

Michael Nebeling Curriculum Vitae

Associate Professor, School of Information & EECS, University of Michigan – nebeling@umich.edu

Academic Positions

University of Michigan, Ann Arbor, MI, USA

Associate Professor, Computer Science & Engineering, College of Engineering (2022-)

Associate Professor, School of Information (2022-)

Visiting Professor, Meta Reality Labs, Research (2022-2023) – *sabbatical*

Assistant Professor, Computer Science & Engineering, College of Engineering (2017-2022)

Assistant Professor, School of Information (2016-2022)

Carnegie Mellon University, HCI Institute, Pittsburgh, PA, USA

Swiss NSF Advanced Postdoc.Mobility Researcher hosted by Anind K. Dey (2015-2016)

ETH Zurich, Department of Computer Science, Zurich, Switzerland

Senior Researcher (*Oberassistent*) & Lecturer (2012-2015)

Doctoral Student & Teaching Assistant (2009-2012)

Education

ETH Zurich, Department of Computer Science, Zurich, Switzerland

Doctor of Sciences in Computer Science (2012)

Monash University, School of Information Technology, Berwick, VIC, Australia

Honours Degree in Information Technology and Systems (2007)

Ulm University, Faculty of Computer Science, Ulm, Germany

Diplom in Media Computer Science (2007)

Honors and Awards (non-research grant)

ACM EICS Best Paper (2023)

Meta Research Award (2022)

Epic MegaGrants Award (2021)

2x ACM CHI Best Paper (2020)

ACM CHI Best Paper Honorable Mention (2019)

Disney Research Faculty Award (2018)

ACM EICS Best Paper (2018)

UROB Outstanding Mentor Honorable Mention (2018)

Swiss NSF Advanced Postdoc.Mobility Fellow (2015, 2016)

ACM CHI Best Paper Honorable Mention (2015)

ACM ITS Best Paper Honorable Mention (2014)

Springer WISE Best Paper (2014)

ACM EICS Best Paper (2014)

ACM EICS Best Paper (2012)

ACM CHI Best Paper Honorable Mention (2011)

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Heavily-reviewed Conference Publications (Full Papers)*

