“Introduction to SCIRun” Class

Held at Northeastern University
August 21, 2006

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NIH-NCRR Center for Integrative Biomedical Computing (CIBC)

Scientific Computing and Imaging Institute (SCI)

University of Utah

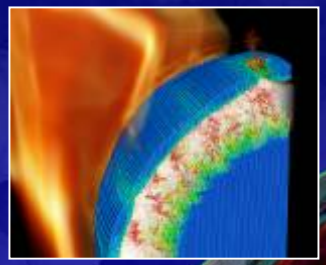
Research at SCI

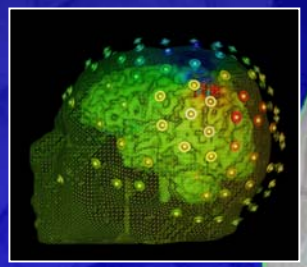
COMPUTING

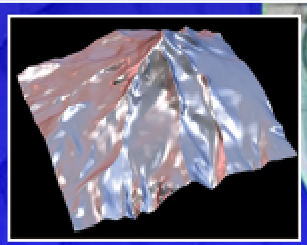
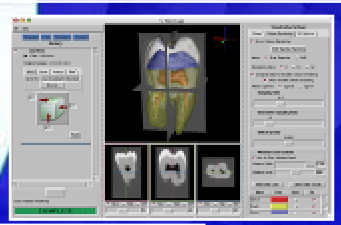
VISUALIZATION

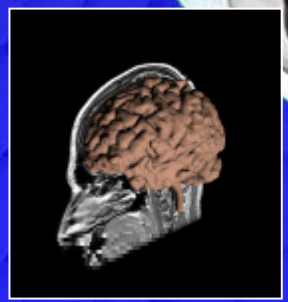
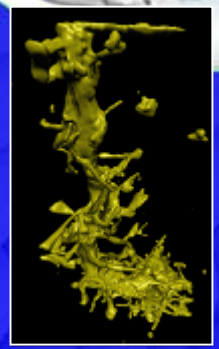
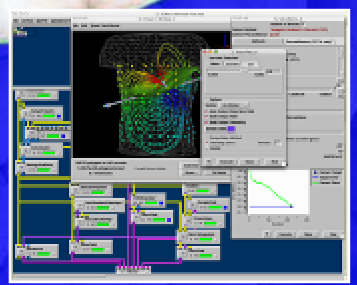
IMAGING

