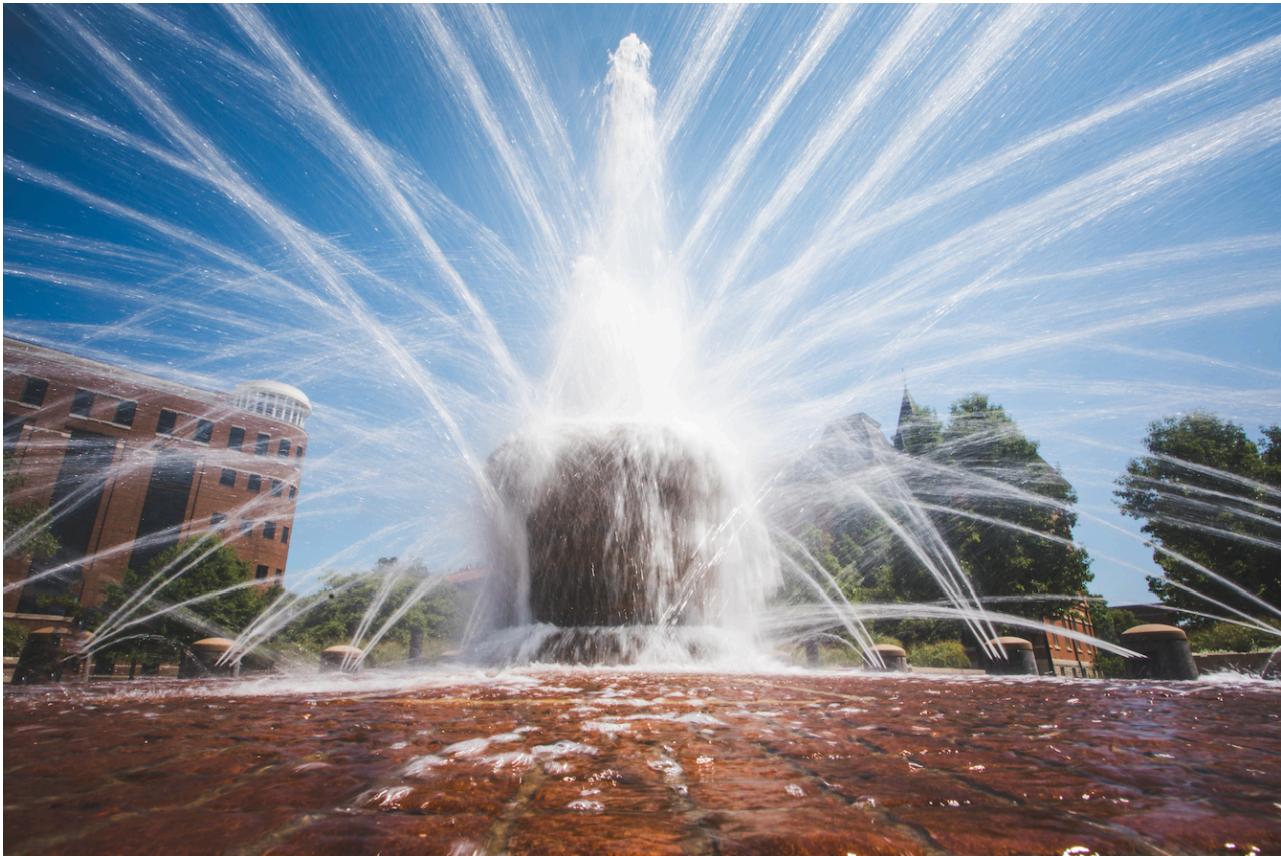


Issue 14, May 2023

# barn

SCHOOL OF NUCLEAR ENGINEERING CHRONICLES

Legend has it that the unit 'barn' was established in 1942 by physicists M.G. Holloway and C.P. Baker while they were having dinner at the Purdue Memorial Union. They came up with the name because  $10^{-24}\text{cm}^2$  is "as big as a barn" for a nuclear reaction process. Professor Alex Sesonske (School Head, 1966-1973) taught in his class that the term came from the common Midwest expression, "someone was such a bad shot at hunting that they couldn't hit the broad side of a barn," implying that the probability of neutrons passing through nuclei to cause fission is so rare, their aim could be equated to that of bad hunters. Hope you enjoy the news. Boiler up!



## Message from The Head

Greetings from the Purdue University School of Nuclear Engineering. With the unprecedented launch of Purdue and Duke Energy's joint study on the feasibility of using small modular reactor (SMR) for West Lafayette campus' long-term energy needs, there has never been a more exciting time for Purdue Nuclear Engineering than right now! We are excited to share the SMR Feasibility Interim Report following a one-year study. We are also proud to present the achievements of our students, faculty and staff in this issue of the 'barn chronicle', which includes our 2023 graduates, faculty promotions, awardees and more.