* *Students I supervised are underlined*

- C1. Shwetha Rajaram, Franziska Roesner, **Michael Nebeling**: **Reframe: An Augmented Reality Storyboarding Tool for Character-Driven Analysis of Security & Privacy Concerns**. In *Proc. 2023 CHI Conference on Human Factors in Computing Systems (UIST 2023)*
- C2. Shwetha Rajaram, Chen Chen, Franziska Roesner, **Michael Nebeling**: **Eliciting Security & Privacy-Informed Sharing Techniques for Multi-User Augmented Reality**. In *Proc. 2023 CHI Conference on Human Factors in Computing Systems (CHI 2023)*
- C3. Shwetha Rajaram, **Michael Nebeling**: **Paper Trail: An Immersive Authoring System for Augmented Reality Instructional Experiences**. In *Proc. 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022)*
- C4. Ana María Cárdenas Gasca, Jennifer Mary Jacobs, Andrés Monroy-Hernández, **Michael Nebeling**: **AR Exhibitions for Sensitive Narratives: Designing an Immersive Exhibition for the Museum of Memory in Colombia**. Conference on Designing Interactive Systems 2022: 1698-1714 (DIS 2022)
- C5. Veronika Krauß, **Michael Nebeling**, Florian Jasche, Alexander Boden: **Elements of XR Prototyping: Characterizing the Role and Use of Prototypes in Augmented and Virtual Reality Design**. In *Proc. 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022)*
- C6. **Michael Nebeling**, Shwetha Rajaram, Liwei Wu, Yifei Cheng, Jaylin Herskovitz: **XRStudio: A Virtual Production and Live Streaming System for Immersive Instructional Experiences**. In *Proc. 2021 CHI Conference on Human Factors in Computing Systems (CHI 2021)*
- C7. **Michael Nebeling**, Katy Lewis, Yu-Cheng Chang, Lihan Zhu, Michelle Chung, Piaoyang Wang, Janet Nebeling: **XRDirector: A Role-Based Collaborative Immersive Authoring System**. In *Proc. 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020)*
- C8. **Michael Nebeling**, Maximilian Speicher, Xizi Wang, Shwetha Rajaram, Brian D. Hall, Zijian Xie, Alexander R.E. Raistrick, Michelle Aebersold, Edward G. Happ, Jiayin Wang, Yanan Sun, Lotus Zhang, Leah Ramsier, Rhea Kulkarni: **MRAT: The Mixed Reality Analytics Toolkit**. In *Proc. 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020)* **Best Paper Award**
- C9. Narges Ashtari, Andrea Bunt, Joanna McGrenere, **Michael Nebeling**, Parmit K. Chilana: **Creating Augmented and Virtual Reality Applications: Current Practices, Challenges, and Opportunities**. In *Proc. 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020)* **Best Paper Award**
- C10. Roland Graf, Pallavi Benawri, Amy E. Whitesall, Dashiell Carichner, Zixuan Li, **Michael Nebeling**, Hun Seok Kim: **iGYM: An Interactive Floor Projection System for Inclusive Exergame Environments**. In *Proc. Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2019)* **Best Paper Award**
- C11. Maximilian Speicher, Brian D. Hall and **Michael Nebeling**: **What is Mixed Reality?** In *Proc. 2019 CHI Conference on Human Factors in Computing Systems (CHI 2019)* **Best Paper Honorable Mention Award**
- C12. **Michael Nebeling**, Katy Madier: **360proto: Making Interactive Virtual Reality & Augmented Reality Prototypes from Paper**. In *Proc. 2019 CHI Conference on Human Factors in Computing Systems (CHI 2019)*
- C13. **Michael Nebeling**, Janet Nebeling, Ao Yu, Rob Rumble: **ProtoAR: Rapid Physical-Digital Prototyping of Mobile Augmented Reality Applications**. In *Proc. 2018 CHI Conference on Human Factors in Computing Systems (CHI 2018)*
- C14. Maximilian Speicher, **Michael Nebeling**: **GestureWiz: A Human-Powered Gesture Design Environment for User Interface Prototypes**. In *Proc. 2018 CHI Conference on Human Factors in Computing Systems (CHI 2018)*