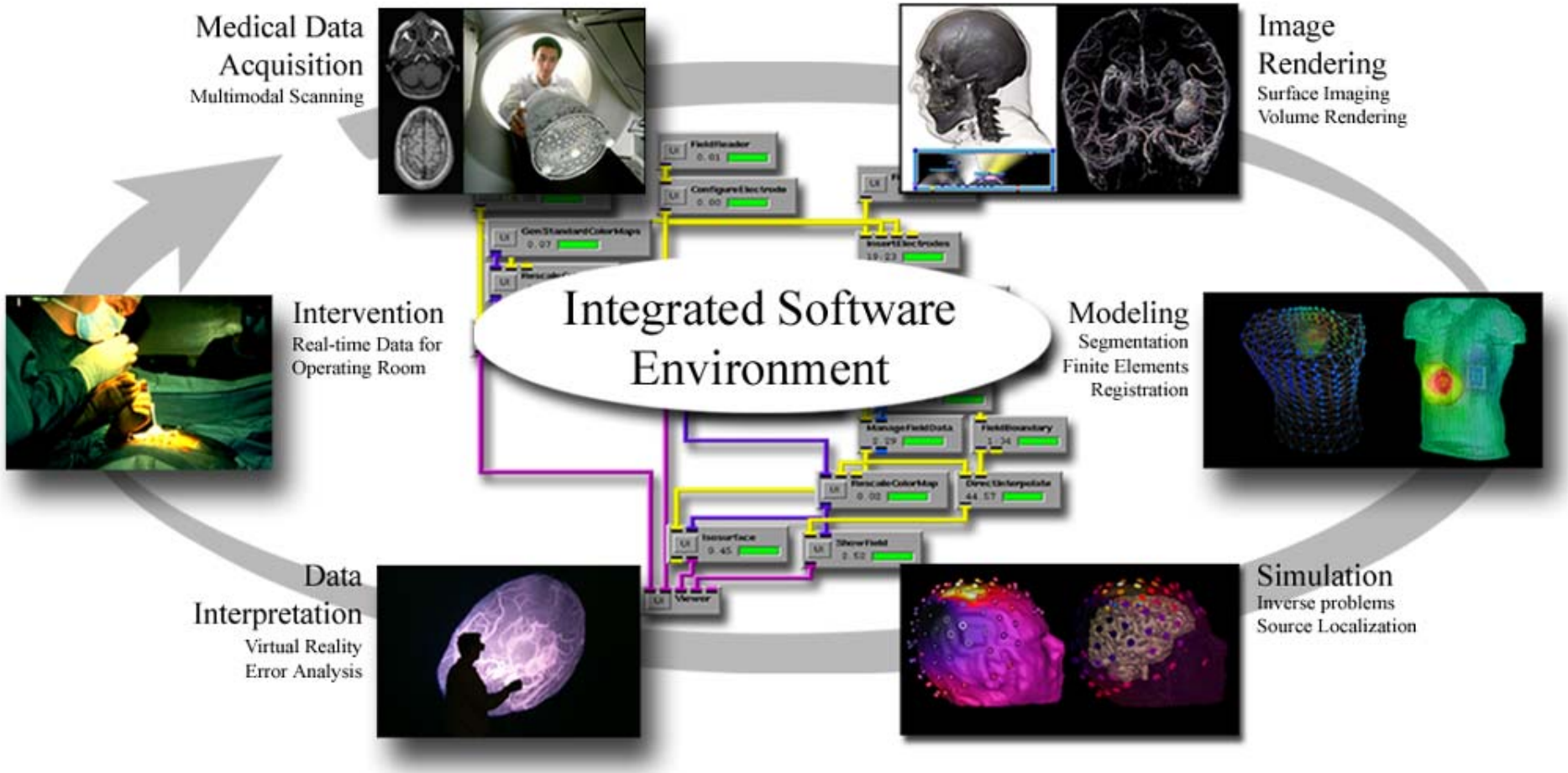
APPLICATIONS

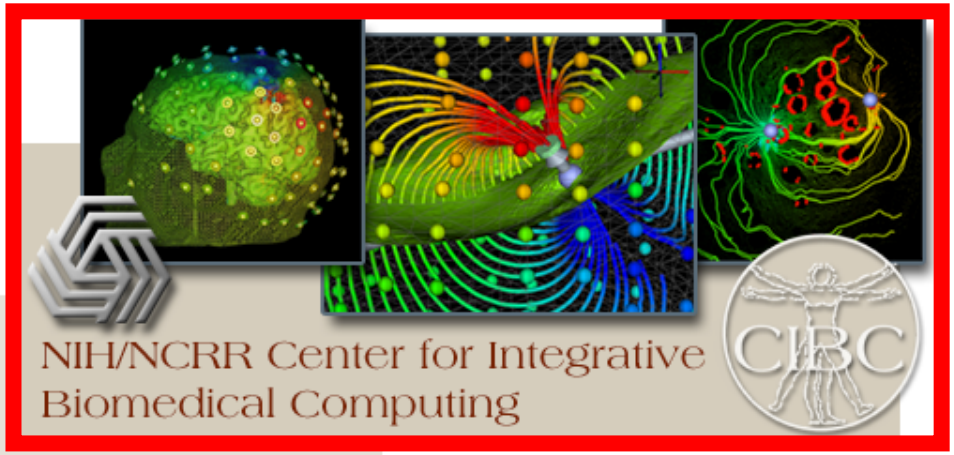


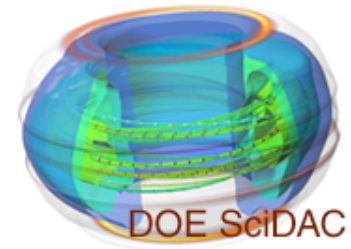



Medical Data Acquisition
Multimodal Scanning
Image Rendering
Surface Imaging
Volume Rendering
Intervention
Real-time Data for Operating Room
Integrated Software Environment
Modeling
Segmentation
Finite Elements
Registration
Data Interpretation
Virtual Reality
Error Analysis
Simulation
Inverse problems
Source Localization





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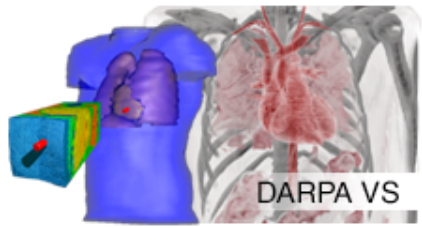
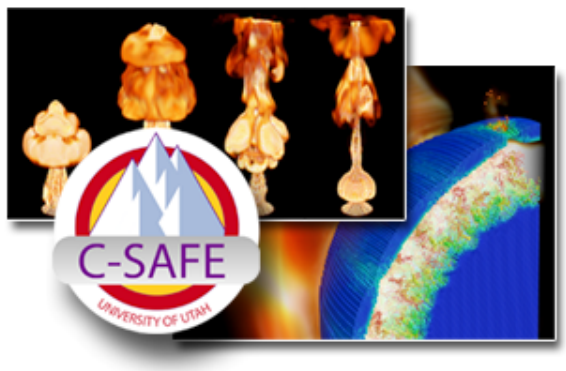


