

Educational Programs

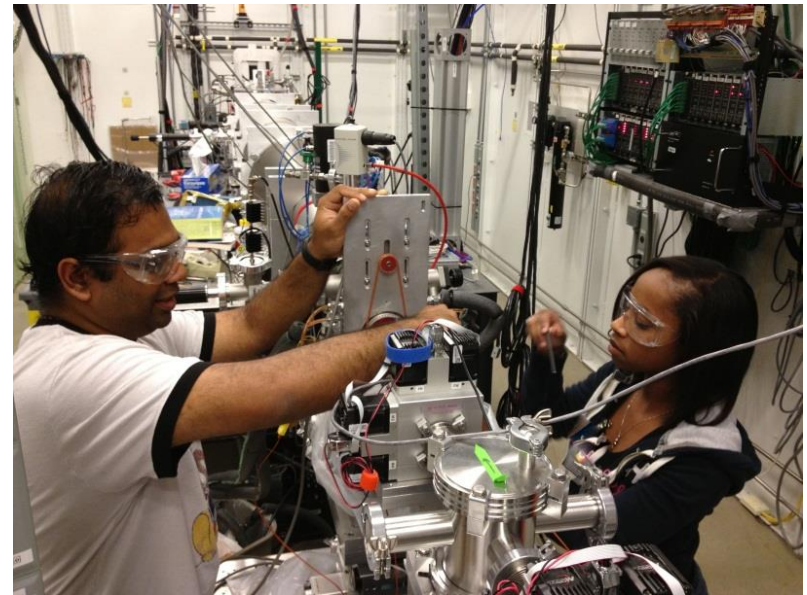
Meridith Bruozas
Emilio E. Bunel

Educational Programs & Outreach
Argonne National Laboratory

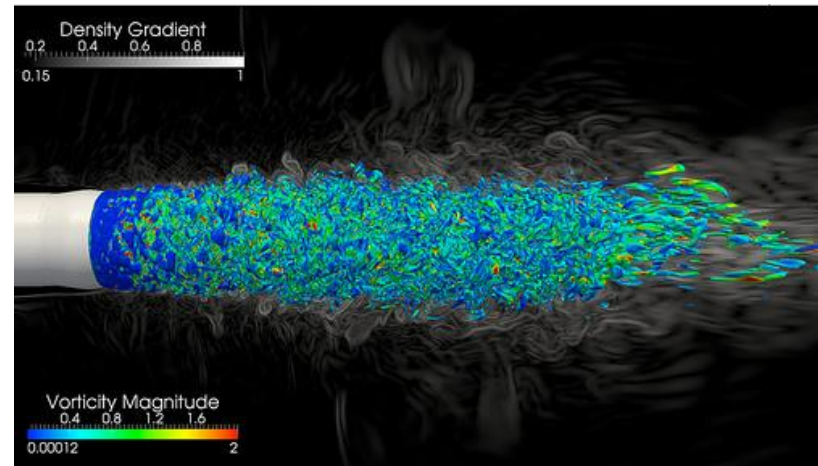
mbruozas@anl.gov

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University of Puerto Rico - Cayey
November 20th, 2014



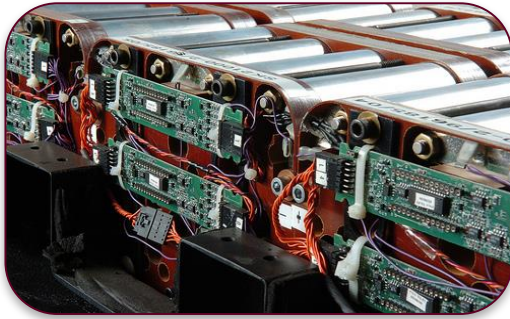
About Argonne



Leading the world in providing scientific and engineering solutions to the grand challenges of our time: sustainable energy, a healthy environment, and a secure nation.

- Apply a unique mix of world-class science, engineering and user facilities to deliver innovative research and technologies.
- Create new knowledge that addresses the most important scientific and societal needs of our nation.
- Argonne's programmatic activities cover all aspects of the innovation ecology: basic research, technology development and prototype development and testing.
- We regularly work with industry through exclusive licensing, joint research and a variety of other mechanisms to transfer our inventions to the marketplace.

