PROMOTION RECOMMENDATION THE UNIVERSITY OF MICHIGAN SCHOOL OF INFORMATION

Florian Schaub, assistant professor of information, School of Information, and assistant professor of electrical engineering and computer science, College of Engineering, is recommended for promotion to associate professor of information, with tenure, School of Information, and associate professor of electrical engineering and computer science, without tenure, College of Engineering.

Academic Degrees:

Ph.D.	2014	Department of Computer Science, University of Ulm, Germany
M.S.	2008	University of Ulm, Germany
B.A.	2006	Deakin University, Melbourne, Australia

Professional Record:

2017 – present	Assistant Professor of Electrical Engineering and Computer Science,
-	College of Engineering, University of Michigan
2016 - present	Assistant Professor of Information, School of Information, University of
	Michigan

Summary of Evaluation:

<u>Teaching</u>: Professor Schaub is a thoughtful teacher who has developed a pedagogy centered upon experiential learning focusing on real-world problems. This thread runs throughout Professor Schaub's teaching work, including his participation in the Law School's Problem Solving Initiative (PSI) courses and his emphasis on project-based assignments in all courses. A second major focus is diversity, equity, and inclusion (DEI). To foster an inclusive classroom atmosphere, he provides time for individual reflection before discussions, moderates discussions to facilitate equal participation and includes diverse perspectives in course materials. Professor Schaub has also contributed significantly to curriculum development. For example, he redesigned the user experience (UX) capstone course SI 487 to focus on client-based projects.

Professor Schaub's graduate mentoring meets and exceeds expectations for an assistant professor. Professor Schaub advises seven doctoral students (five in Information, one in CSE, one pursuing an Information/CSE dual degree) and has also advised five masters students. Professor Schaub's graduate students have been successful having published in top venues such as ACM Conference on Human Factors in Computing Systems (CHI) and Symposium on Usable Privacy and Security (SOUPS), receiving best paper awards/nominations, and Ph.D. fellowships.

Professor Schaub has taught four courses at UMSI: two graduate-level courses (SI-540 Privacy in Information and SI-699 Mastery: User Experience Research and Design) and two undergraduate capstone courses (SI-487 User Experience Final Project and SI-405 Final Project Preparation). He has also taught: Identity Theft: Causes and Countermeasures and PSI: Information Privacy, Surveillance and Exposure). Professor Schaub worked on improving SI 487 going from 4.23 (Q1631: This course advanced my understanding of the subject matter) in Winter 2019 to 4.38 in Winter 2021. Overall his teaching scores without SI 487 averaged 4.3 reaching as high as 4.74.

<u>Research</u>: Professor Schaub's most significant research impact is in the identification of gaps between privacy policy and privacy protocols implemented on technology platforms, and how this gap contributes to the failure to protect user privacy; and in providing both conceptual and practical recommendations to address them. His work has shown how technology design can hamper people's assessment of privacy risks and limit their privacy-seeking behavior, leading them to act against their own privacy preferences. In addition, his work has demonstrated how technology platform design and policies create and further exacerbate privacy risks for exposuresensitive populations. In doing so, his work advances human-centered privacy design with solutions and methods that have become reference models in academia and industry.

Professor Schaub's research contributes to usable privacy, a subfield of human-computer interaction (HCI). Professor Schaub's academic record exceeds expectations for the HCI field with respect to publication output, citations, external funding, and visibility. Professor Schaub has published 77+ peer-reviewed articles in top-tier venues throughout his career. His papers have received numerous awards, one of which was the 2019 Caspar Bowden Privacy Enhancing Technologies (PET) Award for Outstanding Research—a top honor in privacy technology research. As of January 12, 2022, Google Citations suggests that Prof. Schaub's work has been cited 6209 times, with an h-index of 39 and an i10-index of 88. Professor Schaub has successfully secured \$1.6 million in research funding. Funding has come from agencies such as the Defense Advanced Research Project Agency' s Young Faculty Award, the National Science Foundation (NSF), Spencer Foundation, AT&T, and Google. Professor Schaub's research has informed the public debate on privacy, influenced industry practice, and directly impacted public policy. His work has received popular media mention in the *New York Times, Wall Street Journal, Wired, Bloomberg Businessweek, Scientific American*, CNN, and BBC.

