

Graduate Seminar



Reproducibility in Computationally-enabled Research

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Thursday, April 6th

4:30 pm Scaife Hall 125

Abstract:

Imagine querying the scholarly record for all image compression algorithms that have been applied to the famous “Barbara” image in the last five years (with citations), or all articles published using the well-known Acute Lymphoblastic Leukemia dataset from Golub et al. (1999). Queries such as these are natural questions for researchers, and are as yet effectively impossible. The scholarly community is taking steps to link data, code, workflows and other artifacts that support and enable the verification of the claims made in the scholarly record. In this talk I will frame a motivation for this effort — resolving reproducibility in computational science — and time permitting discuss recent steps to enable reproducibility including a recently funded NSF project, “Merging Science and Cyberinfrastructure Pathways: The Whole Tale”.

Bio:

Victoria is an associate professor in the School of Information Sciences at the University of Illinois at Urbana-Champaign, with affiliate appointments in the School of Law, the Department of Computer Science, the Department of Statistics, the Coordinated Science Laboratory, and the National Center for SuperComputing Applications. She completed both her PhD in statistics and her law degree at Stanford University.

Her research centers on the multifaceted problem of enabling reproducibility in computational science. This includes studying adequacy and robustness in replicated results, designing and implementing validation systems, developing standards of openness for data and code sharing, and resolving legal and policy barriers to disseminating reproducible research.

She is the developer of the “Reproducible Research Standard,” a suite of open licensing recommendations for the dissemination of computational results, and winner of the Kaltura Prize for Access to Knowledge Writing.

Victoria was awarded the NSF EAGER grant “Policy Design for Reproducibility and Data Sharing in Computational Science.” She is a co-PI on the NSF grant #1541450: CC*DNI DIBBS: Merging Science and Cyberinfrastructure Pathways: The Whole Tale.

She is also the creator and curator of SparseLab, a collaborative platform for reproducible computational research in underdetermined systems.

She is a member of the Advisory Group on Reproducibility to the SC Conference, ACM, and IEEE. She is an Associate Editor for the Annals of Applied Statistics. She is a member of the Social Science Research Council (SSRC) Digital Culture Program Committee.

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SEMINAR NOTES: (REFRESHMENTS SERVED AT 4:00 PM)