

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
SCHOOL OF INFORMATION

Lionel P. Robert, associate professor of information, with tenure, School of Information, is recommended for promotion to professor of information, with tenure, School of Information.

Academic Degrees:

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| Ph.D. | 2006 | Indiana University, Bloomington, IN |
| M.B. | 2005 | Indiana University, Bloomington, IN |
| M.S. | 2000 | University of Louisiana, Lafayette, LA |
| M.S. | 1997 | Clemson University, Clemson, SC |
| B.S. | 1995 | University of Louisiana, Lafayette, LA |

Professional Record:

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| 2017 – present | Associate Professor, with tenure, School of Information, University of Michigan |
| 2011 – 2017 | Assistant Professor, School of Information, University of Michigan |
| 2007 – 2011 | Assistant Professor, Walton College of Business, University of Arkansas |
| 2006 – 2007 | Visiting Assistant Professor, Walton College of Business, University of Arkansas |

Summary of Evaluation:

Teaching: Professor Robert is particularly interested in students critically learning course material. To this end, his teaching philosophy emphasizes four principles: preparation, participation, reflection and assessment. These principles promote mastery and retention of course material. Professor Robert utilizes various modes of instruction such as videos, guest speakers, case studies, and journal articles. In order to encourage students to avoid procrastination, he frequently uses various assessments throughout the semester such as pop quizzes, calling on students throughout class discussions, presentations and short essay responses. He also pre-assigns questions to students prior to lecture to have better discussions and encourages students to rely on their lived experiences to bring their own perspectives to reflect on the course material. Overall, he aims to make the classroom an active learning environment in which students take responsibility for their learning.

In terms of curriculum development, Professor Robert significantly redesigned SI 310: Information Environments and Work and SI 530: Principles in Management. Most of the improvements involved making active learning activities such as case studies and exposure to current events analyses. He also created a new doctoral course (SI 710) on technology mediated teamwork which he taught in winter 2018.

Professor Robert is an advisor or co-advisor to ten doctoral students in information and robotics. He is very involved in mentoring through MAVRIC (Michigan Autonomous Vehicle Research Intergroup Collaboration); this involvement includes mentoring doctoral, masters and undergraduate students. Professor Robert often co-authors journal articles and conference

proceedings with mentees. Doctoral students mentored by Professor Robert are very productive, publishing journal articles and conference papers during their doctoral studies. Professor Robert has also been involved in mentoring graduate students and junior faculty through various computing and business consortia (Academy of Management Organizational Communication and Information Systems (OCIS), Consortium for the Science of Sociotechnical systems, Ph.D. Project Information System Doctoral Student Association, and the Work in the Age of Intelligent Machines Research Coordination Network). As a DEI committee chair, he initiated a program that facilitated student travel to conferences, with subsequent debriefings to the benefit of the entire student community.

Professor Robert has taught four different Masters of Science in information (MSI) courses (SI 530, SI 501: Contextual Inquiry and Consulting Foundations, SI 588: Fundamentals of Human Behavior, SI 627: Managing and Leading the Information Technology Organization) and SI 530), one doctoral course (SI 710) in his area of expertise, and one Bachelor of Science in information (BSI) course (SI 310). Most of his teaching has been in required courses which typically have lower ratings on teaching evaluations. His course evaluations in these courses show a positive improvement trend. For example, he taught SI 530 regularly from 2014 to 2021. In the most recent offerings in 2019 and 2021, averages for the question regarding whether the course advanced students' understanding of the subject matter (Q1631) were 4.21 and 4.63, respectively. He taught an undergraduate required course for BSI, SI 310: Information Environments and Work twice. The average Q1632 for the four sections was 3.8 and shows an improvement from 3.5 in the first year to 4.3 in the second year.

Research: Professor Robert's greatest contribution is in pioneering research on mechanisms which underlie and promote effective human collaboration with technologically-based agents, namely autonomous vehicles (AVs), robots, and artificial intelligence (AI). His earlier work focused on human teamwork, examining how technology changes communication, cooperation, and coordination, and contributed to the fields of Information Systems and Computer-Supported Cooperative Work (CSCW). After tenure and promotion to associate professor, Professor Robert expanded his focus to include contributions to the field of artificial intelligence (AI) and its applications. Respect within multiple scholarly communities can also be seen in his recent election to be an IEEE Senior Member, which is given to only 8% of the IEEE membership based on "documented achievements of significance," and his receipt of a Distinguished Member Designation at the Association for Information Systems.

