

Same workshop, new format

NEUP changed the format of its informative planning workshop, transitioning from an in-person format to a webinar-based format. The workshop included pre-recorded presentations by Office of Nuclear Energy senior management and live webinars with program managers from workscope areas for FY 2013.

The webinar series, held over three days in August, allowed more participation than past workshops. This year more than 200 individual PIs tuned into a live presentation.

"The webinar format allowed DOE to leverage more resources than ever before," said Greg Bala, Program Manager of the NEUP Integration Office. "Overall, there was a lot of positive feedback. We plan to continue using webinars to deliver information to the nuclear community."

In December, nearly 400 PIs from across the Nation attended a webinar that was held to explain DOE's new Consolidated Innovative Nuclear Research Funding Opportunity Announcement (FOA) for FY 2013.

NEUP program managers continue to engage the community in several different ways. In addition to the webinars, NEUP leadership met with nuclear engineering faculty at the 2012 Winter ANS meeting to discuss 2012 NEUP awards and changes to the FY 2013 FOA process.

All NEUP related webinars are recorded and added to NEUP's website to aid in the development of proposals.

NEUP Fellow studies recycling capabilities in fuel cycle models

By Drew Thomas

NEUP Integration Office



Ask the typical teenager what they want to do after high school, and many say they don't know. This wasn't the case for Matthew Gidden who, upon graduation, found that nuclear engineering was a good fit.

But this path has not been an easy one for this student who has a keen interest for math and science. After graduating with a bachelor's degree in nuclear engineering, Gidden was accepted into the University of Wisconsin, Madison's nuclear engineering program where he planned to earn an advanced degree.

Upon his arrival in Wisconsin, Gidden found that research funding for the fuel cycle projects he was interested in was hard to come by. Not wanting to work on a different project, he began a search for independent fellowship funding. In 2009, he was awarded a three-year graduate fellowship from the U.S. Department of Energy's Nuclear Energy University Programs (NEUP). Gidden decided to defer the fellowship for one year to work with AREVA in Paris.

In 2010, with fellowship funding in hand, he began working with Paul Wilson on the development of CYCLUS, a fuel cycle simulator.

"The NEUP Fellowship allowed me to stay on track with what I wanted to do. Funding for graduate research is often restricted to project funding at

a given university," said Gidden. "In my case, I was able to continue pursuing my thesis research on CYCLUS."

CYCLUS is based on a novel approach that will create an adaptable, universal framework for fuel cycle modeling. This approach uses agent-based modeling in a multiple reactor model ecosystem, allowing researchers to track parameters to establish a verified and validated fuel cycle model.

Gidden is currently finishing his research and will be writing his PhD thesis on the work he has completed on the recycling capability of CYCLUS.

His pursuits do not stop at nuclear research. He has been an active member of the Nuclear Engineering Student Delegation, an organization that has recently tried to secure nuclear energy funding for university students through political activism. He hopes that CYCLUS and his other nuclear research experience can influence policymakers to change the way they think about nuclear energy.

"CYCLUS has policy implications as a decision making tool. It can model the fuel cycle at both institutional and regional levels, allowing non-technical decision makers to see results," said Gidden. "I want to bring that kind of technical expertise to public policy decisions."

Gidden has not solidified plans for the future, but after graduation he would like to influence policy in some way, possibly by working as a senate staffer or for the Department of Energy.



Meet the NEUP staff

Val Seeley **NEUP IO Deputy Program Manager**

Val Seeley has worked at Idaho National Laboratory (INL) since 1987 and has served as a finance/project manager on multiple initiatives during that time. Prior to joining NEUP, she was responsible for project planning and financial management in the Campus Development Office at INL.

Val earned her bachelor's degree in Industrial Technology and a master's in Interdisciplinary Project Management from University of Idaho.

In her current position, Val acts as the NEUP Integration Office Deputy Program Manager and assists in the day-to-day operations. She leads the financial operations of the office which include scheduling and administration of contracts.

Val is an avid horse trainer and outdoorsman. In her free time, she teaches horseriding lessons to young children.

Calendar updates

The FY 2013 solicitation process is in full swing. Please be aware of the following close dates:

- Reactor Upgrades Due: May 20th
- GSI Due: June 12th
- Consolidated INR FOA Sections A & B Full Applications Due: June 12th
- Consolidated INR FOA Section C (IRP) Due: June 12th

For more information about DOE-NE funding opportunities, visit neup.gov.

NEUP awards over \$60 million to 46 U.S. colleges and universities in FY 2012

NEUP has continued to have great success and welcomes project award winners in FY 2012.

Here's a breakdown of what happened during this fiscal year.

Research & Development

In FY 2012, NEUP received 648 pre-applications in response to its R&D solicitation. Of the 648, 150 pre-applications were invited to submit full proposals, and a total of 202 full applications were submitted. After two rounds of relevancy and technical reviews, 49 R&D projects were awarded in May 2012.

NEUP welcomed 12 new universities and 36 principal investigators as first-time R&D award recipients.

Overall, 33 universities in 22 states and the District of Columbia received more than \$37 million in R&D funding.

Integrated Research Projects

Three universities were selected to lead multi-institutional collaborative Integrated Research Projects (IRPs). The three teams will develop advanced light water reactor designs with inherent safety features, as well as one or more advanced fuel concepts that could enhance accident tolerance of nuclear fuel systems.

For the first time, Research Councils, UK held a concurrent solicitation for UK researchers to collaborate on IRP projects, leveraging international capabilities more than ever before. All three projects took advantage of this opportunity and included major collaborations with UK researchers.

IRP awards amounted to over \$13 million.

Infrastructure

Two major reactor upgrade grants were awarded to Purdue University and University of Wisconsin, Madison for a total of \$1.7 million.

Twelve universities received minor reactor upgrades to purchase equipment and instrumentation related to the performance and operation of the reactor or associated facilities for a total of \$1.49 million.

Twelve additional universities were granted General Scientific Infrastructure (GSI) support to purchase equipment for specialized facilities and labs. GSI awards amounted to more than \$2.8 million.

Student Educational Support

NEUP continues to support students who will become the nuclear scientists and engineers of tomorrow. Thirty-nine undergraduate scholarships and thirty-one graduate fellowships were awarded.

Additionally, NEUP supports 343 students working on 200 university research projects.

Ongoing Projects

Since 2009 NEUP has funded \$233 million at 81 universities in 34 states and the District of Columbia. Currently, NEUP has 200 active projects that total more than \$178 million in university research and development.

Since FY 2009, NEUP projects have produced 261 publications and 2 patent applications.

For additional details about the FY 2012 awards, including a complete list of universities, PIs, and funding amounts, visit neup.gov.