SDM CENTER

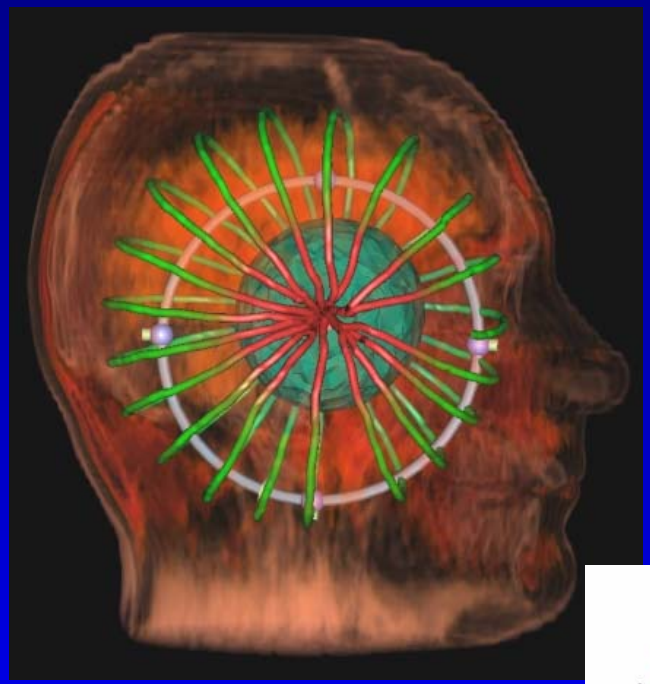
DOE ASCI C-SAFE

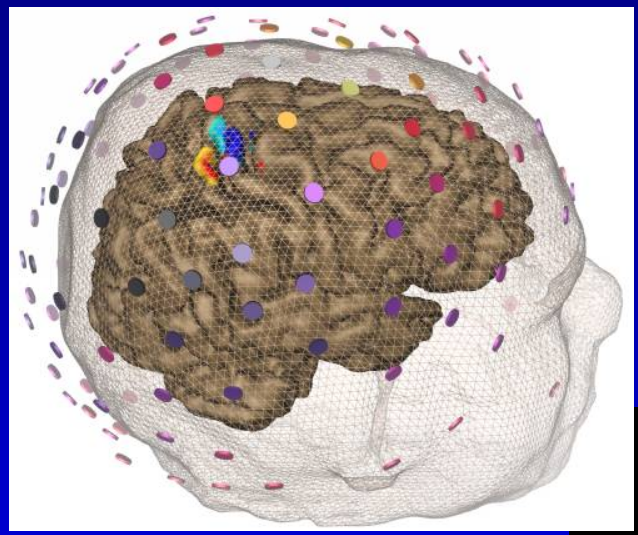


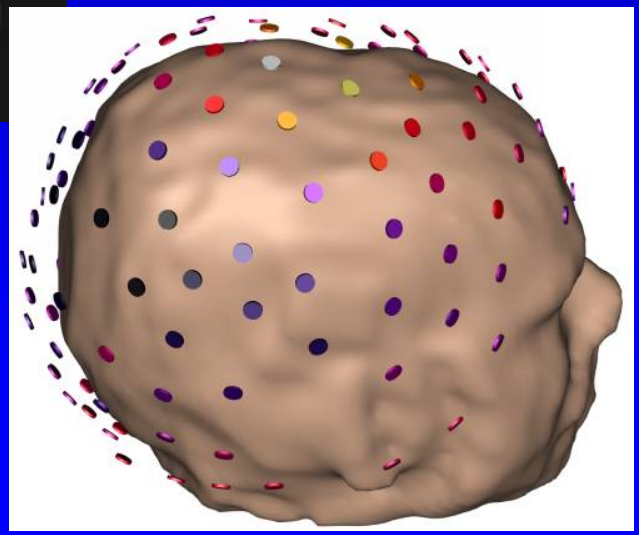
CCA
Common Component
Architecture

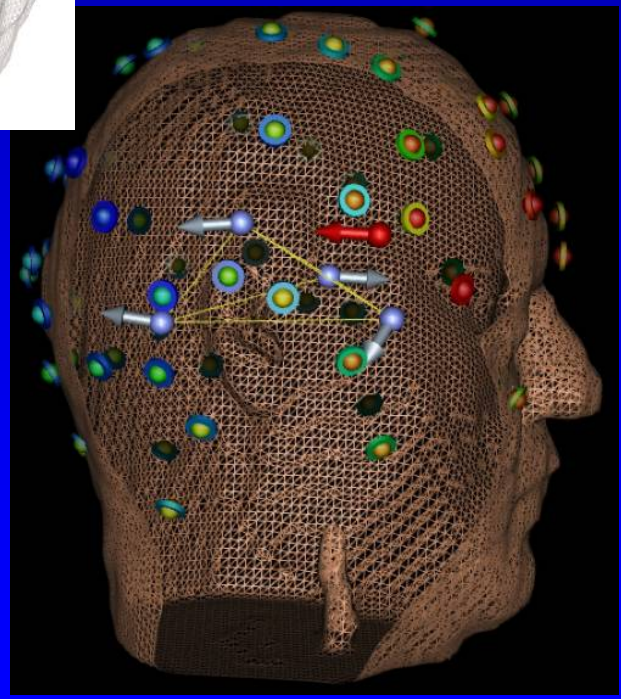
Forward and Inverse EEG

Introduction



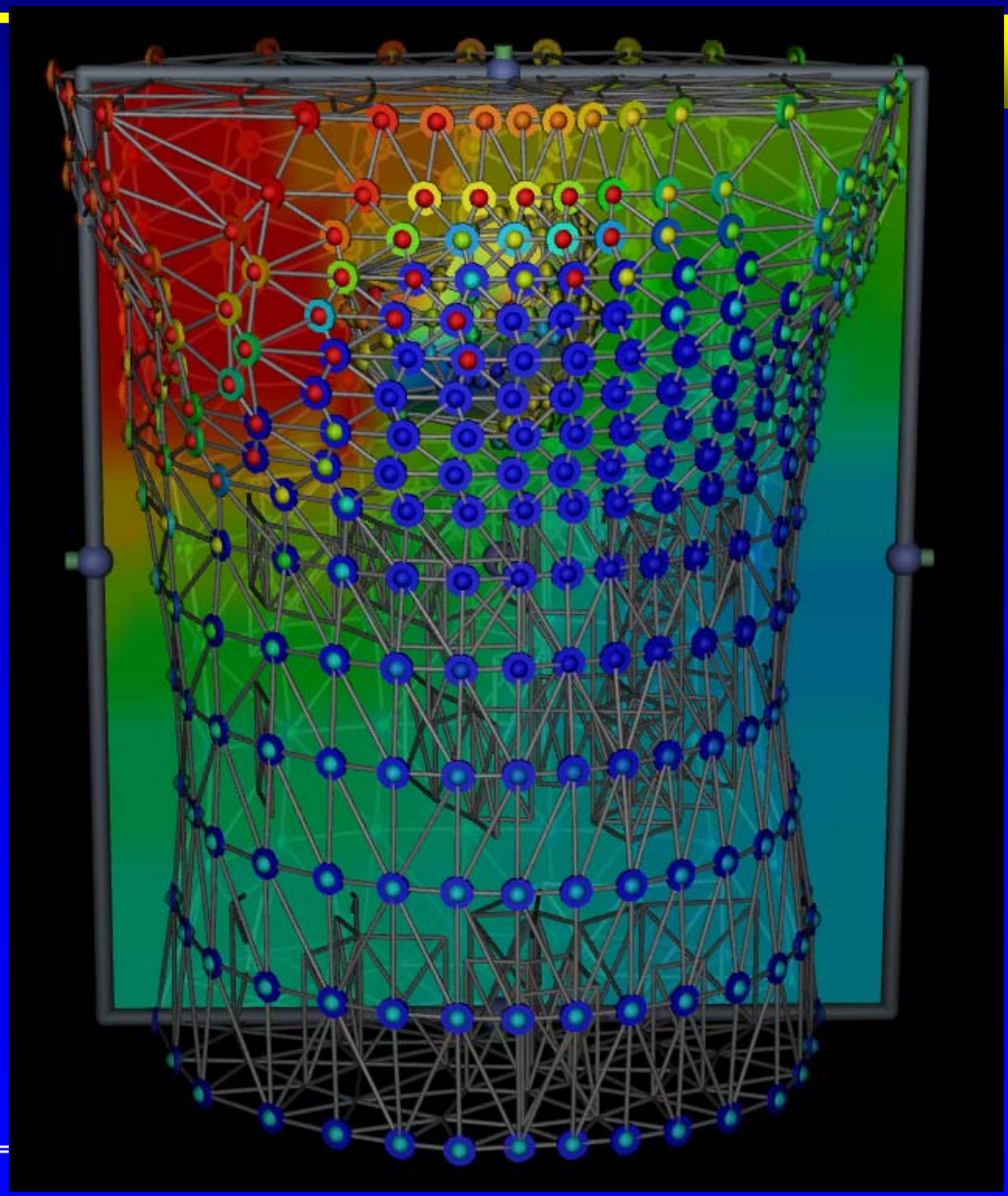