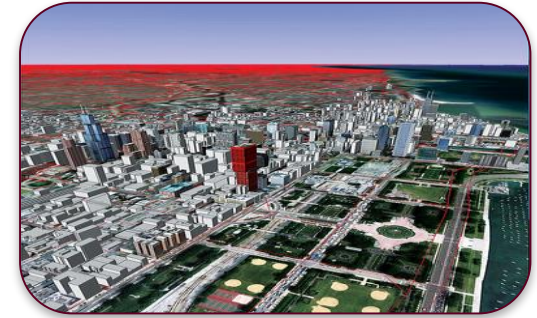
Core Missions



Energy Security



**Biological & Environmental
Systems**



National Security

Use Inspired Science and Engineering...

... Discovery and Transformational Science and Engineering

Science & Technology

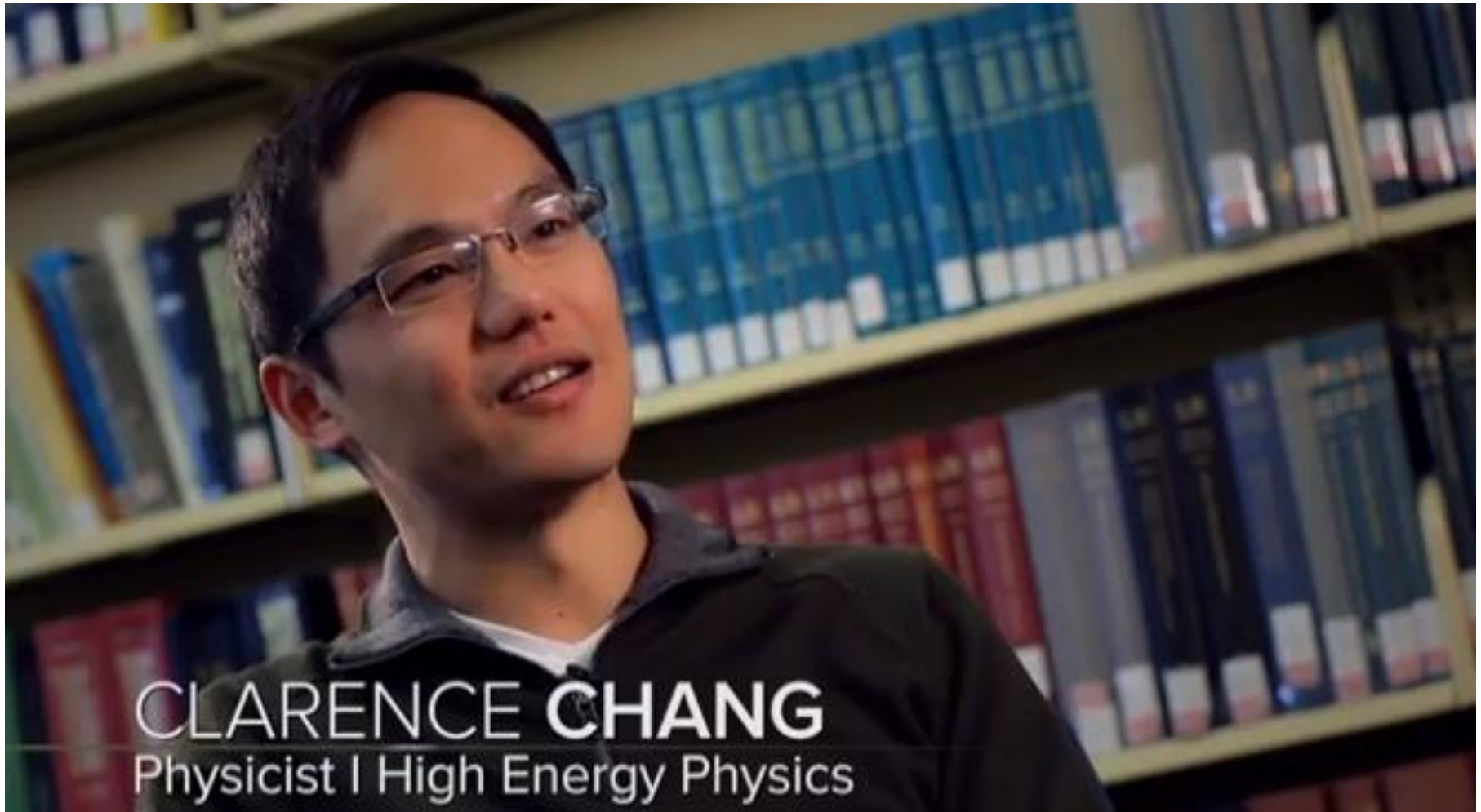


User Facilities

- Advance Photon Source
- Center for Nanoscale Materials
- Argonne Leadership Computing Facility
- Argonne Tandem Linac Accelerator System
- Electron Microscopy Center
- Transportation Research and Analysis Computing Center

