia Rheinhart, & Michael Tseng at **WebConf'19**.

**Designing for Curiosity: an Interdisciplinary Workshop.** Co-organized with Edith Law, Pierre-Yves Oudeyer, Ming Yin, & Alex Williams at **CHI'17**.

**RESEARCH & WORK EXPERIENCE**

<b>Student Researcher</b> , Google Health, Mountain View, CA	2018 - present
<b>Research Intern</b> , Google Brain, Mountain View, CA	2018
<b>Visiting Researcher</b> , Inria Bordeaux, France	2017
<b>Software Engineering Intern</b> , Google, Mountain View, CA	2017
<b>Entrepreneur</b> , SpontaneousOrder GmbH, Berlin, Germany	2011 - 2015
<b>Visiting Researcher</b> , Ontario Tech University, ON, Canada	2013 - 2014
<b>Research Assistant</b> , University Medical Center, Marburg, Germany	2009 - 2010

**SELECTED PROJECTS**

**crowdEEG.ca**  
 Framework to combine machine and human intelligence for the scalable and accurate analysis of human clinical EEG recordings. This is an active research project in the HCI CrowdLab at the University of Waterloo, Canada, led by professor Edith Law.

**3D Simulation of the Human Endocrine System**  
 Real-time 3D simulation of the hypothalamic-pituitary-adrenal (HPA) axis, a part of the human neuro-endocrine system. Final project for “Simulation Methods in Physiology and Neurobiology” at medical school of University of Marburg, Germany.

**SERVICE & LEADERSHIP**

**Journal Reviewer:** ACM Transactions on Interactive Intelligent Systems (2017)  
**Conference Reviewer:** CHI (2017, 2018, 2019, 2020), CSCW (2018, 2019), CHI PLAY (2016)  
**Program Committee:** CrowdBias 2018, HumBL 2019  
**Other:** Session chair for the CHI 2019 session on “Designing Decision Support”, advisor for incoming international students (2012), and president of the students council (2013) at Salzburg University of Applied Sciences, Austria