Electrocardiography

Torso Tank in BioPSE



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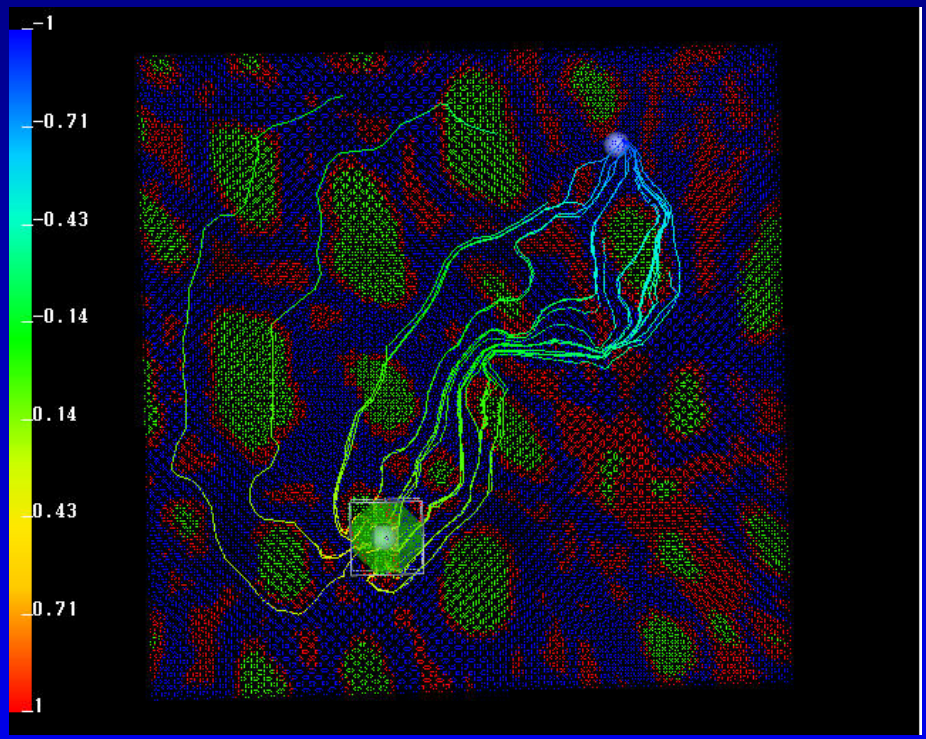
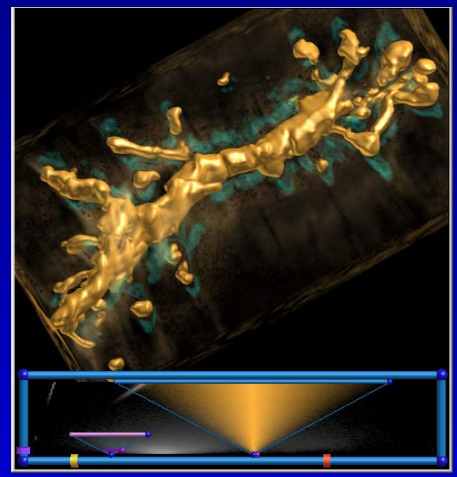
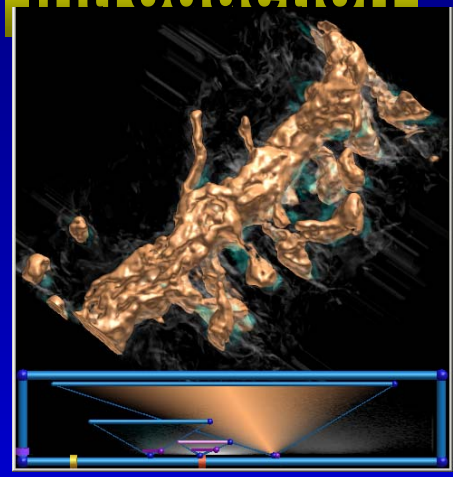
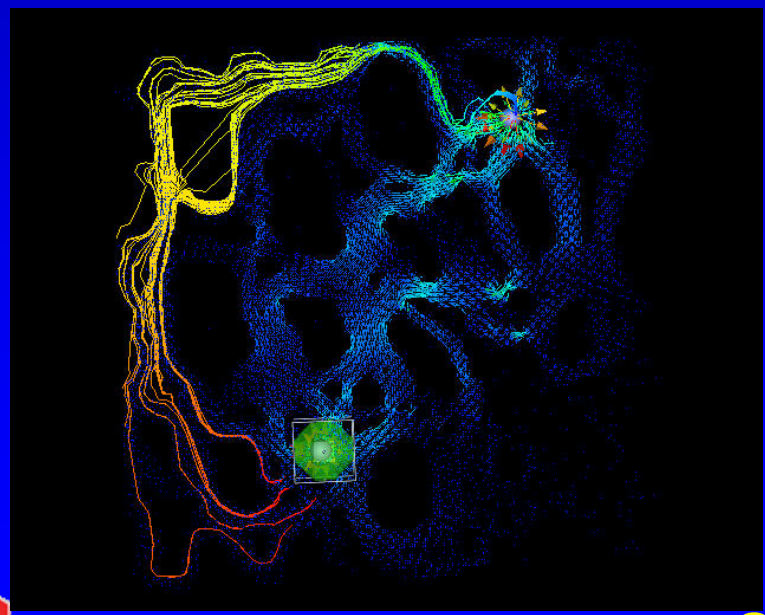
Neural Modeling and Visualization

