

1116-00-1884 **Timothy W. Cole*** (t-cole3@illinois.edu), Mathematics Library, 216 Altgeld Hall, 1409 W. Green Street, Urbana, IL 61801. *Linked Data, Annotations and the Future of Mathematics Libraries.*

This talk anticipates advances to come for mathematics libraries. The information resources libraries collate, link, acquire, license and curate in support of mathematics research and pedagogy continue to grow and diversify, encompassing not only traditional monographs, dissertations and peer-reviewed articles, but also self-published arXiv.org research papers, virtual discussions captured by MathOverflow.net, lecture and meeting session online videos, Websites of functions, sequences and other mathematical objects. At present, these information resources remain poorly integrated, hobbling discovery and use. Traditional library methods for name and subject authority control are evolving, using emerging standards and Linked Data best practices to enhance connectedness. But mathematics literature deals also with objects not well represented in bibliographic metadata – e.g., theorems, lemmas, functions, sequences. Connections between resources that discuss the same or related objects often remain hidden. Automated recognition systems, though limited by the imprecision of natural language, variations in mathematical notation and changes in terminology over time, can help but fail to reveal all linkages. Domain expert involvement, e.g., using annotation tools, is needed as well. (Received September 21, 2015)