Postdoc All Hands Meeting

Don DePaolo, ESD Director
B50-Auditorium
February 23, 2011

Agenda / Outline

• Our “Postdoc Initiative”
• Meet the Advisors
• ES Division Organization Structure and Roles
• DOE structure and funding patterns
• How We Can Help You Network
• Open Discussion
What are we trying to do?

• Make LBNL/ESD a great place to work
• Enhance your postdoc experience
• Provide continuing education and career development opportunities
• Empower you as major new employee group
• Address comments and feedback raised during
  – the Director’s Review of ESD in March 2010
  – the LBNL-organized workplace climate surveys
• Respond to the growth of our ESD postdoc community

Postdoc Profile by Department

• September 2009, only about 8 postdoc staff; today we have 51 staff and 21 guests
Meet the Advisors for ESD Postdocs

Points of contact

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LBNL Earth Sciences Division

... create new knowledge and understanding of Earth sciences to significantly impact national and global energy and environmental problems.

Climate Change

- Climate system modeling and prediction of impacts
- Carbon Sequestration
- Ecosystem response
- Biosequestration

Fundamental Science:
- Earth Materials and Processes
- Geochemistry
- Observing and imaging the Earth at nm to km scales
- Environmental biology
- Computational Geoscience

Energy Resources

- Enhanced hydrocarbon recovery, methane hydrates
- Alternative fuels
- Geothermal energy
- Nuclear fuel cycle & waste

Water Resources & Environment

- Groundwater remediation science
- Hydrologic response to climate change
- Ensuring adequate water supplies
ORG CHART: ESD

Research Programs
- Climate & Carbon Sciences
  - Bill Collins & Margaret Torn
- Energy Resources
  - Ernstar L. Mayer
- Environmental & Water Resources
  - Susan Hubbard
- Geodynamics & Exploratory Research
  - Donald L. DePaolo
- Geologic Carbon Sequestration
  - Carl Oelhafen
- Nuclear Energy & Waste
  - Jane Blechschmier

Earth Sciences Division
Division Director
Donald J. DePaolo
Deputy Director for Programs
Susan Hubbard
Senior Advisor to the Division Director
Ernest L. Nage
Business Manager
Marjorie Villaret

Support Staff
Division Support Staff
Marjorie Villaret
Human Resources
Traci Bigelow and Laura Ellender

Committees
- Division Council
  - Donald L. DePaolo, Chair
- Professional Staff Committee
  - T. Teuscher, Chair
- Environmental Health & Safety
  - Don Friesen, Safety Coord.
- Diversity Committee
  - Jim Houserthorpe

Departments
- Climate Sciences
  - Bill Collins
- Geology
  - Terry Hazen
- Geochronology
  - Mark Cabral
- Geophysics
  - Greg Newson
- Hydrogeology
  - Hsiu-Hsi Liu

Facilities & Centers
- BNC
  - Berkeley Nanotechnology Center
- CCG
  - Center for Computational Genomic Science
- CFS
  - Center for Environmental Biotechnology
- CEF
  - Center for Environmental Geosciences
- CCE
  - Center for Nanoscale Control of Catalysis
- CFF
  - CrossFlow Facility

Division Council – Department Heads + Program Leads
The Department of Energy’s overarching mission is to advance the national, economic, and energy security of the United States; to promote scientific and technological innovation in support of that mission; and to ensure the environmental cleanup of the national nuclear weapons complex.

The Department’s strategic goals to achieve the mission are designed to deliver results along five strategic themes:

1. Energy Security: Promoting America’s energy security through reliable, clean, and affordable energy
2. Nuclear Security: Ensuring America’s nuclear security
3. Scientific Discovery and Innovation: Strengthening U.S. scientific discovery, economic competitiveness, and improving quality of life through innovations in science and technology
4. Environmental Responsibility: Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production
5. Management Excellence: Enabling the mission through sound management
What is a National Laboratory?

In the overall U.S. constellation of federally sponsored research, the National laboratories are intended to have special roles; they*:

1. Support large-scale research efforts that require significant capital expenditures, unique scientific facilities, and specialized staffing
2. Conduct classified research of a sensitive nature
3. Perform research that is needed to fulfill the missions, and support the regulatory functions, of specific federal agencies
4. Manage long-term research programs


Many DOE programs moved away from this paradigm and treated national lab scientists as individual investigators, like University faculty; now they are moving back to a larger project / team science / lab managed approach

Our DOE context

Approximate FY2010 numbers

Department of Energy $26B

National Security (NNSA) $10B
- Weapons $6.4B
- Nuclear non-proliferation $2.1B
- Naval reactors $1.0B

Energy and Environment $10B
- EERE $2.3B
- fossil $0.9B
- Nuclear $0.8B
- Environmental remediation $5.8B
- OCRWM $0.2B

Science $5B
- BES $1.7B
- BER $0.6B
- ASCR $0.4B
- Physics $1.8B (HE+N+Fusion)
- ARPA-E $0.4B

ARPA-E $0.4B

?
ESD total spending growth

LBNL Initiatives
Strategic Directions to Advance DOE's Missions

- Soft X-Ray Science (Next Generation Light Source)
- Energy and the Environment (Carbon Cycle 2.0)
- Computational Science (Green computing)
- High-Energy, Nuclear, and Particle Astro-Physics
- Life Sciences for Energy Research
Recent ESD Initiatives

