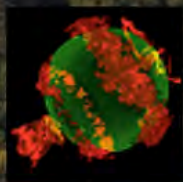
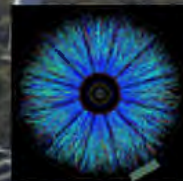


Welcome to Argonne



About Argonne

- \$675M operating budget
- 3,200 employees
- 1,450 scientists and engineers
- 750 Ph.D.s



Direct descendent of Enrico Fermi's Metallurgical Laboratory



Major Scientific User Facilities

Electron Microscopy Center



Advanced Photon Source



Argonne Tandem Linear Accelerator System



Argonne Leadership Computing Facility



Center for Nanoscale Materials



4 Directorates

Computing, Environment & Life Sciences (CELS)

Rick Stevens



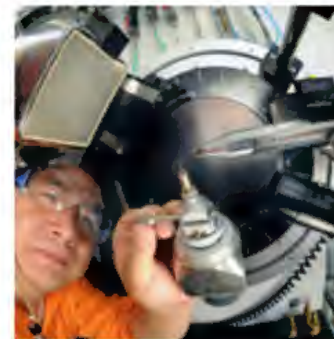
Mike Papka



Energy Engineering & Systems Analysis (EESA)



Photon Sciences (PS)



Physical Sciences & Engineering (PSE)



4 Divisions

The Argonne Leadership Computing Facility



Min: 10 PF BG/O,
~750,000 cores, 0.75 PB

Biosciences Division



Environmental Science Division



Mathematics and Computer Science Division
Marc Snir



Institute for Genomics & Systems Biology



Jim Fiedler

PHYSICS DEPARTMENT - UNIVERSITY OF CHICAGO



Marc Snir



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Biosciences
Division



Environmental
Science Division

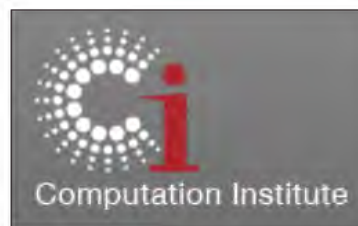


*Mathematics and
Computer
Science Division*

Marc Snir



Institute for
Genomics &
Systems Biology



Ian Foster

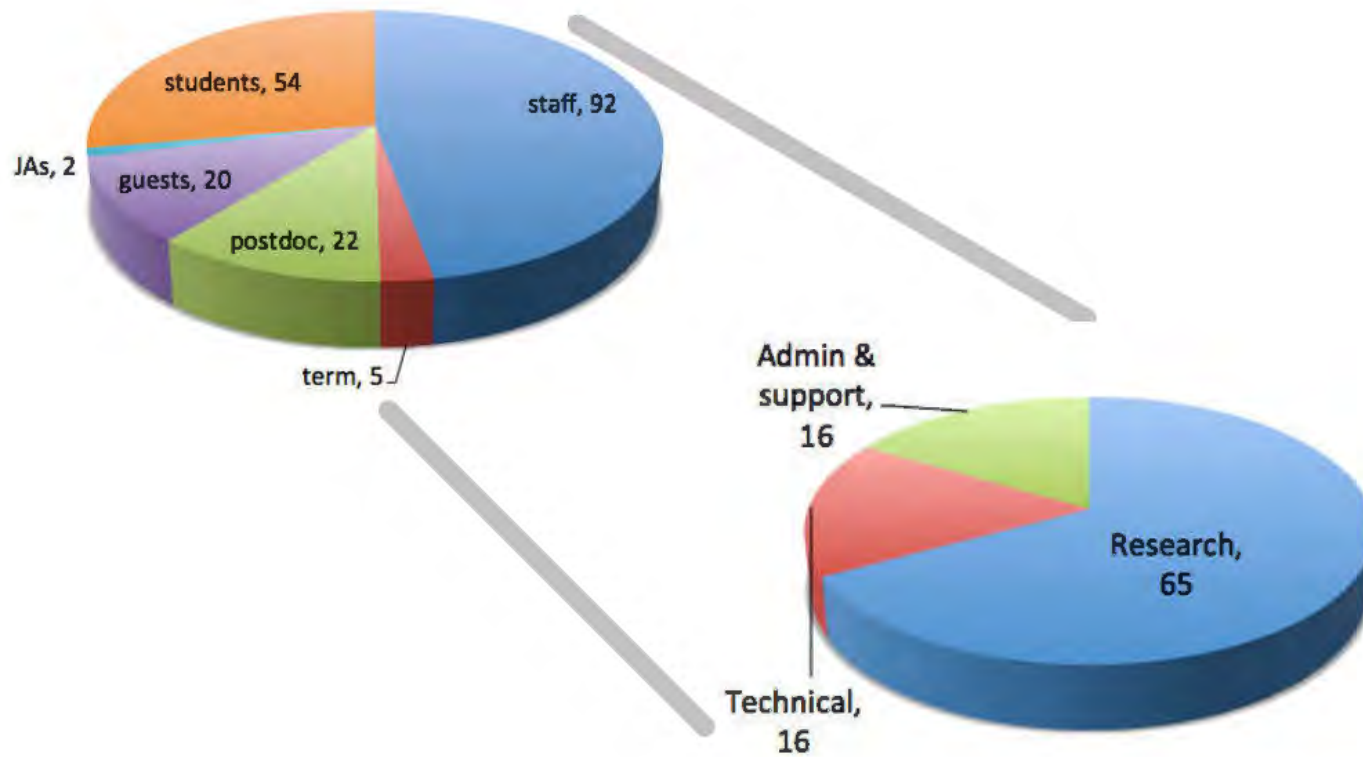


NORTHWESTERN • ARGONNE
INSTITUTE FOR SCIENCE AND ENGINEERING

Pete Beckman



Headcount





Marc Snir



Rajeev Thakur

Applications

Ray Bair



- **Bio**
- **Climate**
- **Nuclear Engineering**
- **Cosmology**

14 researchers

20 researchers

Applied Math

Paul Hovland



- **Optimization**
- **PDE solvers**
- **AD**
- ...

Extreme Computing

Pete Beckman



- **Define the exascale SW architecture**
- **Impact the exascale HW architecture**

10 researchers

18 researchers
(includes viz, grid & cloud)

Scientific Data

Rob Ross



- **Define the exascale storage architecture**
- **Impact the system architecture for end-to-end data flow**
- **Advance data analysis and visualization technologies**

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Potential areas of collaborations

Strategic Directions

- Applied math
 - programming at a higher level
 - scientific data analysis
- Extreme scale
 - Global OS, node run-time
 - Resilience
- Data
 - Future storage architecture
 - Cloud & collaborative environments
- Applications
 - Climate, material science, cosmology, astrophysics



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Rajeev Thakur

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