Workshop on Applying to Internships at National Labs

Dr. Andrienne Friedli

November 10, 2016
Workshop Plan

• Intro to summer internships (20 min)
• Application information (10 min)
• Online searching
• Questions

Handout
National Lab Research Experience

• Build technical skills

• State of the art instrumentation

• Cutting edge research projects

• Top researchers

• Scientific mentors
“My experience was a success and worth every moment I spent away from MTSU. I call on every MTSU student to fill out an application to do an internship at ORNL.

Ramy Sayed (Biology, pre-med)

I’m applying again this summer!

Charysse Archer
(Mathematics)
An Opportunity to Learn

Robert Ehemann (Physics)  Jeremy Tiegs (Geosciences)

- Attend seminars and workshops
- Write a scientific abstract - publish in a journal
- Present at a poster session
- Learn about careers
- Attend a graduate school fair
Apply Your Knowledge

Gail Hayes, Chemistry Teacher
BS Chem ’08, ORNL ‘07

• Relate research experience to classroom experience

Paul Turner, Physics ’11
ORNL STAR(PST) ’10
Profile http://www.orau.org/ornl/
Have Fun!

- In the Laboratory
- Summer peer group
- Outside the Laboratory
ORNL / MTSU Internships

Summer 2006: 4 students and 2 faculty internships
Summer 2008: 13 students
2 faculty, 2 students on grants
Summer 2010: 6 students
Summer 2012: 3 students
Summer 2014: 3 students
Summer 2015: 5 students

Take the opportunity!

Faculty: Drs. Koritsanszky, Volkov, Chong (Chemistry), Carlton, Erenso, Wallin, Mahurin (Physics), Nasab (ET).
SULI  (Science Undergrad. Laboratory internship) Program

Deadline: 1/13/17

http://science.energy.gov/wdts/suli/

Locations:  Ames Lab (Ames, IA)
Brookhaven NL (Upton, NY)
Argonne Natl. Lab (Argonne, IL)
Fermi Natl Accelerator Lab (Batavia, IL)
Idaho Natl. Lab (ID)
Lawrence Berkeley Natl. Lab (Berkeley, CA)
Los Alamo National Lab (Los Alamos, NM)
National Renewable Energy Lab (Golden, CO)
Oak Ridge Natl. Lab (Oak Ridge, TN)
Naval Reactors Directorate
Pacific Northwest NL (Richland, WA)
Princeton Plasma Physics Lab (Princeton, NJ)
Stanford Natl Accelerator Lab (Menlo Park, CA)
Thomas Jefferson Natl. Acc. Fac. (Newport News, VA)
Which Program at ORNL?

- **Undergraduate** students  SULI, HERE@ORNL
  
  http://science.energy.gov/wdts/suli/
  http://www.orau.org/ornl/hereatornl/

  *Apply to both*

- Between ug and grad  school or job
  HERE@ORNL

- **Graduate** students
  HERE@ORNL
The Bottom Line

- 10 Weeks
- Stipend paid monthly or bi-weekly $500 /week
- Reimbursement for inbound and outbound transportation up to $500
- Housing allowance or contract housing $105/week

Application due

Jan 13, 2017 SULI

Feb 1, 2017 HERE
Criteria for Selection

• Academic background
• Interests
• Grades
• Career goals
• Your enthusiasm
• Good match

Andy Standley (Chem & Bio ‘10)
*A Successful Application*

1. **Evidence of ability**
   - Grades >3.0 GPA
   - Recommendation letter

2. **Personal statements**
   - Research interests
   - Career plans
   - Enthusiasm
   - **attention to detail**

3. **Depth of interest**
   - Contact ORNL staff
   - Express enthusiasm for their work

http://science.energy.gov/wdts/suli/

http://www.orau.org/ornl/hereatornl/
Preparation

4. Recommendation letters
- 1 page or more with details
- Discuss academic, research experience
- Potential as a scientist

Choose a faculty member you know well who is knowledgeable about research

Give the recommender a resume or talk to them

Ask for TWO recommendations NOW

5. Experience
- STEM courses
- Research experience

Take advantage of the multiple opportunities to do projects at MTSU first, if possible
Research Prep @ MTSU

Undergraduate students
URECA grants [www.mtsu.edu/urc](http://www.mtsu.edu/urc)
Deadline: 1/26/17 (Spring) 3/30/17 (Summer)

Individual research courses in most departments

Assistant ($500, 60 hours)

Silver level ($1000, 100 hours)

(Gold level – two semesters ($2400)

Platinum – summer ($3500)
Do Your Homework

6. Career Plans and Goals - short and long
Must choose 3 research areas of interest:

• Biology
• Chemistry
• Computer Science
• Energy
• Engineering
• Environmental Sciences
• Geology
• Life Sciences Manufacturing
• Materials Science

• Math/Statistics
• Neutron Scattering
• Nuclear Physics
• Physics
• Robotics
• Social Science
• Waste Management/Remediation

7. Contacts at ORNL (the hard part - but important)
Name, Division/Department, Phone Email

Ask for help if you need it

www.ornl.gov
Science and Engineering Missions at ORNL

- Neutron Science
- Clean Energy
- Advanced Materials (Nanoscale)
- Nuclear Sciences
- Supercomputing
- National Security

www.ornl.gov

Life Sciences - Biology: NSF-REU, NIH, CDC
Press on buttons to find directorates and divisions

Find projects, people

Watch out for user centers (not ORNL projects)

- Neutron Sciences
- Nuclear Science and Engineering
- Physical Sciences
- Environment, Safety, and Health
- Energy and Environmental Sciences
- Computing and Computational Sciences
- Global Security
Finally……

Complete your application!

Questions: afriedli@mtsu.edu

898-2071

GOOD LUCK!

“Diligence is the mother of good luck.”

Benjamin Franklin
Other Government Labs

**NIST** National Institute for Standards and Technology (Gaithersburg, MD) **Summer Undergrad Research Fellowships**
http://www.nist.gov/surfgaithersburg/
Requires package application due 2/13/17
MTSU selections made 1/27/17

**National Institutes of Health** (Bethesda, MD)
Summer Internship Program (SIP) (Biomedical)
**Deadline**: TBD application available mid-November
https://www.training.nih.gov/programs/sip

**Naval Research Labs** (29 labs including Washington, DC)
**Deadline**: 11/30/2016
http://nreip.asee.org/
NASA USRP (Undergrad Summer Res Program)

Deadline 3/01/2017 (open 10/18/2016)
https://intern.nasa.gov/ossi/

Locations:
Ames Research Center (Moffett Field, CA)
Dryden Flight Research Center (Edwards, CA)
Glenn Space Flight Center (Cleveland, OH)
Goddard Space Flight Center (Greenbelt, MD)
Jet Propulsion Lab (Pasadena, CA)
Johnson Space Flight Center (Houston, TX)
Kennedy (FL)
Langley Research Center (Langley, VA)
**Marshall Space Flight Center (Huntsville, AL)**
Stennis Space Flight Center (Stennis, MS)
White Sands Test Facility (White Sands, NM)