Introduction



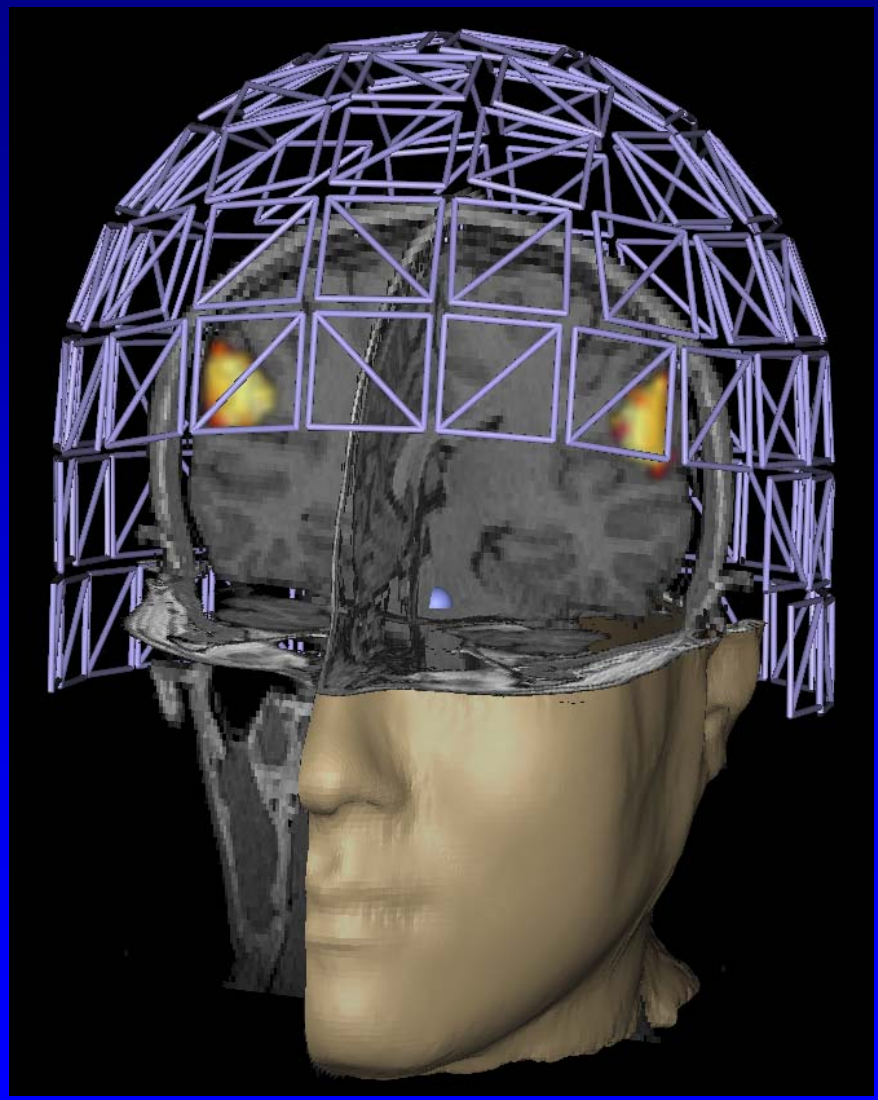






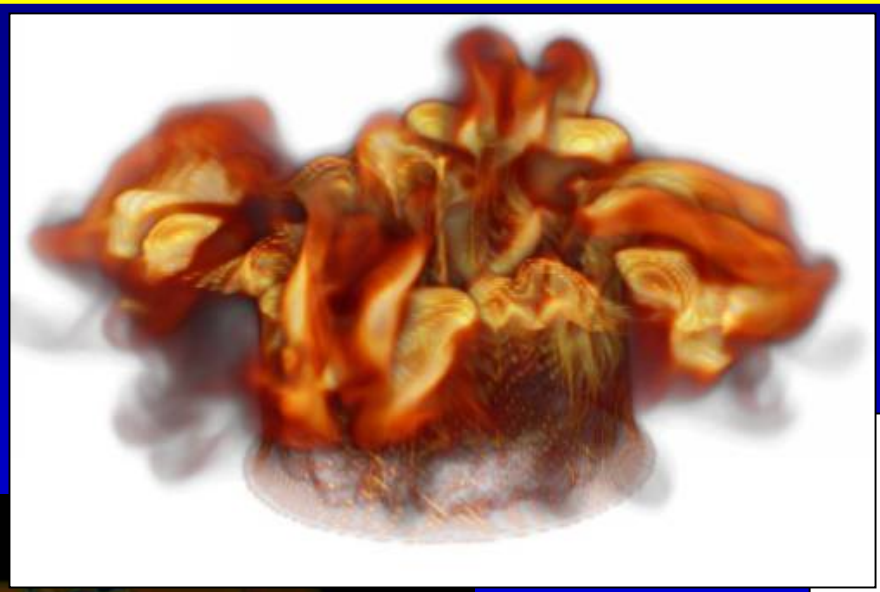
Magnetoencephalography

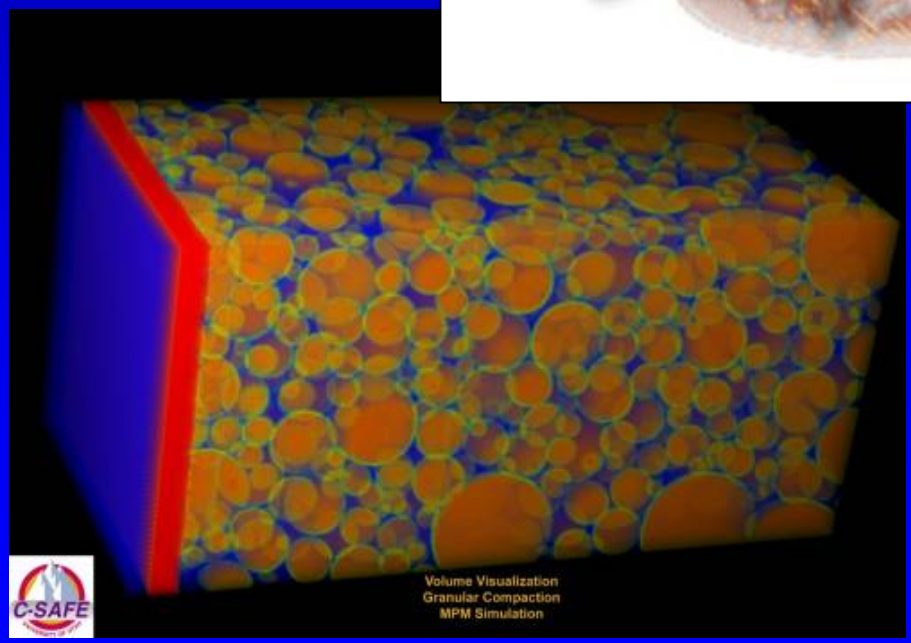
Introduction