I wish you a wonderful and safe summer. Boiler up!

Seungjin Kim  
Capt. James F. McCarthy Jr. and Cheryl E. McCarthy Head

Click [here](#) to visit the school website.

**WHERE FUTURE LEADERS**  
of the  
**Global Nuclear Engineering Community**  
**ARE CULITIVATED**

## FEATURED STORIES

### Congratulations to the 2023 Graduates!

The School of Nuclear Engineering participated in two graduation ceremonies held Friday, May 12th, and Sunday, May 14th. 18 BSNE, 10 MSNE and 4 PhD degrees were conferred.

Morgan Smith, the President of Purdue University's Women in Nuclear organization was peer nominated and selected by the College of Engineering Undergraduate Education group as the 2023 College of Engineering Banner Bearer. Dr. Allen Garner was elected by graduating seniors as the 2023 Faculty Marshal.

Read more [here](#).



### Dr. Allen Garner and Dr. Hany Abdel-Khalik are Promoted to Full Professor!

Dr. Abdel-Khalik joined Purdue University in 2014 as a tenured Associate Professor. He is an expert in the development of data-driven / physics-guided algorithms.

Dr. Garner joined Purdue University in 2012 as a tenure-track Assistant Professor, and was promoted to an Associate Professor in 2019. He is recognized for his impactful research on electron emission and gas breakdown; and biomedical application of non-ionizing Radiation.

Read more [here](#).



Professor Allen Garner



Professor Hany Abdel-Khalik

### SMR Feasibility Study Interim Report Released by Purdue University and Duke Energy!

Purdue and Duke Energy determined that small modular reactor and advanced reactor technology is a viable solution to achieving zero emissions at Purdue University's West Lafayette Campus. This report was published following a one-year study into whether advanced nuclear technologies could power the campus and supply excess energy to Indiana's electric grid in the future. Dr. Seungjin

Kim, Head and Professor of Purdue's School of Nuclear Engineering served as a principal in charge.

Read more [here](#).



Purdue University and Duke Energy  
SMALL MODULAR REACTOR AND ADVANCED REACTOR

### Feasibility Study Interim Report



### The Dedication of Dudley and Lambertus Halls Marks a New Home for Purdue's School of Nuclear Engineering!

On April 14th, 2023, hundreds of students, faculty, staff and guests witnessed the building's dedication, followed by a reception and self-guided tours. The fifth-floor north wing of Lambertus Hall is now home to the Purdue University School of Nuclear Engineering. The new residency includes faculty and staff offices, shared space for graduate and undergraduate students and two new computer labs: a nuclear codes lab and a nuclear security lab. Additionally, located in the basement of Dudley Hall are two nuclear laboratories, which includes a new nuclear fusion and plasma teaching lab generously gifted by alumni Jerome and Brenda Blattner.



Read more [here](#).

### ***Student, Faculty, & Staff Achievements***

**Drs. Stylianos Chatzidakis, Ahmed Hassanein, and Lefteri Tsoukalas have been Recognized as Outstanding Engineering Teachers!**

Dr. Ahmed Hassanein and Dr. Lefteri Tsoukalas were recognized for their outstanding teaching in the 2022 spring semester. Dr. Stylianos Chatzidakis was recognized for his phenomenal teaching in the 2022 spring and fall semesters. Individual teachers received an average score on ten Center for Instructional Excellence teacher evaluation survey questions related to instruction and teacher effectiveness on a 5-point scale. Each teacher received a 50% or higher response rate.

[Read more here.](#)



Professor Chatzidakis

Professor Hassanein

Professor Tsoukalas

## Congratulations to the 2022-2023 School of Nuclear Engineering Award Recipients!

The Purdue University School of Nuclear Engineering (NE) held its annual Senior Design Project showcase. Based on evaluations, the NRC-project won. In addition, the RGA Labs, Inc.-sponsored team won the Industry Impact Award at the College of Engineering's inaugural Design Expo.

[Read more here.](#)



## Mitch Daniels and Maria Korsnick as Speakers during the 2023 American Nuclear Society Annual Meeting!

The 2023 ANS Annual Meeting Opening Plenary titled, "Failure is not an Option," will be moderated by Mark Peters, the Executive Vice President for National Laboratory Management & Operations, Battelle. Panelists include Purdue University President Emeritus and Former Indiana Governor, Mitch Daniels, as well as Maria Korsnick, President and CEO of Nuclear Energy Institute and Purdue University School of Nuclear Engineering Advisory Board Member. The panel will also include Dr. Michael Goff, Principal Deputy Assistant Secretary at the U.S. Department of Energy's Office of Nuclear Energy, and Grace Stanke, Miss America 2023 and Zero-Carbon Advocate and Student at University of Wisconsin-Madison.

[Read more here.](#)



Mitch Daniels, Jr.

Maria Korsnick