Big Data, Little Data, or No Data?
Knowledge Infrastructures for the Earth Sciences

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While some researchers in the earth sciences collect “big data” that requires compute- and data-intensive research methods, “little data” remains the norm in those many areas where evidence is scarce and labor-intensive to acquire. The earth sciences span a broad array of physical and life science disciplines, adding yet more heterogeneity to the research methods and types of data acquired. Despite these challenges, the earth sciences are likely to benefit from a coordinated knowledge infrastructure that enables this diverse community to share data, tools, software, methods, and expertise. Much of the scholarship on data practices attempts to understand the sociotechnical barriers to sharing and provide incentives to overcome these barriers. Yet data sharing and reuse are common practice in only a few fields. Data practices are local, varying from field to field, individual to individual, and country to country. Until the larger questions of knowledge infrastructures and sustainability are addressed by research communities, “no data” may be the norm for many fields. This talk will explore the stakes and stakeholders in research data, drawing on current research in the earth sciences and material from the presenter’s recent book, Big Data, Little Data, No Data: Scholarship in the Networked World (MIT Press, 2015).

Christine L. Borgman, Distinguished Professor and Presidential Chair in Information Studies at UCLA, is the author of more than 250 publications in information studies, computer science, and communication. These include three books from MIT Press. The most recent, Big Data, Little Data, No Data: Scholarship in the Networked World (2015), winner of the 2015 American Publishers Award for Professional and Scholarly Excellence (PROSE Award) in Computing and Information Sciences. She is a Fellow of the American Association for the Advancement of Science and of the Association for Computing Machinery. At UCLA, she directs the Center for Knowledge Infrastructures with funding from the Alfred P. Sloan Foundation and other sources. Prof. Borgman earned a PhD in Communication from Stanford University, an MLS in information science from the University of Pittsburgh, and a B.A. in mathematics from Michigan State University.