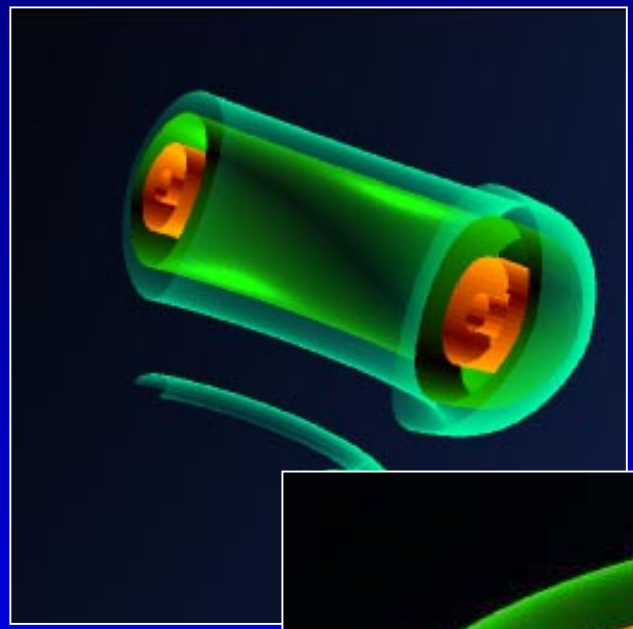
CSAFE: Fire-spread

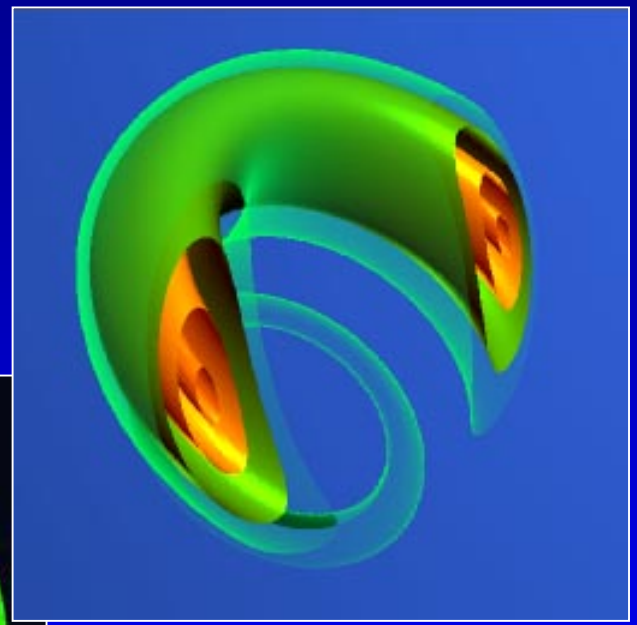
Introduction





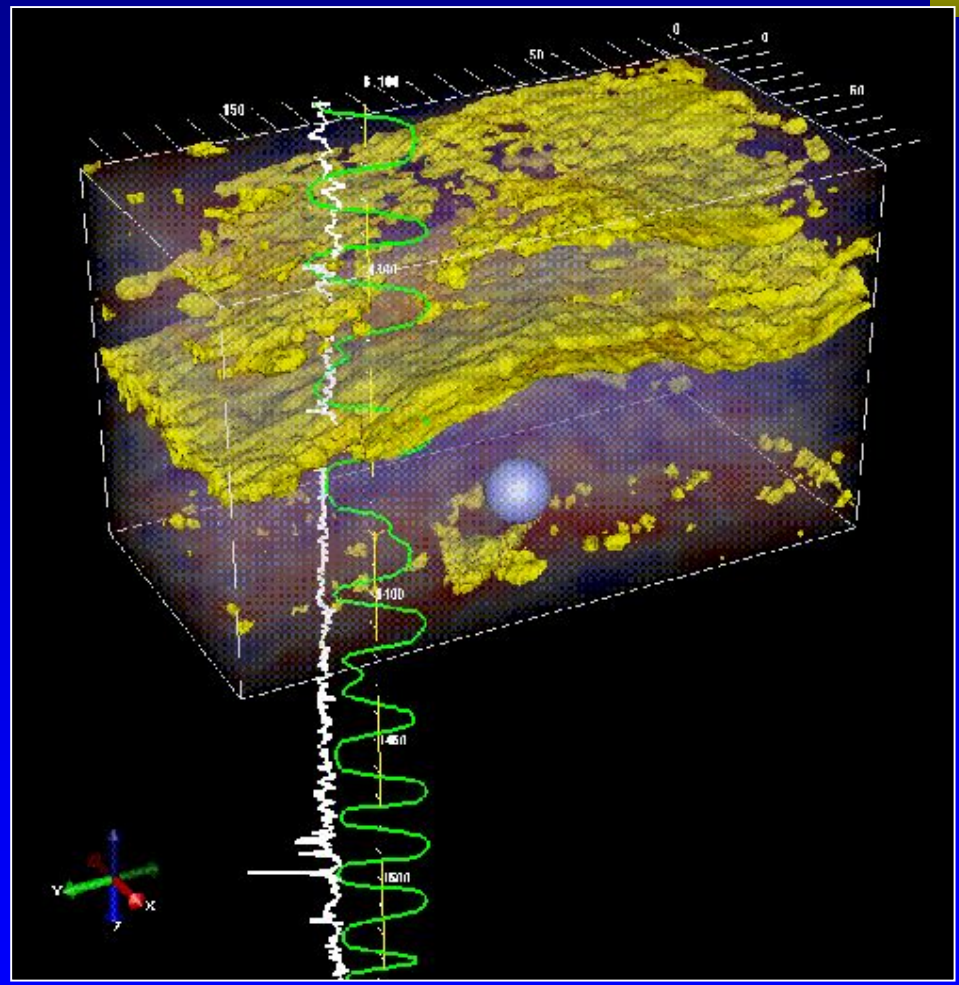
Nuclear Fusion: Tokamak





