

PROMOTION RECOMMENDATION
The University of Michigan
School of Information

Carl Lagoze, associate professor of information, without tenure, School of Information, is recommended for the granting of tenure to be held with his title of associate professor of information, School of Information.

Academic Degrees:

Ph.D.	2010	Cornell University, Ithaca, NY
M.S.E.	1987	Wang Institute of Graduate Studies, Software Engineering
B.A.	1975	Cornell University, Ithaca, NY

Professional Record:

2012 – present	Associate Professor, School of Information, University of Michigan
2011 – 2012	Associate Professor, and Director, Master of Professional Studies Program, Cornell University Information Science
2009 – 2011	Research Fellow, Graduate School of Library and Information Science, University of Illinois
2002 – 2010	Senior Research Associate, Cornell University Information Science
1998 – 2002	Research Associate, Digital Library Scientist, Cornell University, University Library and Department of Computer Science

Summary of Evaluation:

Teaching: Professor Lagoze is an experienced instructor who has taught technical and non-technical courses. At Cornell, he taught a variety of courses, such as Intermediate Design and Programming for the Web, Learning from Web Data, and Introduction to Design and Programming for the Web. At Michigan, Professor Lagoze has taught Digital Libraries and Archives, Data Curation, as well as two new courses he designed, Semantic-based Knowledge Organization and Discovery and, a doctoral seminar, Informetric Study of Scientific Collaboration and Knowledge Transfer. In all these courses, Professor Lagoze offers students theoretical underpinning and real-world scenarios.

Professor Lagoze also has a strong record of mentoring doctoral students and post-doctoral fellows. At Cornell, Professor Lagoze chaired one doctoral committee and co-chaired two other Ph.D. committees. Since coming to Michigan, he has served on five dissertation committees (four at Michigan and one at Cornell) and is currently the primary advisor for two doctoral students at the University of Michigan, School of Information (UMSI). He still mentors a post-doctoral fellow at UMSI and mentored another post-doctoral fellow from the Université de Technologie de Compiègne, France, who is now an assistant professor at the London School of Economics.

Research: Professor Lagoze's research centers on digital information and the infrastructures that maintain, organize, and disseminate this information. Professor Lagoze's greatest impact has been the development of the critical technologies behind digital libraries, such as the Open Archive Initiative-Protocol for Metadata Harvesting (OAI-PMH), and his application of machine learning techniques to improve the quality of crowd-based data collection, such as in citizen science projects.

Professor Lagoze is an accomplished scholar, visionary and leader in the field of digital libraries and scholarly communication. His post-Ph.D. scholarship is informed by his technical expertise, but employs socio-technical theory to explore information dissemination using a variety of quantitative and qualitative methods.

Our ability to search across digital library platforms and to exchange data between platforms is a result of Professor Lagoze's work as the principal developer of OAI-PMH. He also developed the Open Archive Initiative-Object Reuse and Exchange (OAI-ORE), a semantic model for exchanging complex objects between producers, repositories, and consumers and was a primary architect of the Flexible Extensible Digital Object Repository Architecture (Fedora), an open source set of tools to manage digital content) which has over 350 installations worldwide. His research as a developer also influenced other major digital library initiatives, such as the Dublin Core Metadata Framework and the arXiv platform for electronic preprints in physics.

Professor Lagoze's post-Ph.D. work is equally distinguished. He has investigated scholarly communication patterns in chemistry; the barriers to success in multi-disciplinary data science projects and what socio-technical support might be used to overcome those barriers; and how machine-learning can be used to assess the quality of crowdsourced data in the eBird project. In the eBird project, Professor Lagoze designed a post-hoc approach, which does not directly interfere with the ongoing crowdsourcing processes but analyzes and curates contributors' data after they are collected. This approach does not compromise the process of collecting high-volume contributions from variably-skilled volunteers. It also integrates an understanding of human behavior and machine learning methods, which enables Professor Lagoze to explore the synergies between human and mechanical computation. The impact of the results from the e-Bird project is not limited to this or other citizen science projects, but is generalizable to the broader problem of data quality from partially or uncontrolled sources, both human and automated, in many other contexts.

Professor Lagoze has published more than 75 papers in refereed journals and conference proceedings (20 since joining UMSI two years ago), five book chapters, and 15 technical reports. He has also presented 50 invited talks in a dozen countries (seven since joining UMSI two years ago). He has served as the PI/co-PI or senior personnel on 20 grants and contracts that designed and built the foundational technologies, protocols and standards for digital library infrastructure and open access publishing funded by the National Science Foundation, the Andrew W. Mellon Foundation, and the Digital Library Federation. Recently, he received a large grant from the Alfred P. Sloan and the Gordon and Betty Moore Foundations to study the organizational and technical barriers to the use of 'big data.'

