

# Abstract

## Title: Registering, Discovering, and Using Distributed Services in Academia

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This CAMP will explore the issues in deploying service oriented approaches for supporting distributed academic collaborations, both for web services and other approaches.

The deployment of service-oriented architectures in support of scholarship in higher education has a number of distinctive challenges. These include:

- the distributed nature of IT across major campuses, and the need to integrate services from many providers and academic and administrative processes
- the strong inter-institutional nature of many scholarly activities, with the requisite need to both provision and integrate for a federated environment
- the particular nature of major international team science projects, with their own service architectures that increasingly want to use campus services.

Taken together, such issues suggest loosely coupled approaches, combined with attention to the shared mechanisms such as messaging, security models, schema and data models, governance and management, and others.

Topics such as shared academic and administrative use, external services, federated identity management, and support of researcher needs affect how we in higher education provision services. Workflow, for example, needs integration with scientific, scholarly, instructional and administrative processes; such breadth of needs requires particular attention when services are spread across the enterprise and to inter-realm providers. The objective of this Advanced CAMP is to discover the leading functional and technical requirements for packaging, registering, and discovering scholarly services and the means of integrating them into new scholarly projects.

- How should digital tools and data for scholarship be made available?
- What metadata should be recorded about them?
- How can that be globally aggregated and searched?
- What operational and security environments should both protect them and enable their appropriate use?
- How should their semantic interrelationships be codified and maintained?
- When and how services should be refactored?
- What are the most appropriate approaches for messaging in the distributed environment?
- What are effective mechanisms for the governance and management of highly distributed services?
- How to integrate campus and external services, including virtual organization infrastructures?
- How do proprietary solutions address these issues and what problems do they encounter in the academic setting?
- How do open-source enterprise service offerings such as Mule address such issues?

We'll bring together experts in allied technologies, campus infrastructure leaders, technical leaders of projects that have begun to break similar ground, and actual scholars to produce an early harvest of requirements and worthy next steps to advance the state of infrastructure and standards to support scholarship.