

Ilias Bilonis - Short Bio

Ilias Bilonis obtained his Diploma in Applied Mathematics and Physical Sciences from the National Technical University of Athens in 2008. In 2013, he received his Ph.D. in Applied Mathematics from Cornell University. After graduation, he worked as a postdoctoral researcher at the Mathematics and Computer Science Division of Argonne National Laboratory for a year. In August 2014, Bilonis became an Assistant Professor of Mechanical Engineering at Purdue University, where he established the Predictive Science Laboratory (PSL). In July 2020, he was promoted to Associate Professor. He was promoted to Full Professor in July 2024.

The Predictive Science Laboratory (PSL) led by Ilias Bilonis aims to create artificial intelligence technologies that accelerate the pace of engineering innovations. The applications of PSL span technical systems such as electric machines and high-performance materials, as well as sociotechnical systems like smart buildings and extra-terrestrial habitats.

Bilonis's research is highly interdisciplinary and receives funding from organizations such as NSF, NASA, DARPA, AFRL, as well as several industrial grants from Cummins, Eli Lilly, Ford Motor Company, and Facebook. He has published numerous papers, including 71 journal papers, two book chapters, and 28 conference papers.

In 2019, Bilonis was presented with the "Outstanding Faculty Mentor of Mechanical Engineering Graduate Students" award for his service as a graduate student mentor. He has also developed the course "ME 539 Introduction to Scientific Machine Learning," which teaches data science to engineers. The course utilizes active learning and computational activities, and it is available through edX. Additionally, he has developed a data science course for the core mechanical engineering curriculum and has received the "Outstanding Engineering Teacher Recognition" three times.