



**Wednesday
October 22, 2025
3:10 pm
Room 1003 EECS**

Dr. Jean Paul Allain

U.S. Department of Energy Office of Science

Building Bridges – U.S. Fusion Energy Sciences Vision, Strategy, and Roadmap

The U.S. Department of Energy's vision, strategy, and ongoing roadmap development effort toward the accelerated development of fusion energy will be discussed. The presentation will cover a range of topics, including the restructured Fusion Energy Sciences in the Office of Science (SC-FES) and its supporting programs, public-private partnerships and new programs bridging science to supporting a fusion power industry in the U.S., and international collaborations. Emphasis will be placed on outlining key challenges and gaps being defined in the *Fusion Science & Technology Roadmap* under development by SC-FES in areas of materials, internal components, and fusion nuclear sciences.

About the Speaker: Dr. Jean Paul Allain is the Associate Director of Science for Fusion Energy Sciences (FES) in the Department of Energy (DOE) Office of Science (SC). With an annual budget of \$800M, Dr. Allain leads the FES in enabling and foundational burning plasma science including advanced tokamaks, theoretical and simulations, and long-pulse fusion plasmas. FES also supports research in fusion materials and nuclear science, discovery plasma science and plasma technology, high-energy density plasmas and inertial fusion energy; and US participation in ITER and public-private partnerships. Prior to joining FES in July 2023, Dr. Allain was Professor and Head of Nuclear Engineering at Pennsylvania State Univ. He was associate head of Nuclear, Plasma, and Radiological Engineering at the Univ. of Illinois Urbana-Champaign, and associate professor at Purdue Univ. Dr. Allain led the Radiation Surface Science and Engineering Laboratory (RSSEL) conducting research in plasma-material interactions and authored over 350 peer-reviewed and proceedings in experimental and computational modeling work in particle and plasma-surface interactions with high-temperature materials in nuclear fusion, plasma medicine and nanomaterials. Dr. Allain was also Faculty Entrepreneurial Fellow at UIUC with over 10 patents in advanced materials, founder of Editekk Inc, Energy Driven Technologies LLC, and a Fulbright fellowship in tech innovation.