<http://www.anl.gov/>





CLARENCE CHANG
Physicist I High Energy Physics

Chang's work focuses on determining the fundamental properties of the universe to understand how it evolved using a telescope located in the South Pole.

Developing the Next Generation



- Inspire middle and high school students to study STEM topics through on-site field trip programming
- Encourage undergraduate students to commit to STEM careers by providing hands-on opportunities in the R&D workplace
- Train, educate and mentor grad students towards specializations within a career
- Provide postdocs with additional experience and mentoring to ensure career success
- Develop collaborative programs and relationships with faculty at colleges, universities and corporations

Student Engagement at Argonne

School Year 2012-2013

Program	Number of Students
K-12 Experiences	
5 th – 12 th Grade On-Site Programs	4,104 Students 466 Adults
Professional Development	48
Research Experiences	
High School	12
Undergraduate	231
Graduate	280
Faculty	24
Post Doctoral Experiences	300





Educational Programs

Developing the Next Generation of Scientists & Engineers

[HOME](#)[LEARNING CENTER](#)[UNDERGRADUATES](#)[GRADUATES](#)[PARTNERS](#)[NEWS & EVENTS](#)

Nuclear Engineering Job Opening

The International Programs section of the Nuclear Engineering Division is looking for a part-time Computer Science Co-op student.

[More](#)

EDUCATIONAL HIGHLIGHT



VFP participant receives award

Armando Mireles, a participant in Argonne's 2012 Visiting Faculty Program, received a Second Place award at the 2013 LSAMP conference

[More >>](#)

RESOURCES FOR:

[MIDDLE SCHOOL](#)[HIGH SCHOOL](#)[TEACHERS](#)[UNDERGRADUATES](#)[GRADUATES](#)[Middle School Science Bowl](#)[Introduce a Girl to Engineering Day](#)

