

## Metadata and Provenance: Fins in the Sea of Data



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### Speaker Bio

Beth Plale is Director of the Data To Insight Center which is associated with Pervasive Technology Institute. She is an experimental computer scientist whose research interests are in data management, data-driven computing, and the preservation of scientific and scholarly data sets. Plale frequently engages in research problems involving interdisciplinary collaborations with atmospheric and environmental scientists and in digital humanities. She is a Professor in the School of Informatics and Computing at Indiana University. She is an ACM Senior Member, IEEE Member, and recipient of the distinguished DOE Early Career Award, and serves on the editorial board of the Journal of Concurrency and Computation Practice and Experience.

### Presentation Abstract

The data deluge and discussions of its implications is no longer just the purview of obscure technology conferences. So visible and immediate has the topic become, that it was a topic at the 2012 Davos World Economic Forum. The data deluge of interest to computer scientists and informatics researchers is the one that impacts science and scholarly research. If realized properly, this deluge will be a catalyst for new scientific discovery that fuels advances in grand challenge questions such as climate and social-ecological interactions. Antecedent to these discoveries, however, is the need for deeper understanding of the issues of access and use of the metadata and provenance about scientific data. On one hand, good metadata and provenance turn data from being write-once, read-none to write-many, read-many; on the other, bad metadata and provenance just contribute in a non-trivial way to the data deluge.

In this talk I discuss several related research efforts on tools, evaluations, and experiences gained in provenance and metadata use and access that facilitate new forms of access and use of scientific and scholarly data.