

# Distributed and Cloud Computing Specialization

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Introduction to the MCS Specializations  
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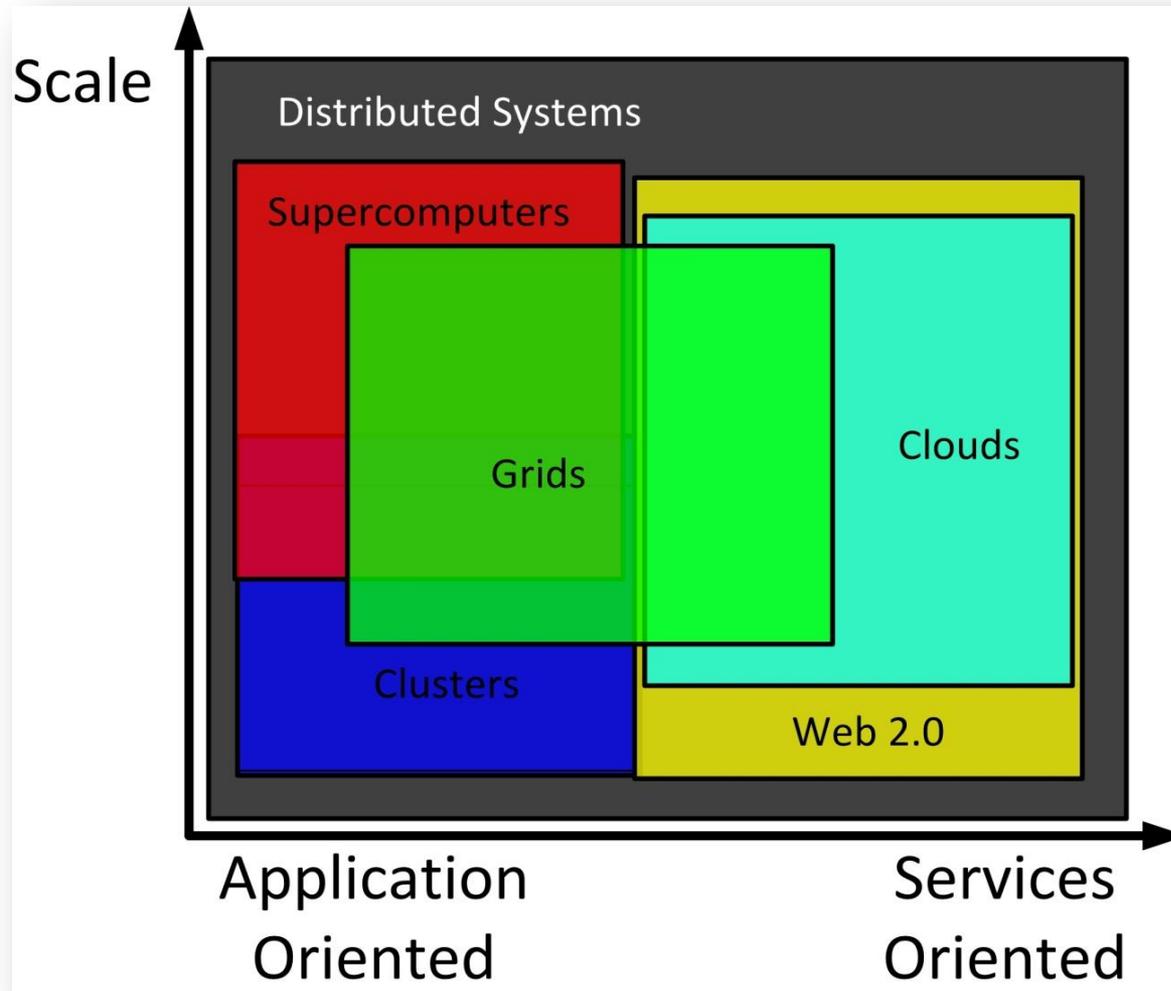
# Distributed Systems

- What is a distributed system?

