PetaShare
All Hands Meeting

March 3, 2008
Overview

- LBRN Overview
- LBRN/PetaShare Resources
- LBRN Research
What is LBRN?

- NIH Funded
- National Center for Research Resources
- IDeA Program
• **Goal**
  Link Institutions across Louisiana

• **Participating Institutions**
  LSU, LSU HSC, SUBR, LSU-S, LA Tech, and ULM,

• **Outreach Partners**
  All PUI institutions in the state
Program Activities

- Infrastructure Enhancements
- Research Programs/Collaborations
- Workshops
Infrastructure Enhancements

- Laboratory Enhancements
- Access Grid Nodes
- Networking
- Storage
LBRN Storage

43.2 Terabytes
LBRN Research

- Sumeet Dua, La Tech
- Marjan Trutschl, LSU-S
- Urska Cveck, LSU-S
- Sanjay Kodiyalam, LSU
Data Mining based dimensionality reduction for bioinformatics discovery

Mentee: Sumeet Dua, Upchurch Associate Professor
Louisiana Tech University

Mentor: Hilary W. Thompson, Ph.D.
Louisiana State University Health Sciences Center
**Visual and Analytical Tools for Cluster Analysis**

- **Project Investigator:** Urska Cvek, Sc.D., MBA  
  » Department of Computer Science, LSUS
- **Mentors:** John Clifford, Ph.D.  
  » Department of Biochemistry and Molecular Biology, LSUHSC-S
- **Gabrielle Allen, Ph.D.**  
  » Center for Computation and Technology, LSU
Neural Network Enhanced Visualization of High-Dimensional Data

Project Investigator: Marjan Trutschl, Sc.D.
Department of Computer Science, LSUS

Mentor: Robert Rhoads, Ph.D.
Department of Biochemistry and Molecular Biology, LSUHSC-S
Large-scale Finite Element Modeling of the Optic Nerve Head

Sanjay Kodiyalam
Biological Sciences, LSU

Mentors:
J. Crawford Downs and Claude F. Burgoyne
Devers Eye Institute, Portland, OR

Rich T. Hart
Biomedical Engineering, Ohio State University

Donald P. Gaver
Biomedical Engineering, Tulane University
Future Data Types/Issues

Medical Data, HIPAA Compliance
Systems Biology, combining datasets