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- C15. [Erin McAweeney](#), [Haihua Zhang](#), **Michael Nebeling**: **User-Driven Design Principles for Gesture Representations**. In *Proc. 2018 CHI Conference on Human Factors in Computing Systems* (CHI 2018)
- C16. Steve Oney, [Alan Lundgard](#), [Rebecca Krosnick](#), **Michael Nebeling**, Walter S. Lasecki: **Arboretum and Arbilty: Improving Web Accessibility Through a Shared Browsing Architecture**. In *Proc. 31st Annual ACM Symposium on User Interface Software and Technology* (UIST 2018)
- C17. **Michael Nebeling**: **XDBrowser 2.0: Semi-Automatic Generation of Cross-Device Interfaces**. In *Proc. 2017 CHI Conference on Human Factors in Computing Systems* (CHI 2017)
- C18. **Michael Nebeling**, Anind K. Dey: **XDBrowser: User-Defined Cross-Device Web Page Designs**. In *Proc. 2016 CHI Conference on Human Factors in Computing Systems* (CHI 2016)
- C19. **Michael Nebeling**, [Alexandra To](#), [Anhong Guo](#), [Adrian A. de Freitas](#), Jaime Teevan, Steven P. Dow, Jeffrey P. Bigham: **WearWrite: Crowd-Assisted Writing on Wearables**. In *Proc. 2016 CHI Conference on Human Factors in Computing Systems* (CHI 2016)
- C20. [Adrian A. de Freitas](#), **Michael Nebeling**, [Xiang 'Anthony' Chen](#), [Junrui Yang](#), [Akshaye S.K.K. Ranithangam](#), Anind K. Dey: **Snap-To-It: A User-Inspired Platform for Opportunistic Device Interactions**. In *Proc. 2016 CHI Conference on Human Factors in Computing Systems* (CHI 2016)
- C21. [Adrian A. de Freitas](#), **Michael Nebeling**, [Akshaye S.K.K. Ranithangam](#), [Junrui Yang](#), Anind K. Dey: **Bluewave: Enabling Opportunistic Context Sharing via Bluetooth Device Names**. In *Proc. 8th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2016)
- C22. **Michael Nebeling**, [David Ott](#), Moira C. Norrie: **Kinect Analysis: A System for Recording, Analysing and Sharing Multimodal Interaction Elicitation Studies**. In *Proc. 7th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2015)
- C23. **Michael Nebeling**, Matthias Geel, [Oleksiy Syrotkin](#), Moira C. Norrie: **MUBox: Multi-User Aware Personal Cloud Storage**. In *Proc. 33rd ACM SIGCHI Conference on Human Factors in Computing Systems* (CHI 2015) **Best Paper Honorable Mention Award**
- C24. [Linda Di Geronimo](#), [Alfonso Murolo](#), **Michael Nebeling**, Moira C. Norrie: **Mixing and Mashing Website Themes**. In *Proc. 15th International Conference on Web Engineering* (ICWE 2015)
- C25. **Michael Nebeling**, [Alexander Huber](#), [David Ott](#), Moira C. Norrie: **Web on the Wall Reloaded: Implementation, Replication and Refinement of User-Defined Interaction Sets**. In *Proc. 9th ACM International Conference on Interactive Tabletops and Surfaces* (ITS 2014) **Best Paper Honorable Mention Award**
- C26. [Maria Husmann](#), **Michael Nebeling**, [Stefano Pongelli](#), Moira C. Norrie: **MultiMasher: Providing Architectural Support and Visual Tools for Multi-Device Mashups**. In *Proc. 15th International Conference on Web Information Systems Engineering* (WISE 2014) **Best Paper Award**
- C27. Moira C. Norrie, [Linda Di Geronimo](#), [Alfonso Murolo](#), **Michael Nebeling**: **The Forgotten Many? A Survey of Modern Web Development Practices**. In *Proc. 14th International Conference on Web Engineering* (ICWE 2014)
- C28. Moira C. Norrie, **Michael Nebeling**, [Linda Di Geronimo](#), [Alfonso Murolo](#): **X-Themes: Supporting Design-by-Example**. In *Proc. 14th International Conference on Web Engineering* (ICWE 2014)
- C29. **Michael Nebeling**, Moira C. Norrie: **Beyond Responsive Design: Adaptation to Touch and Multitouch**. In *Proc. 14th Intl Conference on Web Engineering* (ICWE 2014)
- C30. **Michael Nebeling**, [Elena Teunissen](#), [Maria Husmann](#), Moira C. Norrie: **XDKinect: Development Framework for Cross-Device Interaction using Kinect**. In *Proc. 6th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2014) **Best Paper Award**
- C31. **Michael Nebeling**, Matthias Geel, Moira C. Norrie: **Engineering Information Management Tools by Example**. In *Proc. International Working Conference on Advanced Visual Interfaces* (AVI 2014)