Recent and Significant Publications:

C. Lagoze, P. Edwards, C. Sandvig, and J. C. Plantin, "Should I Stay or Should I Go? Alternative Infrastructures in Scholarly Publishing," *International Journal of Communication*, Vol. 9, 2015, pg. 1052-1071.

C. Lagoze, A. Wiggins, B. L. Sullivan, and S. Kelling, "eBird: Curating Citizen Science Data for Use by Diverse Communities," *International Journal of Data Curation*, Vol. 9, No. 1, 2014, pg. 71-82.

C. Lagoze, L. Vilhuber, J. Williams, B. Perry, and W. C. Block, "CED2AR: The Comprehensive Extensible Data Documentation and Access Repository," in *Digital Libraries*, September 2014, pg. 267-276.

C. Lagoze, "Big Data, Data Integrity, and the Fracturing of the Control Zone," *Big Data & Society*, Vol. 1, No. 2, July – December 2014, pg. 1-11.

T. Velden, K. Yu, and C. Lagoze, "Searching for Temporal Patterns in the Time Series of Publications of Authors in a Research Specialty," *Proceedings of the American Society for Information Science and Technology*, Vol. 51, No. 1, 2014, pg. 1-9.

Service: Professor Lagoze has made important service contributions to the School of Information, the university, and the profession. Within UMSI, he has served on the Doctoral Committee and headed a search sub-committee. At the University of Michigan (UM), he serves on the governing Council of the Inter-University Consortium for Political and Social Research (ICPSR). He has also actively engaged with and contributed to two other significant UM initiatives: the Michigan Initiative on Data Science (MIDAS), where he served on the Steering Committee prior to its formal launch, and the Editorial Board for the Learning Health Systems (LHS) Initiative in the Medical School. Appointments at the level of ICPSR Council, the MIDAS Steering Committee, and the LHS Initiative provide evidence that three distinct communities hold Professor Lagoze in high regard. Externally, since coming to UM, Professor Lagoze has been a meta-reviewer for the International Conference on Theory and Practice of Digital Libraries, a program committee member for the International Data Curation Conference and the International Provenance and Annotation Workshop, and Research Track Chair for OpenSym 2015.

External Reviewers:

Reviewer A: "[Professor Lagoze's] record of publishing, grants, and teaching make him highly competitive for tenure at [my institution] or any major research university in our field."

Reviewer B: "His service record is remarkably good. ... [Professor Lagoze] has a clear research agenda which should render him productive for the remainder of his career."

Reviewer C: "[Professor Lagoze] is thoughtful, insightful and experienced – his depth of knowledge tempered with outstanding taste in topics means he asks the right questions not the obvious ones."

Reviewer D: “[Professor Lagoze] is noticeably more productive and influential than most of our full professors, let alone the associates. He would undoubtedly get tenure here and I’d trade any of our associate professors for him in a second.”

Reviewer E: “...it’s very clear to me that Professor Lagoze’s contributions and achievements to date substantially exceed what I would expect at the Associate Professor with Tenure level. I support this appointment without reservation.”

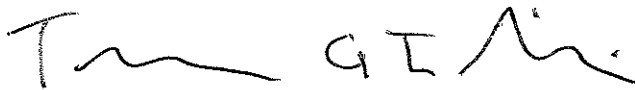
Reviewer F: “[Professor] Lagoze is also an active member of the digital library community who regularly serves on program committees and reviews research papers. His experience in building repositories and tools make him highly sought reviewer and leader. His stature in the community exceeds what we would normally expect for an untenured professor.”

Reviewer G: “...I feel that [Professor Lagoze’s] accomplishments, stature and future potential as an intellectual and technical leader in the field are consistent with the rank of Associate Professor with tenure and that he meets the requirements for appointment at that level here [in my institution]... .”

Reviewer H: “I will be following [Professor Lagoze’s] future work closely; he is poised to become the major voice in infrastructure, data integrity, and big data in the future.”

Summary of Recommendation

Professor Lagoze has a strong reputation in teaching, research, and service. With the overwhelming support of the promotion and tenure committee of the School of Information, I enthusiastically recommend Carl Lagoze for the granting of tenure to be held with his title of associate professor of information, School of Information.

A handwritten signature in black ink, appearing to read 'T. A. Finholt', written over a horizontal line.

Thomas A. Finholt
Interim Dean, School of Information

May 2016