



PennState

Engineering faculty named senior members of the National Academy of Inventors

Two professors in the Department of Engineering Science and Mechanics honored for work as inventors

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UNIVERSITY PARK, Pa. — The National Academy of Inventors (NAI) has named 54 academic inventors to the spring 2019 class of NAI senior members. Among these are Penn State College of Engineering faculty members Melik Demirel, professor of engineering science and mechanics and Lloyd Dorothy Foehr Huck Chair in Biomimetic Materials in the Huck Institutes of the Life Sciences, and Bernhard Tittmann, professor emeritus of engineering science and mechanics and retired Schell Professor in the Materials Research Institute.

NAI senior members are faculty, scientists and administrators from its member institutions who have demonstrated innovation producing technologies that have brought, or aspire to bring, real impact on the welfare of society. They also have proven success in patents, licensing and commercialization.

Demirel focuses on designing and fabricating advanced, functional nanoscale synthetic biomimetic materials and biological materials for use in the fields of national defense and security, energy and biomedicine. Biomimetics is an interdisciplinary field in which principles from engineering, chemistry and biology are applied to the synthesis of materials, synthetic systems or machines that have functions that mimic biological processes and natural materials and can be used to solve complex human problems. He holds 13 patents.

Tittmann researched materials characterization to better understand how atoms and molecules are arranged within nanomaterials. In this pursuit, he used acoustic microscopy and other tools to investigate and develop materials for use in microelectronics, biomaterials and more. He holds eight patents and three patent disclosures.

According to the NAI, it is a distinct honor for a supporting institution to nominate individuals for the NAI senior member class.

“Melik and Bernhard have made major scientific contributions as inventors, and they deserve this national honor,” said Justin Schwartz, Harold and Inge Marcus Dean of Engineering.

Both professors have and will continue to encourage a spirit of innovation and stress the importance of educating and mentoring the next generation of inventors, according to Schwartz. They also embody the spirit of collaboration across disciplines.

“These researchers have embraced the multidisciplinary opportunities that the intersections between the institutes and colleges enable at Penn State,” said Clive Randall, director of the Materials Research Institute and professor of materials science and engineering. “It is wonderful to see the fruits of their creativity being rewarded with this prestigious honor.”

Andrew Read, director of the Huck Institutes of the Life Sciences, Evan Pugh Professor of Biology and Entomology, and Eberly Professor of Biotechnology, echoed Randall’s sentiment.

“I’m really delighted to see faculty who take risks by working across disciplinary boundaries are getting national recognition,” Read said.

This latest class of NAI senior members represents 32 research universities and government and nonprofit research institutes. They are named inventors on more than 860 issued U.S. patents.

“NAI member institutions support some of the most elite innovators on the horizon. With the NAI senior member award distinction, we are recognizing innovators that are rising stars in their fields,” said Paul R. Sanberg, NAI president. “This new class is joining a prolific group of academic visionaries already defining tomorrow.”

Following a nomination for the NAI senior member class, individuals undergo a rigorous selection process by the NAI Advisory Committee comprised of elected NAI members and other professionals considered pioneers in their respective fields.

Senior members are elected biannually, and nominations are accepted on a rolling basis. Nominations are currently being accepted for the third senior member class in the NAI nomination portal.

A full list of NAI senior members is available on the NAI website.

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