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KO, KR, KM: Integrating the Organization of Information, Resources and Knowledge

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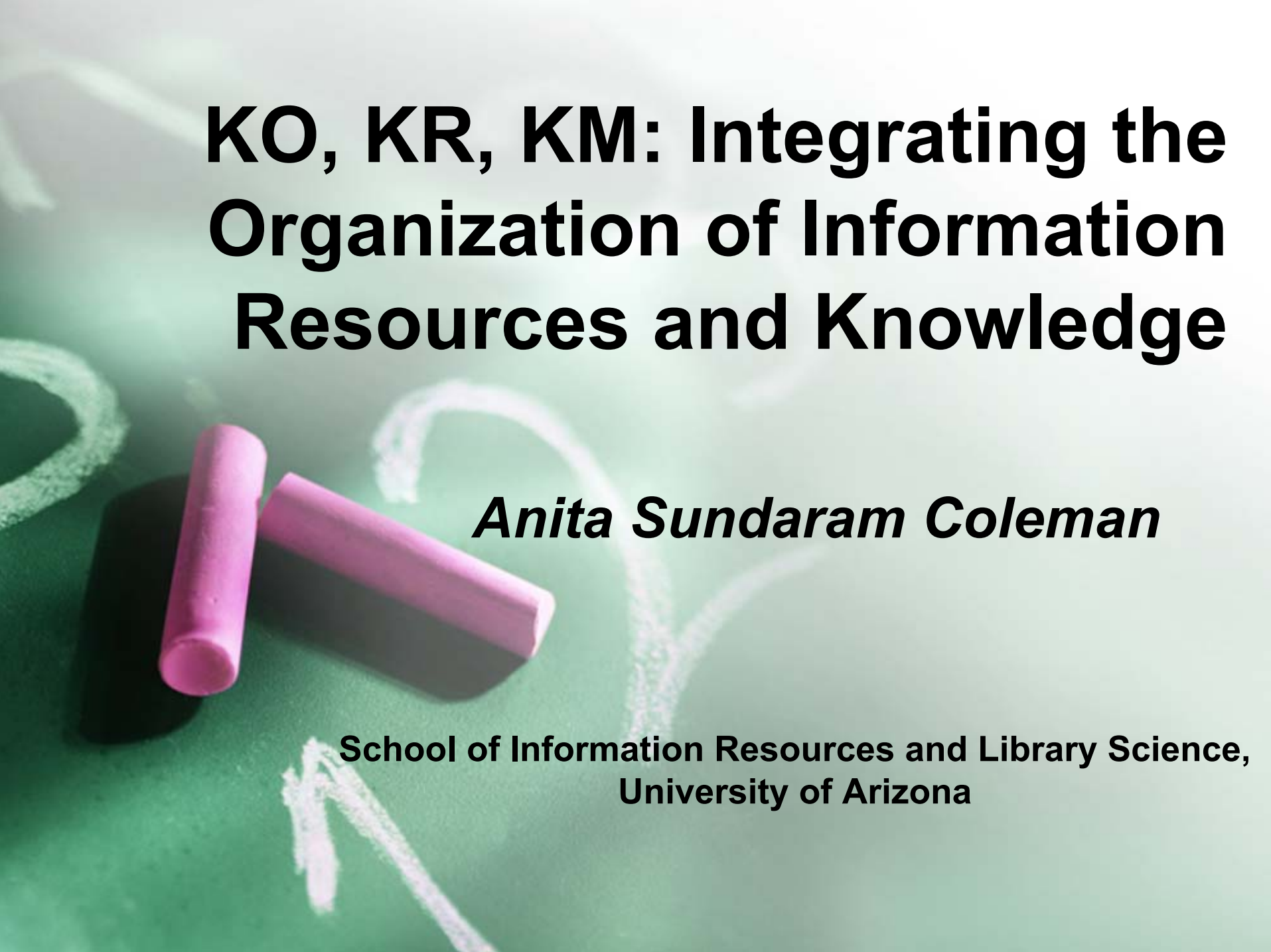

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Knowledge Organization

- Includes the organization of information resources, such as books, catalogs, journal article, videos, audio cassettes, digital documents
- Better term is information organization or information resources organization and management
- Takes place in varying information environments – libraries, archives, museums, records management, etc.

Knowledge Representation

- How can knowledge be represented?
- Different disciplines approach this in many ways:
  - AI – case based reasoning
  - Philosophy – language of logic
  - Mathematics – boolean algebra
  - Biology – connectionism
  - LIS – metadata, classification (includes categorizations and controlled vocabularies)
- Ontologies

Knowledge Management

- Is it just another buzzword? Or is it a justifiable new discipline? ☺
- Assumptions:
  - Continuum of data-information-knowledge–wisdom (experience, process)
- A conglomeration of new methods, practices and technologies for integrating information and knowledge in organizations

Models Classification

- The Models Classification Project is exploring the uses of faceted classification for improving access and retrieval of information about scientific models
- Ontology and metadata based knowledge management

What are scientific models?

Scientific models are critical teaching tools that can also serve as interactive learning spaces in digital libraries. Preliminary research indicates that they may improve the scientific reasoning abilities of students. Yet, models are difficult to locate, describe, or use; traditional libraries do not provide access to them and descriptions of models are insufficient (too little) or overwhelming (too much).

Models Collection

- Some Components
  - A Models Metadata Framework
    - Dublin Core extended
  - A Models Faceted Classification
    - Science facets
    - Education context facets
    - Form/Format (presentation) facets
    - Interaction facets
  - Database
  - Index
  - Communities & Functionalities (similar to portals)

Conclusion

- KM an eclectic discipline also includes
  - KA (Knowledge Acquisition)
  - KDD (Knowledge Data Discovery)
  - KS (Knowledge Sharing)
- More broadly related are
  - IE (Information Extraction)
  - IR (Information Retrieval)
  - IV (Information Visualization)
- Could go on…

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The End

- Q&A
- Thank you!