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- C32. **Michael Nebeling**, [Theano Mintsj](#), [Maria Husmann](#), Moira C. Norrie: **Interactive Development of Cross-Device User Interfaces**. In *Proc. 32nd ACM SIGCHI Conference on Human Factors in Computing Systems* (CHI 2014)
- C33. **Michael Nebeling**, [Maximilian Speicher](#), Moira C. Norrie: **CrowdAdapt: Enabling Crowdsourced Web Page Adaptation for Individual Viewing Conditions and Preferences**. In *Proc. 5th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2013)
- C34. **Michael Nebeling**, [Maximilian Speicher](#), Moira C. Norrie: **CrowdStudy: General Toolkit for Crowdsourced Evaluation of Web Interfaces**. In *Proc. 5th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2013)
- C35. **Michael Nebeling**, [Maximilian Speicher](#), Moira C. Norrie: **W3Touch: Metrics-based Web Page Adaptation for Touch**. In *Proc. 31st ACM SIGCHI Conference on Human Factors in Computing Systems* (CHI 2013)
- C36. Matthias Geel, **Michael Nebeling**, Moira C. Norrie: **PubLight: Managing Publications using a Task-oriented Approach**. In *Proc. International Conference on Theory and Practice of Digital Libraries* (TPDL 2012)
- C37. **Michael Nebeling**, Stefania Leone and Moira C. Norrie: **Crowdsourced Web Engineering and Design**, In *Proc. 12th International Conference on Web Engineering* (ICWE 2012)
- C38. **Michael Nebeling**, Moira C. Norrie: **jqMultiTouch: Lightweight Toolkit and Development Framework for Multi-touch/Multi-device Web Interfaces**. In *Proc. 4th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2012) **Best Paper Award**
- C39. **Michael Nebeling**, Fabrice Matulic, Lucas Streit, Moira C. Norrie: **Adaptive Layout Template for Effective Web Content Presentation in Large-Screen Contexts**. In *Proc. 11th ACM Symposium on Document Engineering* (DocEng 2011)
- C40. **Michael Nebeling**, Moira C. Norrie: **Tools and Architectural Support for Crowdsourced Adaptation of Web Interfaces**. In *Proc. 11th International Conference on Web Engineering* (ICWE 2011)
- C41. Alexandre de Spindler, Stefania Leone, **Michael Nebeling**, Matthias Geel, Moira C. Norrie: **Using Synchronised Tag Clouds for Browsing Data Collections**. In *Proc. 23rd International Conference on Advanced Information Systems Engineering* (CAiSE 2011)
- C42. **Michael Nebeling**, Fabrice Matulic, Moira C. Norrie: **Metrics for the Evaluation of News Site Content Layout in Large-Screen Contexts**. In *Proc. 29th ACM Conference on Human Factors in Computing Systems* (CHI 2011) **Best Paper Honorable Mention Award**

Peer-reviewed Journal Articles

- J1. [Vittoria Frau](#), Lucio Davide Spano, Valentino Artizzu, **Michael Nebeling**: **XRSpotlight: Example-based Programming of XR Interactions using a Rule-based Approach**. In *Proc. of the ACM on Human-Computer Interaction* 7(EICS): 1-28 (EICS 2023) **Best Paper Award**
- J2. [Jaylin Herskovitz](#), [Yifei Cheng](#), Anhong Guo, Alanson P. Sample, **Michael Nebeling**: **XSpace: An Augmented Reality Toolkit for Enabling Spatially-Aware Distributed Collaboration**. In *Proc. ACM on Human-Computer Interaction* 6(ISS): 277-302 (2022)
- J3. [Maximilian Speicher](#), [Brian D. Hall](#), [Ao Yu](#), [Bowen Zhang](#), [Haihua Zhang](#), Janet Nebeling, **Michael Nebeling**: **XD-AR: Challenges and Opportunities in Cross-Device Augmented Reality Application Development**. In *Proc. ACM on Human-Computer Interaction* 2: 7:1-7:24 (EICS 2018) **Best Paper Award**
- J4. [Maximilian Speicher](#), [Jingchen Cao](#), [Ao Yu](#), [Haihua Zhang](#), **Michael Nebeling**: **360Anywhere: Mobile Ad-hoc Collaboration in Any Environment using 360 Video and Augmented Reality**. In *Proc. ACM on Human-Computer Interaction* 2: 9:1-9:20 (EICS 2018)