www.anl.gov/education



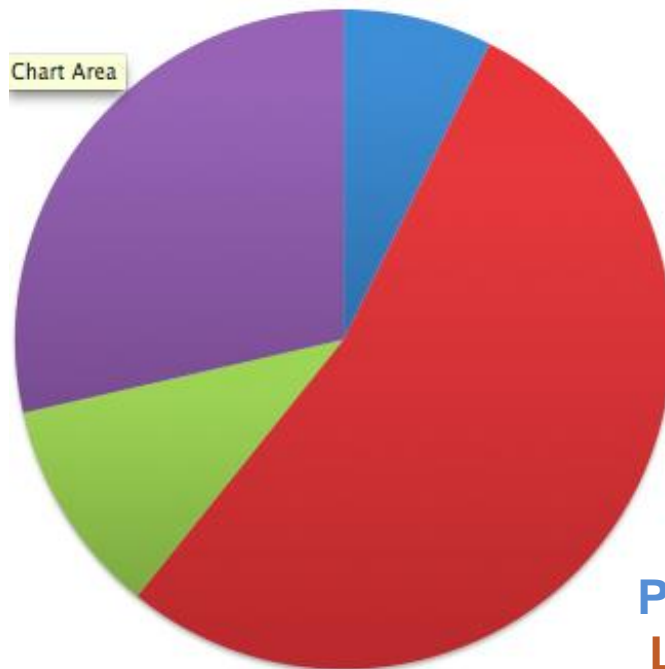
U.S. DEPARTMENT OF
ENERGY

Engaging and Inspiring Youth

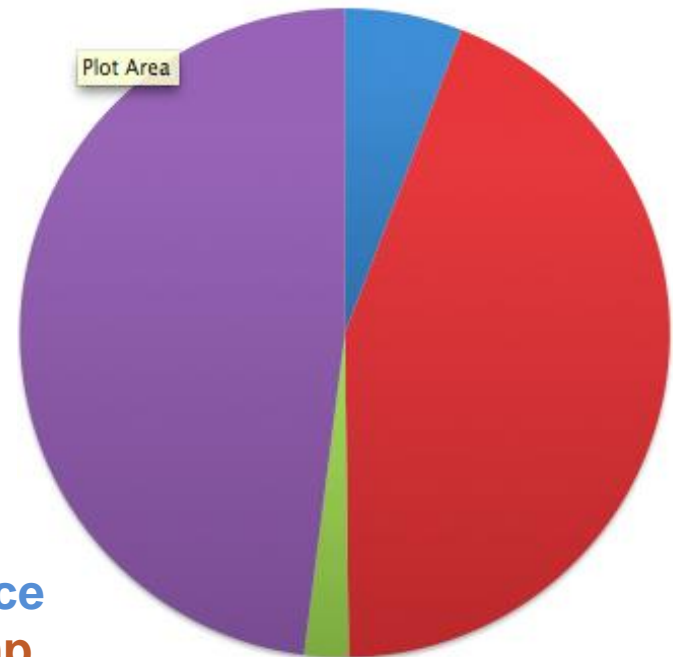
- **On-Site Learning Lab Activities for Middle and High School Students**
 - Hands-on activity and/or Tour
- **High School Student Research Experiences**
 - Advance Photon Source Program
 - ACT-SO Sat Program
 - Illinois Math and Science Academy Wed Program
 - Pre-College Internship Program (Graduating Seniors)
- **Competitions**
 - Academic Science Bowl (Middle School)
 - Alternative Energy Car Race (Middle School)
 - Rube Goldberg (High School)
- **Outreach Events**
 - Science Careers In Search of Women
 - Introduce a Girl to Engineering
 - Regional Appearances
- **Teacher Professional Development Sessions**

