

# Center for Research Computing Visioning Committee

Dean's Council

Jan. 15, 2013

## **Purpose:**

To gain a comprehensive understanding of the information technology needs necessary to support the research mission of MSU. To develop a vision for supporting research and scholarship with a set of centralized and distributed services, supported by a sustainable business model, that will enhance research competitiveness, ensure compliance with federal funding regulations, and mitigate risk to the institution by safeguarding valuable research data and sensitive information.

## **The Committee:**

The optimal committee will consist of 15 individuals representing all colleges and research domains in the natural, physical and social sciences, engineering, agriculture, health sciences, arts and humanities. The committee will seek input from key researchers representing research fields that are highly computationally and data intensive, including recently recruited junior faculty from top tier research-intensive institutions. Ex-Officio members should include: Chief Information Officer, Vice President for Research and representation from Academic Affairs, the Graduate School and Administration and Finance.

## **Committee activities:**

- Identify specific information technology needs in five areas:
  - Improvement of end-to-end performance of campus networks
  - Large and small scale data storage and database management
  - High Performance Computing and access to national computational resources
  - Support for data mining, analysis and visualization, and
  - Professional staff needs.
- Evaluate emerging national models and institutional best practices.
- Identify key funding opportunities for support.
- Develop a vision document and business plan for MSU leadership.

## **Timeline:**

January – March:

- Gather information, including quantitative and qualitative assessment of needs, evaluate national models and business plans.

March – April:

- Prepare of visioning document, present to MSU leadership by April 1<sup>st</sup> for critique and feedback.

April – May:

- Revise and prepare final document, present findings to MSU community in public forums.
- Develop schedule of committee activities for Fall 2013.

**Proposed Committee Membership:** The following individuals were identified as potential candidates for inclusion on the committee. We suggest that some colleges have more members than others to represent the diversity of research efforts across campus.

Individuals indicated in **bold** have participated in previous strategic planning and visioning efforts in computational sciences and information technology.

**We need your help in finalizing the committee composition as you and your department heads know the individual workloads of the prospective committee members much better than us.**

### **Agriculture (3 members)**

#### Animal Science

- Jennifer Thompson – Genetics

#### Immunology and Infectious Disease

- Joshua Obar – Immunology
- Blake Widenhelft – Molecular Biology

#### Land Resources and Environmental Science

- Rick Lawrence – Director Spatial Sciences
- Lucy Marshall – Hydrology modeling and simulation
- Paul Stoy – Land use and climate change – modeling

#### Plant Sciences and Plant Pathology

- Tom Blake – Barley Breeding and Genetics
- Mike Giroux – molecular genetics and chemistry of cereal
- Li Huang – genetic mechanisms of gene mediated response
- **Mark Young** – Viruses as model systems, metagenomics

### **College of Arts and Architecture (2 members)**

#### Architecture

- David Fortin – design studio and architectural history – sustainable housing
- Zuzanna Karczewska – first year design curriculum – representation and phenomenology
- Tom Wood – Director of Integrated Design Lab

#### Art

- Nathan Davis – Graphic Design
- Stephanie Newman – Graphic Design
- Terry Beaubois – Director Creative Research Lab

#### Film and Photography

- Theo Lipfert – MFA in Science and Natural History Filmmaking
- Dennis Aig – MFA program director
- Stephen Jackson – Curator for Museum of the Rockies

**College of Education Health and Human Development (1 member)**

## Education

- Nick Lux – Educational Technology
- Elisabeth Swanson – Science Education

## Health and Human Development

- Libby Hancock – Director Early Childhood Project
- Lynn Paul – 4Health Principal Investigator

**College of Engineering (3 members)**

## Center for Biofilm Engineering

- Phil Stewart - Director

## Chemical and Biological Engineering

- Ross Carlson – Biochemical Engineering

## Computer Science

- **Clem Izurieta** – software engineering
- **Rafael Angryk** – data mining, image analysis

## Electrical and Computer Engineering

- Joe Shaw – Remote Sensing and Optical Systems and OpTek
- Steve Shaw – Fuel Cells, Signals and Systems
- **Richard Wolff** – Networking and OpTek

**Letters and Science (3 members)**

## Chemistry and Biochemistry

- **Brian Bothner** - Proteomics
- **Ed Dratz** – Systems Biology
- John Peters – Center for Astrobiology
- **Robert Szilagyi** – Computational Chemistry

## Earth Science

- Jordy Hendrixx – Snow science and avalanche
- Cathy Whitlock – Institute on Ecosystems

## Ecology

- Wyatt Cross- aquatic ecology

## Mathematics

- **Tomas Gedeon** – math biology and modeling

## Microbiology

- Matt Fields - Bioinformatics
- Deborah Keil - Environmental Toxicity
- Aurelien Mazurie – Director Bioinformatics Core Facility
- Seth Walk – Bioinformatics

## Physics

- David McKenzie – Solar physics
- Charles Kankelborg – Solar physics
- David Klumpar – Space Science and Engineering Laboratory

## Political Science

- Liz Shanahan – policy research methods

## Psychology

- Jessie Smith – PI ADVANCE Project

Sociology and Anthropology

- **Sue Monahan** – HIPPA and IT Implementation in hospitals
- Steve Swinford – survey research, web survey design
- Tomomi Yamaguchi – use of social media in anthropological research

**College of Business (1 member)**

- Laura Black – Management

**Library (1 member)**

- Kenning Arlitsch – Dean of MSU Library

**Nursing (1 members)**

- Laura Larsson – environmental public health
- Sandra Kuntz – community based participatory research in native communities