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- J5. **Michael Nebeling**, Michael Grossniklaus, Stefania Leone, Moira C. Norrie: **XCML: Providing Context-Aware Language Extensions for the Specification of Multi-Device Web Applications**. In *World Wide Web* 15(4): 447-481 (2012)

Lightly-reviewed Conference Publications & Short Papers

- c1. Frederik Brudy, Alexander De Luca, Jennifer Marlow, Manya Sleeper, Susanne Kirchner-Adelhardt, Sean Munson, **Michael Nebeling**, Sarah Clinch: **CHI 2019**. In *IEEE Pervasive Computing* 18(3): 70-76 (IEEE Pervasive Computing 2019)
- c2. **Michael Nebeling**, Maria Husmann, Christoph Zimmerli, Giulio Valente, Moira C. Norrie: **XDSession: Integrated Development and Testing of Cross-Device Applications**. In *Proc. 7th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2015 Late Breaking Results)
- c3. **Michael Nebeling**, Christoph Zimmerli, Moira C. Norrie: **Informing the Design of New Mobile Development Methods and Tools**. In *CHI 2013 Extended Abstracts on Human Factors in Computing Systems* (CHI 2013 Works-in-Progress)
- c4. **Michael Nebeling**, Maximilian Speicher, Michael Grossniklaus, Moira C. Norrie: **Crowdsourced Web Site Evaluation with CrowdStudy**. In *Proc. 12th International Conference on Web Engineering* (ICWE 2012 Demos)
- c5. Matthias Geel, **Michael Nebeling**, Stefania Leone, Moira C. Norrie: **Advanced Management of Research Publications based on the Lightroom Paradigm**. In *Proc. 23rd International Conference on Advanced Information Systems Engineering* (CAISE Forum 2011)
- c6. **Michael Nebeling**, Michael Grossniklaus, Stefania Leone, Moira C. Norrie: **Domain-specific Language for Context-aware Web Applications**. In *Proc. 11th International Conference on Web Information Systems Engineering* (WISE 2010)
- c7. **Michael Nebeling**, Grace Rumantir, Lindsay Smith: **Migration between Content Management Systems—Exploiting the JSR-170 Content Repository Standard** In *Proc. 10th International Conference on Enterprise Information Systems* (ICEIS 2008)

Conference Proceedings

- P1. Ranjitha S. Kumar, **Michael Nebeling**, Jeffrey Nichols: *Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology* (UIST 2021)
- P2. **Michael Nebeling**, Jürgen Ziegler, Laurence Nigay: *Proceedings of the 7th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS 2015)

Service

Conference Organizing Committees

- **ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS)**
 - General co-chair (2024)
- **ACM Symposium on User Interface Software and Technology (UIST)**
 - Papers co-chair (2021)
- **ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS)**
 - Papers co-chair (2015)
 - Late Breaking Results co-chair (2014)
- **International Conference on Web Engineering (ICWE)**
 - Demos co-chair (2014)

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Conference Program Committees

- **ACM CHI Conference on Human Factors in Computing (CHI)**
 - Papers and Notes (2014, 2015, 2016, 2018, 2019, 2020, 2023, 2024)
 - Works in Progress (2012, 2013, 2014)
- **ACM Symposium on User Interface Software and Technology (UIST)** (2018, 2019, 2020, 2023, 2024)
- **ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS)** (2014, 2015, 2016, 2017, 2018, 2019)
- **International Conference on Intelligent User Interfaces (IUI)** (2014, 2015, 2016, 2017)
- **AAAI Conference on Human Computation & Crowdsourcing (HCOMP)** (2014, 2016)
- **International Working Conference on Advanced Visual Interfaces (AVI)** (2016)
- **International Conference on Web Engineering (ICWE)** (2014)

Editorial Boards

- **Proceedings of the ACM on Human-Computer Interaction (PACM HCI)**
 - **Engineering Interactive Computing Systems (EICS)** (2018-2020)