- CO$_2$ Sequestration
  - WestCarb Phase III (ESD)
  - National Risk Assessment Program (NRAP) (ESD)
  - Biosequestration (and ecogenomics) (w/PBD,JGI)
- Climate Modeling & Carbon Res. (w/CRD, EETD)
- Bioenergy
  - Energy Biosciences Institute (EBI) (w/campus)
  - Joint BioEnergy Institute (JBEI) (w/PBD)
- Advanced Scientific Computing for Environmental management (ASCEM) (w/CRD)
- Enhanced Geothermal Systems (ESD)
- Energy Frontier Research Center (w/MSD, CRD)

Examples of Team Science structure

Biological and Environmental Research Division SFA's
- Roughly 20 individual ESD PI projects rolled into one $4.5M/yr team project in Subsurface Science
- ESD (+EETD & CRD) Climate science projects to be rolled into 3 or 4 SFA's (total ca. $5M)

Basic Energy Sciences Cluster Proposals
- 20 individual projects rolled into 3 cluster projects (total $4.5M)

BES Energy Frontier Research Center
- $4M/yr team research effort (17 subprojects)

Environmental Management ASCEM project
- Multi-lab/multi-investigator project; may be $20M/yr

Bioenergy Centers (JBEI)
- $25M/yr team research effort

National Risk Assessment Partnership (NRAP)
- Multi-lab/multi-investigator project; may be $20M/yr
Implications of Team Science structure

Staffing of Teams is left largely to the Lab
- Younger scientists can be included as appropriate
- Easier to plan due to longer-term of funding (typically 5 yr)

Some loss of flexibility in research direction
- Project success is evaluated on degree to which initial objectives and goals are met; less incentive to change direction

Change in internal metrics for Performance evaluation
- Ability to secure funding was a useful discriminator for advancement to Staff and Senior Scientist levels

Early Career scientists may find it more difficult to establish independence

New (developing) Initiative:
LBNL Center for Integrated Soil Systems Biology

**Question**: How much carbon can the terrestrial ecosystem hold over next 200 yr?
- Requires a mechanistic understanding of biosphere response and the stability and flux of soil carbon under changing environmental conditions.

What is the impact on molecular mechanisms and microbial communities to a variety of changing environmental conditions (freeze vs. thaw? Wet vs. drought?) and how does that impact carbon cycling?

LBNL Cross-cutting initiative & CC2.0 relevant
New ESD Mission Diagram
(still under development)

Meet the Advisors for ESD Postdocs

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Networking: Resources and actions you can take

- About > Staff > postdocs.html web page
- CV/Staff web pages
- Esd.lbl.gov and LinkedIn
- Seminar Series
- Tell us about yourself

New web page resource for postdocs

Includes:

1. Postdoc Staff Directory
2. Direct link to ESD’s current job openings
3. Links to organized Employee/Career Development and Training throughout LBNL
4. Contact information for Junior Staff Science Discussion Groups
5. Links/information about LBNL sponsored fellowships

http://esd.lbl.gov/about/staff/postdocs.html
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http://esd.lbl.gov/about/staff/postdocs.html

All ESD staff are encouraged to prepare a staff page.

Resource is supported by the Division.

Content Management System is available for self-updates (training will be provided).

Provide an updated CV to esdwebmaster@lbl.gov and page will be updated with basic structure.

Provide a URL where current CV resides a link will be redirected.

Maintain a consistent look and feel.
Esd.lbl.gov and LinkedIn

- Using both will help to get your name out there in search engines
  - Are you number 1?
- Make sure to be consistent with use of your name in publications or any information that may refer to you
  - Benefits for understanding this
- Use referring links to increase search results
- Know what not to write...

Esd.lbl.gov and LinkedIn

- Esd.lbl.gov is hosted by LBNL/ESD
- Content exists while personnel are employed
- Content can be transferred to another host organization
- LinkedIn is external to LBNL, content is hosted at LinkedIn
  - It is a type of social network
- Content exists until user decides to delete account
- “Transfer” of content is not needed, just update your information when you change jobs
Esd.lbl.gov and LinkedIn

• ESD POSTDOC WEBSITE
  – http://esd.lbl.gov/about/staff/postdocs.html

• Look forward to:
  – A Content Management System (CMS) training that will show users how to
    • create their own Staff/CV pages,
    • discuss the importance of leveraging cross linkages to gain better search results,
    • opportunities for networking by utilizing LinkedIn or other social networking tools

Hosting a Seminar Series

• Seminars are for disseminating information / exchanging results through reports and discussions

• Organizational leader
  – Attracting an audience
  – Funding request /budget
  – Format and structure
Tell us about yourself!

- We want to hear from you about
  - News and events
  - Awards
  - Publications
- Send an email to esdwebmaster@lbl.gov
- Stories/Posts will be coordinated to appear on-line in various news resources as applicable
  - Esd.lbl.gov (News and Events blog)
  - Today at Berkeley Lab (TABL)
  - LBNL News Center

Discussion / Q & A?

What’s on your mind?