Professor Robert uses experimental methods to examine how collaborating with technology changes communication, cooperation and coordination and how to better design technology to support collaboration. His work on human-human communication, cooperation and collaboration examines issues of diversity in virtual teams. In his work about human-AI collaboration, he has shown that factors such as robot personality and employee's abilities to influence AI behavior promote effective communication between humans and semi-autonomous agents. He also identified factors such as trust, emotional attachment and psychological identification that can be developed and leveraged to support human collaboration with autonomous and semi-autonomous agents. In terms of coordination, he has surfaced mechanisms underlying trust between people both within (drivers, passengers) and outside (pedestrians) of autonomous vehicles, an area with significant implications for human safety.

Professor Robert has been a prolific scholar since he was promoted to associate professor. In this time, Professor Robert has published a book, 28 journal papers, eleven conference papers, and two book chapters. This work has also received a number of awards. His productivity can also be seen in the slope of his citation rate, with 72% of his citations since 2016 and most within the last few years. It should also be noted that Professor Robert is active in public engagement, including writing public-facing publications and talking to the press including the *New York Times*, Michigan Radio, and CNET. In addition to scholarly publications, Professor Robert has garnered \$1.8 Million in funding since being promoted to associate professor, sufficient to fund a large research group of ten students.

Recent and Significant Publications:

Claretha Hughes, Lionel P. Robert, Kristin Frady, Adam Arroyos. Managing Technology and Middle and Low Skilled Employees: Advances for Economic Regeneration. Bingley, UK: Emerald Publishing Limited, 2019.

Luke Petersen, Lionel P. Robert, X. Jessie Yang, Dawn Tilbury. "Situational Awareness, Driver's Trust in Automated Driving Systems and Secondary Task Performance," *SAE International Journal of Connected and Automated Vehicles*, 2(2), 2019, Best Paper Award Winner.

Lionel P. Robert (2016). "Monitoring and Trust in Virtual Teams," *19th ACM Conference on Computer Supported Cooperative Work and Social Computing*, 2016, pg. 245-259, Best Paper Award, Honorable Mention.

Sangseok You, Lionel P. Robert. "Human-robot similarity and willingness to work with a robotic co-worker," *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction*, 2018, pg. 251-260.

Service: Professor Robert has performed extensive service in his research communities. He is currently serving as an associate editor or on the editorial board of six journals, and has been the co-editor of three special issues since being promoted to associate professor. He also has been the associate papers chair or track chair at numerous Association for Computing Machinery (ACM) conferences, including ACM International Conference on Supporting Group Work (GROUP), ACM Conference on Computer Supported Cooperative Work (CSCW), ACM Conference on Human Factors in Computing Systems (CHI), and the ACM/IEEE International Conference on Human-Robot Interaction (HRI).

Within UMSI, in addition to the normal committee assignments, he has led several faculty search committees and chaired the Diversity, Equity and Inclusion (DEI) committee. Professor Robert is to be applauded for his considerable formal and informal mentorship of junior faculty. At the university, he chairs the MCity Working Group: Beyond Technology, which examines non-technical issues regarding autonomous vehicles (AVs). He has also served as a member of the University Institutional Autonomous Systems Committee, the Robotics Graduate Committee, and the Military Officer Education Program committee. He is also a mentor for the Diversity Faculty Network.

External Reviewers:

Reviewer A: "..., [Professor] Robert has a solid record of research and service that has begun to influence the direction of others in multiple disciplines. Within the communities of virtual team

and human robot interaction researchers across Information Systems and Computer Supported Collaborative Work, he has a reputation as a significant contributor and an intellectual leader.”

Reviewer B: “Professor Robert reports a good range of service contributions, such as associate editorships for some of the leading journals in the field and general and program chair positions for leading conferences. While these positions are service, they indicate that his contributions and his judgement are valued by the community, a reputation that is built on research. The range of positions is consistent with someone who is and is seen as a leader in the field.”

Reviewer C: “..., [Professor] Robert is an extremely sophisticated researcher of the role of technology in virtual teamwork. He uses clever and rigorous methods to investigate central topics in a number of different research areas, including trust development, team communication, social capital, and team size and diversity.”

Reviewer D: “..., I am impressed with the work produced by [Professor] Robert and the position he has achieved as a leader in the field.”

Reviewer E: “His work is very relevant to our current work settings created by the pandemic, especially the relationship between working from home and team diversity, where his work has shown how different types of diversity can affect remote teamwork.”

Summary of Recommendation:

Professor Robert’s teaching, research, and service are well above the level expected of senior faculty member. With the overwhelming support of the promotion and tenure committee of the School of Information, I enthusiastically recommend Lionel P. Robert for promotion to professor of information, with tenure, School of Information.



Thomas A. Finholt
Dean, School of Information

May 2022