



GAIN Gateway for Accelerated
Innovation in Nuclear

RECOGNIZING KEMAL PASAMEHMETOGLU FOR HIS LEADERSHIP AT THE IDAHO NATIONAL LABORATORY

HON. MICHAEL K. SIMPSON OF IDAHO IN THE HOUSE OF REPRESENTATIVES

Thursday, September 21, 2017

Mr. SIMPSON. Mr. Speaker, I rise today to recognize Dr. Kemal Pasamehmetoglu for his leadership at the Idaho National Laboratory (INL). For the past five and a half years, D. Pasamehmetoglu has served as the Associate Laboratory Director for Nuclear Science & Technology at INL.



Dr. Pasamehmetoglu has been instrumental in supporting the Department of Energy's Office of Nuclear Energy in developing the roadmap and setting national research and development priorities. His vision and passion for nuclear energy has been a huge asset to INL, the Office of Nuclear Energy, and the nation.

During his tenure, Kemal traveled the globe serving in leadership positions in multi-national collaborative efforts. He enhanced INL's reputation nationally and internationally as a groundbreaking laboratory for nuclear energy research and development.

Most recently, Kemal led the national effort to develop the Gateway for Accelerated Innovation in Nuclear (GAIN) initiative and served as its first National Director. The GAIN initiative provides the nuclear community with access to the technical, regulatory, and financial support necessary to move innovative nuclear energy technologies toward commercialization while ensuring the continued safe, reliable, and economic operation of the existing nuclear fleet.

Kemal has accepted a new position at INL as the Executive Director of the Versatile Fast Neutron Source Research and Development Initiative. A fast reactor would be groundbreaking in providing next generation nuclear fuel testing capabilities.

Kemal holds a doctorate in mechanical engineering from the University of Central Florida and has more than 30 years of research engineering experience within the national laboratory system.



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Tomorrow's Nuclear Fuel

INL Neutron Radiography Reactor re-irradiates fuel to enable safety analyses

By Nora Heikkinnen

Monday, September 18, 2017

A new phase of post-irradiation examinations (PIE) of nuclear fuel has begun at Idaho National Laboratory's Materials and Fuels Complex (MFC).

Using the Neutron Radiography Reactor (NRAD), a research reactor located beneath the Hot Fuel Examination Facility (HFEF) at MFC, researchers successfully re-irradiated a high-temperature fuel known as tristructural isotropic (TRISO) fuel. Merely hours after re-irradiation, the fuel was transferred into the HFEF main radiation hot cell to study the fuel's ability to retain short-lived fission products at high temperatures.



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Secretary of Energy Rick Perry Announces Nearly \$20 Million to Help Commercialize Promising Energy Technologies

Wednesday, September 13, 2017

DOE released its announcement of the fiscal year (FY) 2017 Technology Commercialization Fund (TCF) selections. The awards that are nuclear energy related are listed below. The press release and list of 54 projects at 12 national labs is available on OTT's

website:<https://www.energy.gov/technologytransitions/articles/secretary-energy-rick-perry-announces-nearly-20-million-help>

Argonne National Laboratory

- NRC Qualification of Advanced Reactor Safety Analysis Software, \$75,000
- Passive, High Efficiency Ventilation for the DRACS and other Natural Circulation Systems, \$100,000
- Joint Development of SAS4A Code in Application to Oxide-fueled LFR Severe Accident Analysis, \$400,000
 - Westinghouse Nuclear, Pittsburgh, Pa.
- Advanced Physics-Based Fluid System Performance Monitoring to Support Nuclear Power Plant Operations, \$500,000
 - LPI Inc. Amesbury, Mass.

Idaho National Laboratory

- RAVEN Code Commercial Deployment for Industrial Related Applications, \$250,000
 - FPoliSolutions, Pittsburgh, Pa.
- Integration of PHISICS into the AREVA reactor design suite for commercial application to High Temperature Reactors, \$300,000
 - AREVA NP Inc., Lynchburg, Va.

- Seismic Isolation of Major Advanced Reactor Systems for Economic Improvement and Safety Assurance, \$710,000
 - Southern Company Services Inc., Birmingham, Ala.
 - TerraPower, Bellevue, Wash.
 - X-energy, Greenbelt, Md.

Los Alamos National Laboratory

- Development of a Micro-Reactor for Generator of Nuclear Power, \$750,000
 - Westinghouse Electric Company, Cranberry Township, Pa.

Sandia National Laboratories

- Consolidation of Commercial Spent Nuclear Fuel into a Universal Canister for Storage, Transportation, and Disposal, \$750,000
 - NAC International, Norcross, Ga.

Idaho National Laboratory Change Detection Team Eyes Commercialization

By Paul Menser

Monday, August 28, 2017

With two patents and two R&D 100 awards to its name, Idaho National Laboratory's Change Detection System (CDS) would appear to be a shoo-in for commercialization. Embraced throughout the U.S. government, CDS is diagnostic software that can align two seemingly identical images and enable a person to see even the tiniest variations.

Yet when the INL inventors took a version of CDS tailored toward the nuclear power industry to a commercialization boot camp, their deep dive into "customer discovery" made them readjust their thinking. What they thought would appeal most to potential customers was completely off the mark, but the possibilities their potential customers saw for the program turned out to be much more exciting.



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What is Change Detection System? [Click [HERE](#) for youTube video]

If you have a regulatory question for NRC, please see the [GAIN Regulatory Tab](#) to submit your question.