Undergraduate and Graduate Placement 2012-2013

Undergraduates

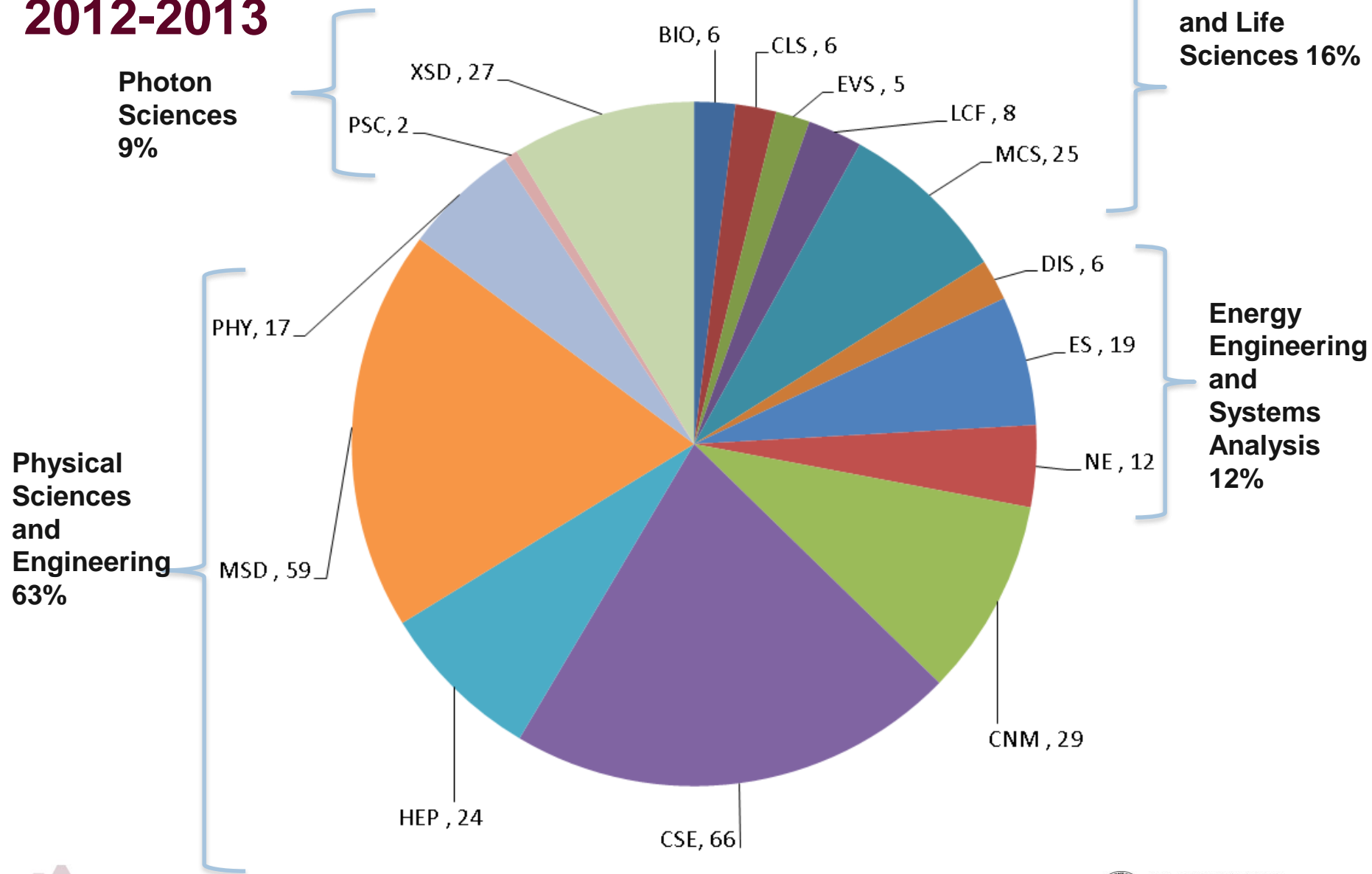


Graduates



Photon Science
Life/Env/Comp
Ops
Physical
Science/Engineering

Post Doctoral Placement 2012-2013



U.S. DEPARTMENT OF
ENERGY

Undergraduate Programs



Undergraduate intern operating a high speed Pin-on-Disk Tribometer

Undergraduate Opportunities

Seasonal Internships:

- Science Undergraduate Laboratory Internship (SULI)
- Student Research Participation (SRP)
- Community College Internship (CCI)
 - Summer Internship Deadline – January 9, 2015

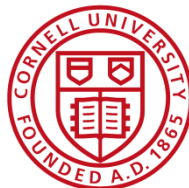
Temporary Employee Opportunities:

- Research Aide (RA)
- Cooperative Education (Co-op)
- Undergraduate Symposium (Fall)

<http://www.anl.gov/education/undergraduates>



University Partnerships



Graduate Programs



Preparation of silver chloride nanowires
Argonne, Center for Nanoscale Materials

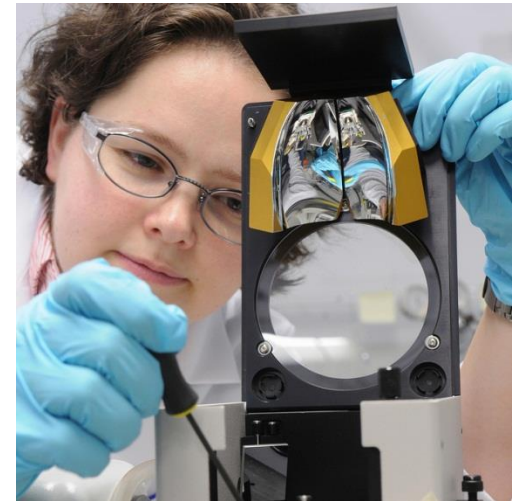
Graduate Programs

Components of a PhD:

- Laboratory Graduate Participant (Lab Grad)
- Guest Graduate (GGS)
- Visiting Graduate (VGS)
- Thesis Parts (TP)

Temporary Employee Opportunities:

- Research Aide (RA)
- Cooperative Education (Co-op)