Recent and Significant Publications:

- Han Habib, Yixin Zou, Yaxing Yao, Alessandro Acquisti, Lorrie Faith Cranor, Joel Reidenberg, Norman Sadeh, Florian Schaub. "Toggles, Dollar Signs, and Triangles: How to (In) Effectively Convey Privacy Choices with Icons and Link Texts." ACM Conference on Human Factors in Computing Systems, Art. 63, May 2021, pp. 1-25.
- Vinayshekhar Bannihatti Kumar, Roger Iyengar, Namita Nisal, Yuanyuan Feng, Hana Habib, Peter Story, Sushain Cherivirala, Margaret Hagan, Lorrie Faith Cranor, Shomir Wilson, Florian Schaub, Norman Sadeh. "Finding a choice in a haystack: Automatic extraction of opt-out statements from privacy policy text," The Web Conference, April 2020, pp. 1943-1954.
- Justin Petelka, Yixin Zou, Florian Schuab. "Put Your Warning Where Your Link Is: Improving and Evaluating Email Phishing Warnings." ACM Conference on Human Factors in Computing Systems, May 2019, pp. 1-15.
- Tamy Guberek, Allison McDonald, Sylvia Simioni, Abraham H. Mhaidli, Kentaro Toyama, Florian Schaub. "Keeping a low profile? Technology, risk and privacy among undocumented immigrants," ACM CHI Conference on Human Factors in Computing Systems, April 2018, pp. 1-15. Best Paper Award.

Yixin Zou, Abraham H. Mhaidli, Austin McCall, Florian Schaub. "I've Got Nothing to Lose:" Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach.," Fourteenth Symposium on Usable Privacy and Security (SOUPS), August 2018, pp. 197-216. Distinguished Paper Award.

<u>Service</u>: Overall, Professor Schaub's service record demonstrates a solid national and international reputation. Externally, Professor Schaub has been on 15 program committees and editorial boards in top-tier venues like CHI, SOUPS, and Privacy Enhancing Technology Systems (PETS). In terms of leadership, Professor Schaub has served six years as a CHI associate chair and three years as an associate chair at SOUPS. Internally, Professor Schaub has served on the Undergraduate Committee, UMSI's DoIIT Lab Faculty Advisory Board, UMSI's grad student-run maker space; Website Faculty Advisory Board (2018-2020) and co-founded and co-organized the Privacy@Michigan Symposium. Professor Schaub and his lab frequently offer security and privacy training in the communities in which UM is located. In Fall 2020, Professor Schaub and his students gave a seven-week virtual "online self-defense" course for older adults offered through the Osher Lifelong Learning Institute. The team also twice provided digital security training sessions in Spanish for the local Latinx community.

External Reviewers:

Reviewer A: "..., Professor Schuab's research is excellent, well-recognized in the field as evidenced by many metrics including grants and awards, and points to a strong stream of research going-forward. These things make it ways to say his work is top-notch and promises to yield ever more needed, insightful, and useful work."

Reviewer B: "...., given [Professor Schuab's] outstanding publication record, his research impact, his service, and the overall strength of his reputation, he would almost certainly be granted tenure at my university. He has already built up an impressive body of work, and I expect his best work is still yet to come."

Reviewer C: "Not only does [Professor] Schaub shine in research quality and research impact, but in service as well. He has served on many program committees – huge responsibility and important task, and hence an immense service to the security and privacy research community."

Reviewer D: "In terms of publication quality and quantity, [Professor] Schaub is a prolific author who publishes in the top venues in his field. Most of his papers appear in high-quality refereed conference proceedings, which is appropriate for design-focused usable privacy and security research."

Reviewer E: "..., [Professor] Schaub has done impressive, impactful work in a number of areas related to usable security and privacy; his graduating students have had great successes as part of this work and I expect they will do well on the job market soon; and I am excited to see what results [Professor] Schaub and his group will produce next!"

Reviewer F: "[Professor] Schaub's publication record is quite impressive, with dozens of papers at top-ranked journals and conference proceedings, as well as several top paper awards at SOUPS [...] and CHI..."

Reviewer G: "...[Professor Schaub] is held in very high regard and is, in my view, the most successful scholar among [Professor Schaub's] contemporaries working in usable security and privacy."

Summary of Recommendation:

Professor Schaub's accomplishments in the areas of teaching, research, and service meet and exceed promotion and tenure requirements. Therefore, with the support of the Promotion and Tenure Committee of the School of Information and the Executive Committee in the College of Engineering, we enthusiastically recommend Florian Schaub for promotion to associate professor of information, with tenure, School of Information, and associate professor of electrical engineering and computer science, without tenure, College of Engineering.

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Thomas A. Finholt Dean, School of Information

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Alec D. Gallimore, Ph.D. Robert J. Vlasic Dean of Engineering College of Engineering

May 2022