PURDUE UNIVERSITY | Department of Physics and Astronomy

Memorial Resolution

Virgil E. Barnes, II (1935-2024)

Department of Physics and Astronomy
Purdue University

Virgil E. Barnes, II was a Professor of Physics at Purdue for 49 years and a leader in the golden age of subatomic particle discoveries since the 1960s that led to the modern understanding of the building blocks of the Universe.

Born November 2, 1935 in Austin, Texas, Dr. Barnes studied physics at Harvard before completing his PhD in 1962 at the University of Cambridge on a Marshall Scholarship. His advisor was the luminary Otto Frisch. Dr. Barnes's first job was at Brookhaven National Laboratory on Long Island, then the center of particle physics research in the United States. In 1964, he was on the team that discovered the Omega Minus particle, a key experiment which confirmed the quark model in high energy Physics and contributed to at least one Nobel Prize.

After joining the faculty at Purdue in 1969, Virgil became a founding member of the groups building particle detectors both at Fermilab near Chicago and at CERN in Europe. He developed techniques (still used around the world) for precisely measuring the energy of particles, key to identifying them and allowing many further discoveries.

In 1995, Dr. Barnes and the team at Fermilab discovered the top quark, completing the discovery of this class of elementary particles, begun 31 years earlier. In 2012, he was also a member of the team that discovered the Higgs Particle, which gives all other particles mass. This was the most important discovery in particle physics of the last few decades.

Dr. Barnes spoke French and German, loved classical music, and collected African and Asian art. He delighted his sons and grandchildren with toys and geometric creations, including a wand to create 20-foot-long bubbles and a dodecahedron version of the Rubik's Cube. He even built his own harpsichord.

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Memorial Resolution for

Dr. Nancy F. Gabin
Professor Emerita
Department of History

Dr. Nancy Felice Gabin, born in Brooklyn, NY on June 21st, 1954, passed away after a brief illness on June 21st, 2024, at IU Health Hospice House in Bloomington, IN. It was her 70th birthday.

Nancy served as a faculty member in the Department of History at Purdue University from 1983-2021, retiring after 38 years. She graduated from the Pingree School (South Hamilton, MA) in 1972 and went on to earn a B.A. from Wellesley College in 1977 and a Ph.D. from the University of Michigan in 1984. At Purdue, Nancy taught a variety of undergraduate and graduate courses in U.S. women's history, labor history, and social history. She held numerous administrative roles across campus and in professional organizations, but her central focus was to always advocate for students and ensure they weren't "lost in the tangle of bureaucracy" of higher education. Her numerous accolades included the Jon C. Teaford Award, being written into Purdue's Book of Great Teachers, and the university's highest honor for undergraduate teaching, the Charles B. Murphy Award. Nancy also authored, co-authored, and edited many books, chapters, and articles on women, work, and the labor movement. Throughout her nearly 40-year career, Nancy was a consummate source of guidance, inspiration, laughter, and kindness to her many colleagues and the countless undergraduate and graduate students for whom her office door was always open.

Nancy was a fervent reader with a brilliant mind. She was an expert at The New York Times crossword puzzle and a dedicated neighborhood walker. She loved art and music, Cape Ann, MA and the American Southwest, being near the ocean, fried clams, Michigan Football, and her many, many cats. Nancy held few things as close as her family. Her children, Natty S. Morrison of Lafayette, IN and Katie M. Morrison of Bloomington, IN, both hope to carry on her memory through her stoicism, humor, and compassion.

Prepared by the Department of History.

Leroy (Lee) Schwarz passed away on December 16, 2023, in Lafayette, Indiana. Throughout his career, Lee had a profound impact on the field of operations management as an inspirational teacher, an important researcher, and an influential citizen serving the operations management community.