**“A collection of independent computers that appears to its users as a single coherent system”**

**-A. Tanenbaum**

# Distributed Systems: Clusters, Grids, Clouds, and Supercomputers



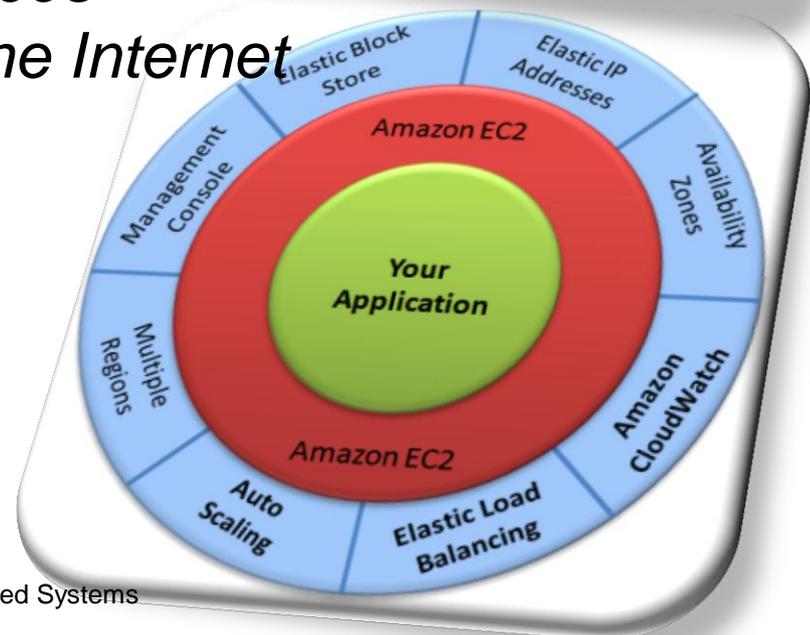
An Overview of Distributed Systems

# Cloud Computing

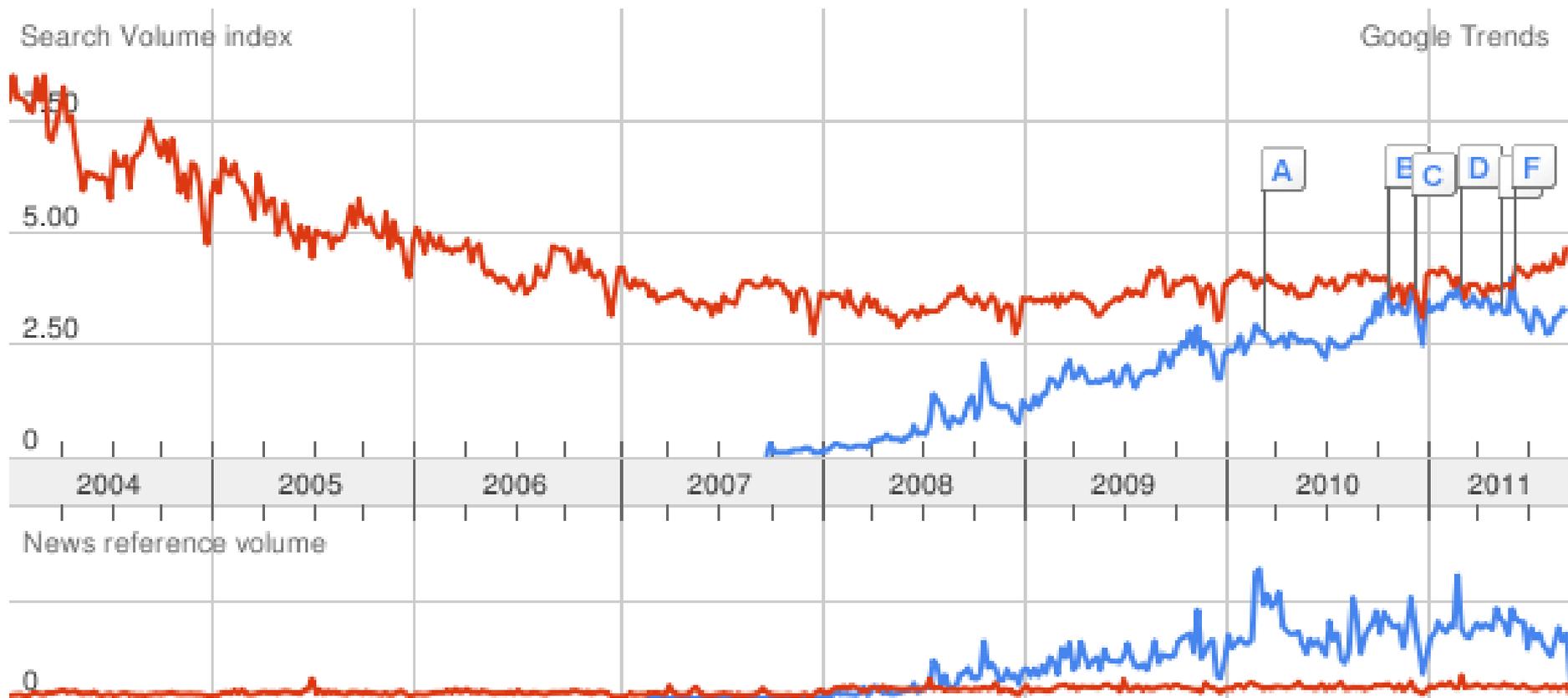
- *A large-scale distributed computing paradigm driven by:*
  1. *economies of scale*
  2. *virtualization*
  3. *dynamically-scalable resources*
  4. *delivered on demand over the Internet*



**Clouds ~ hosting**



# What is exciting about this specialization?



# Coursework

- CS 546 Parallel and Distributed Processing
- CS 550 Advanced Operating Systems
- CS 552 Distributed Real-Time Systems
- CS 553 Cloud Computing
- CS 570 Advanced Computer Architecture
- CS 595 Data-Intensive Distributed Computing

# Faculty

- Xian-He Sun



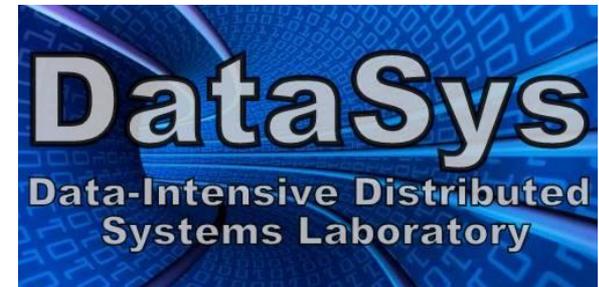
- Zhiling Lan



- Shangping Ren



- Ioan Raicu



# Employment Opportunities

- Google
- Yahoo
- Microsoft
- Amazon
- IBM
- Apple
- VMWare
- Netflix
- Cray
- Intel
- NVIDIA
- Facebook
- LinkedIn
- Salesforce.com
- Rackspace
- Red Hat
- Cleversafe
- UnivaUD
- Greenplum
- AsterData
- Proprietary Trading Companies
- Department of Energy Laboratories
- NASA
- Academic supercomputer centers
- Many more...

# More Information

- More information:
  - <http://www.cs.iit.edu/~iraicu/>
- Contact:
  - [iraicu@cs.iit.edu](mailto:iraicu@cs.iit.edu)
- Questions?