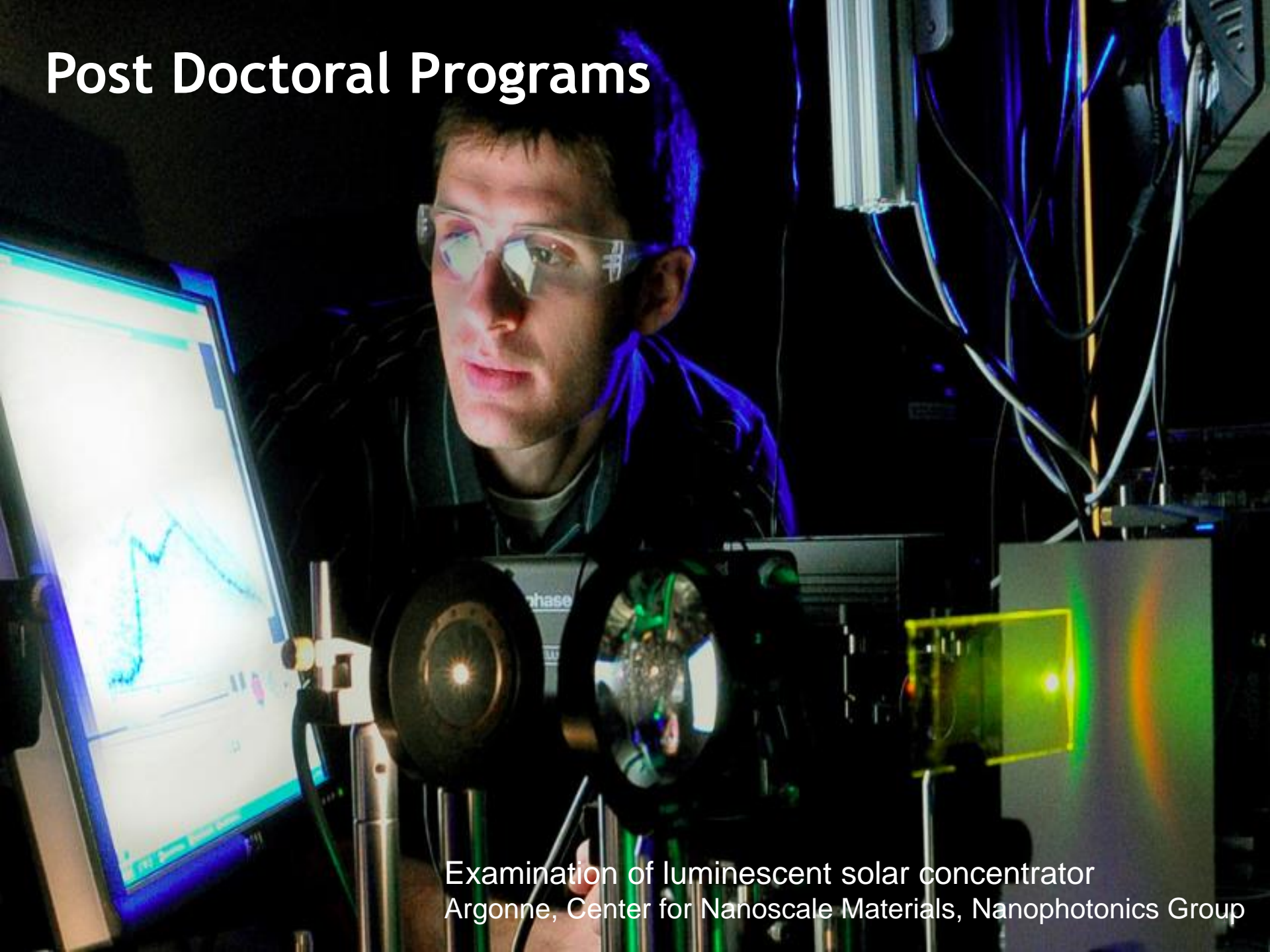


National School on Neutron and X-Ray Scattering

<http://www.dep.anl.gov/>



Post Doctoral Programs



Examination of luminescent solar concentrator
Argonne, Center for Nanoscale Materials, Nanophotonics Group

Post Doc Programs

Appointments:

- Distinguished Fellowships
 - Director Fellows (deadline Feb 2015)
 - Named Fellows (deadline Oct 2014)
- Division Appointments

Continuing Education:

- Lab Committee
- Career Building Seminars
- Yearly Post Doc Symposium

<http://www.anl.gov/education/undergraduates>



Faculty Programs



Faculty Programs

- **Faculty Research Participation (Short-Term Participation) & Guest Faculty Research Participation Program**
- **Faculty Research Leave (Sabbatical Leave)**
- **Visiting Faculty Program**



http://www.dep.anl.gov/p_faculty/frl.htm



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Important Info

- **Summer Internship Applications are due January 9, 2015 (students of Puerto Rico citizenship or US citizenship can apply to the SULI program and non-US citizens can apply to the SRP program)**
- **Post Doctoral Director Fellowships are due February, 2015**
- **Visit Faculty Researcher – we have a couple of spots available for this opportunity and currently have not applicants. If someone is interested, in this experience have them contact us ASAP the deadline is fast approaching and we would like to fill this slot.**