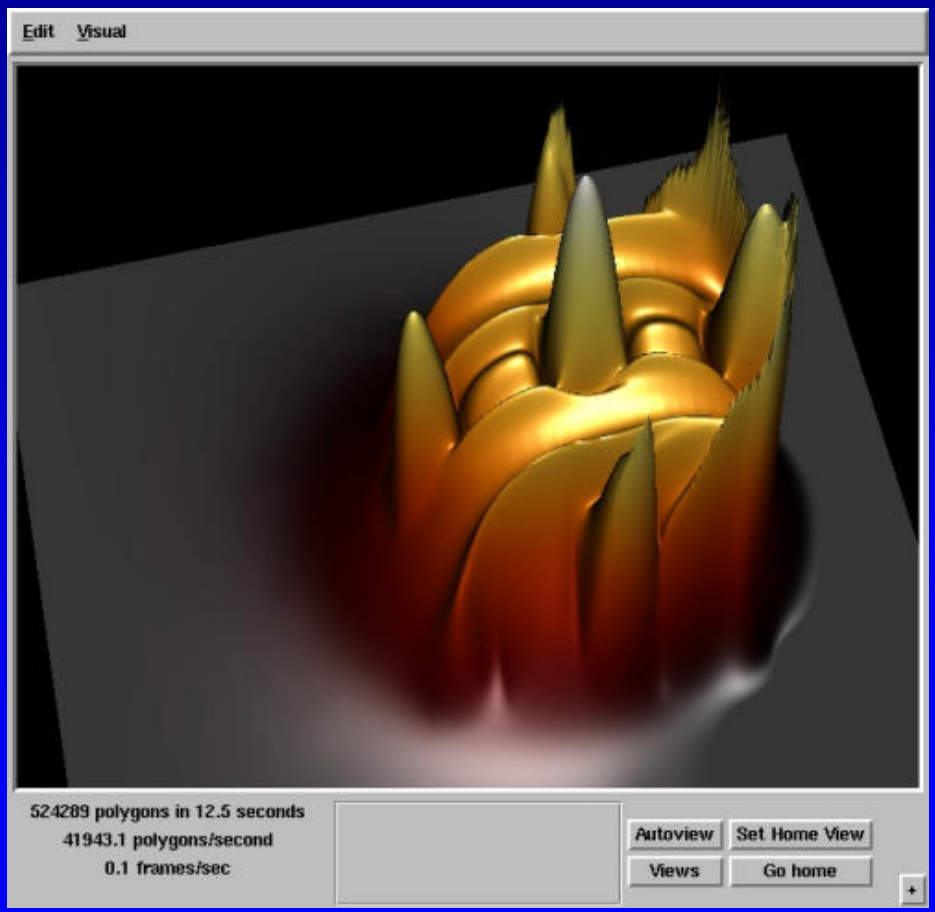
Seismic Data Visualization

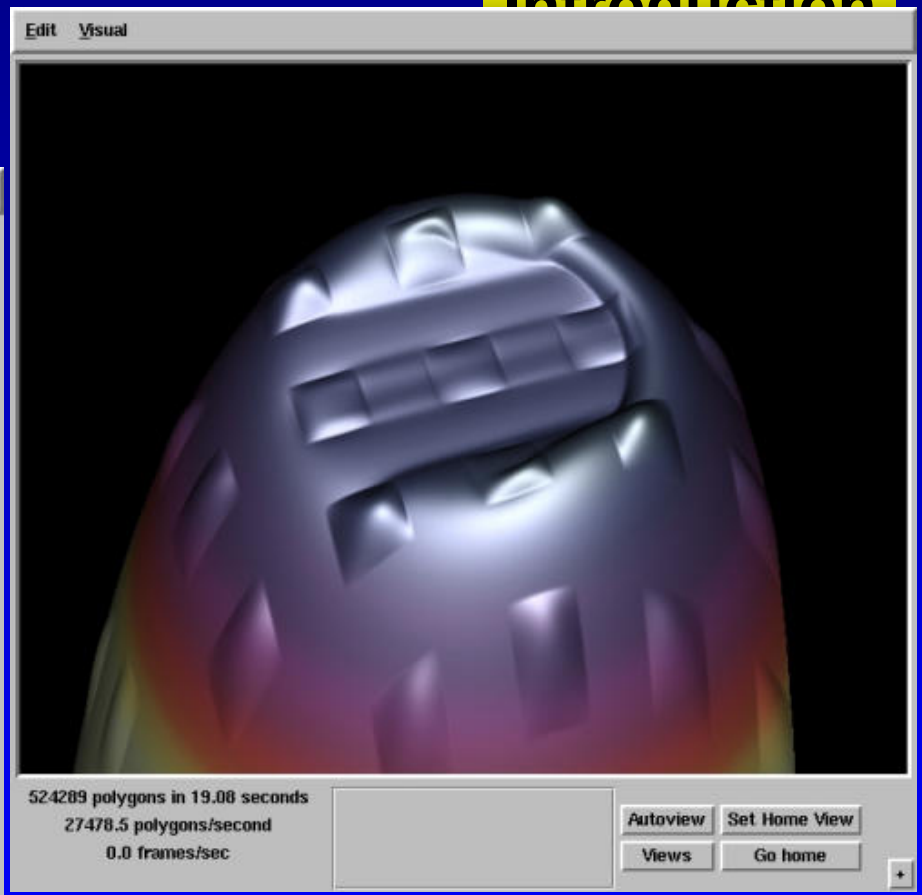
Introduction



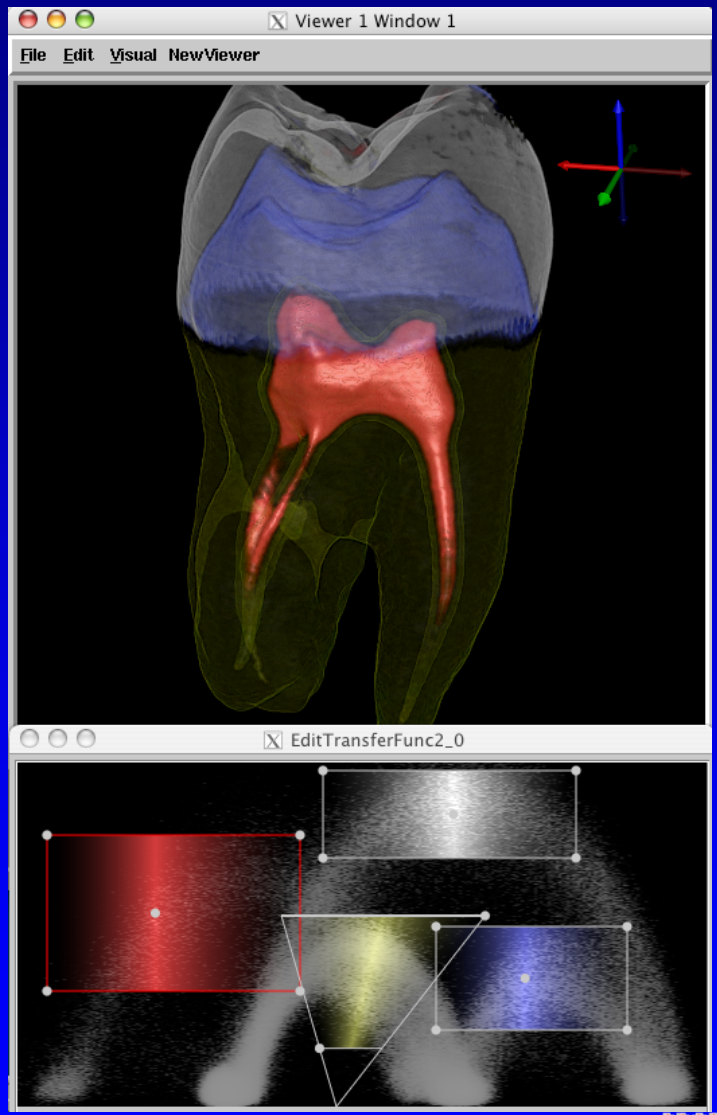
Elastohydrodynamic Lubrication (EHL)

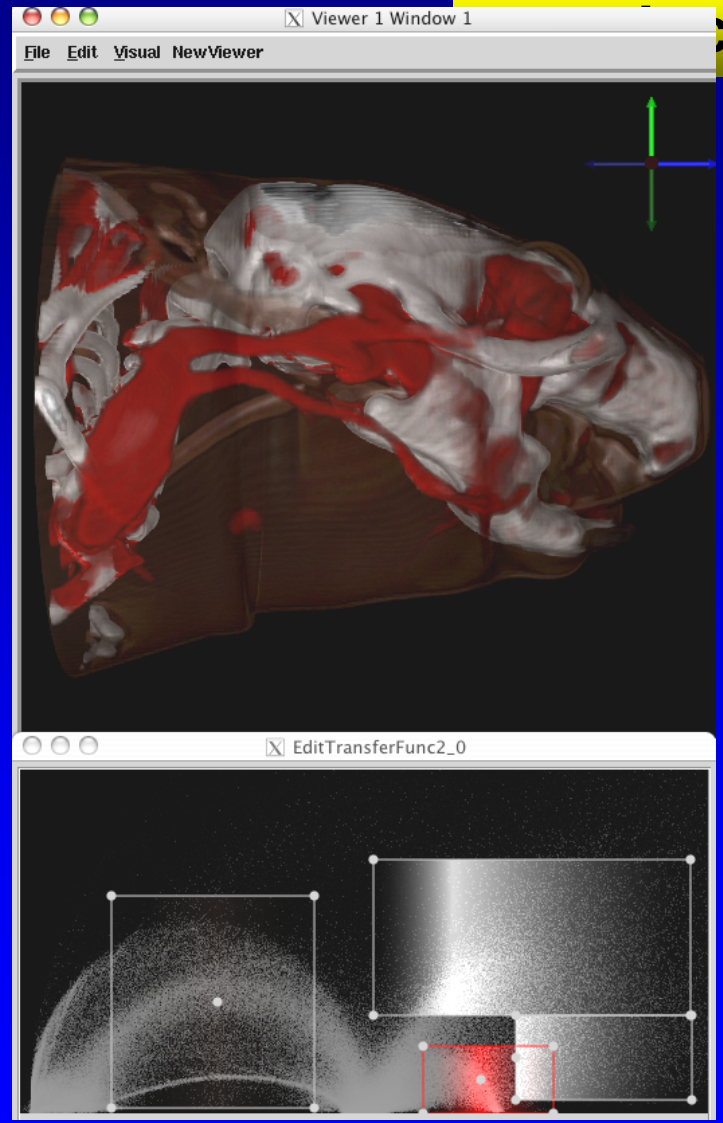
Introduction



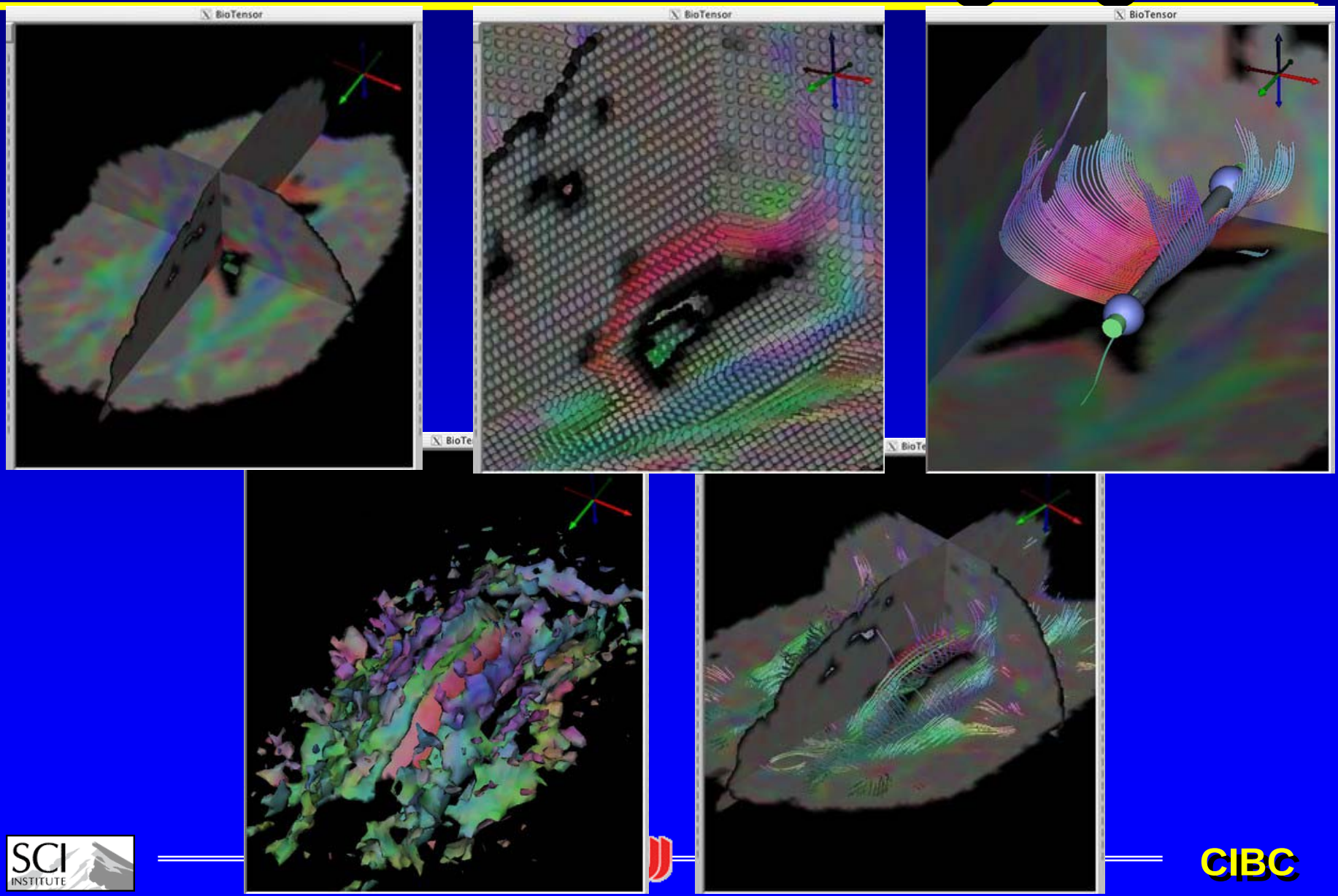


Medical Volume Rendering





Diffusion Tensor Imaging



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Demos

1. Dataflow: Torso Simulation
2. PowerApp: BioFEM
3. PowerApp: BioImage