Lee earned three degrees (BA, MBA, and PhD) from the University of Chicago. His academic career started when he joined the faculty of the Amos Tuck School at Dartmouth College in 1970. Subsequently, he moved to the University of Rochester in 1973, and then to the Krannert School at Purdue University in 1977. In 2005 he was named the Louis A. Weil, Jr. Professor of Management, a position he held until his retirement in May 2012. At Purdue Lee served leadership roles on various educational and research initiatives covering manufacturing, e-business, and healthcare-product supply chains.

Lee is universally recognized for having been the founding editor in chief for *Manufacturing & Service Operations Management*. Lee was exceptional in this role, setting the standards for the journal, building community support and interest, and executing to deliver a high-quality product. This was not an easy task, and indeed, INFORMS nearly pulled the plug on the journal, due to its slow launch. Lee recalls these challenges and struggles in Schwarz (2020). Lee persisted and he never deviated from his vision to create the premier outlet for operations management research. Today's journal is a testament to his leadership.

Research Impact

Lee is highly recognized for his research contributions. His earliest work was on deterministic-demand multi-echelon inventory problems, effectively extending the most fundamental inventory model, the economic-order-quantity model, to inventory systems with multiple stocking points. Lee's contributions were fundamental to this area of inventory theory, developing theoretical results on the structure of the optimal policies, and providing practical algorithms for finding good solutions.

He continued his multi-echelon research with many important developments for stochastic-demand problems focused on operational policies for a central warehouse that supplies local retail sites. Lee developed models that yield both effective policies as well as useful insights for understanding the value of risk pooling in such inventory systems.

Beyond his research, Lee organized and hosted a multi-echelon inventory conference at Purdue in May 1979, which attracted many of the leading researchers at the time. Subsequently, he collected several of the talks from the conference, as well as other submissions, in an edited research volume that contains many influential contributions (Schwarz, 1981).

Lee also performed fundamental research on automated storage and retrieval systems. In a series of papers, Lee established the practical effectiveness of a class-based storage-assignment policy. A key finding was that the system performance with only two or three classes can be near optimal.

Lee's later research efforts provided useful guidelines for supply chain questions such as: How might a manufacturer assist and contract with a sub-contractor who is responsible for developing and supplying a sub-system? How should a newsvendor order from a set of unreliable suppliers?

Lee continued to work on emerging issues in supply chains related to privacy-preserving technology and healthcare. His research on "Secure Supply Chain Collaboration" provided a framework for supply-chain partners to make collaborative decisions without disclosing private information to one another and without the aid of a trusted third party. His research on healthcare supply chains examined the impact of group purchasing organizations (GPOs) on healthcare providers' total purchasing costs.

Educational and Community Impact

In addition to his research impact, Lee has been a stellar educator. For the business school's master's programs, he was recognized 19 times as a Distinguished or Very Distinguished Teacher. He was also particularly innovative in curriculum design, including designing and offering new MBA electives on healthcare supply chains, and sourcing and procurement. For the core operations management class, Lee

developed the information/control/buffer paradigm as a framework for teaching operations (Schwarz, 1998).

Finally, throughout his career, Lee has been an incredibly generous, caring, and thoughtful mentor to his students and colleagues.

Lee's commitment to education is further evidenced by his efforts, with Kalyan Singhal, in organizing the 1996 Production and Operations Management (POM) conference in Indianapolis, with the theme "Teaching POM: Visions, Topics, and Pedagogies." This conference attracted 250 participants who came together to share their practices and innovations in teaching POM, and discussed their visions for the future of POM education. To capture the good ideas from the conference, Lee and Kalyan edited a special issue of *Production and Operations Management*, Vol. 7, No. 2 (1998). This issue highlights many of the challenges of teaching operations, many of which remain current today.

After retiring from Purdue in 2012, Lee continued to do good for his community. He regularly remarked about the joy he got from reading to kindergarten classes and helping seniors with their tax forms. Lee loved music, and even released his own CD in 2011.

We are saddened by the loss of our former teacher, advisor, mentor and colleague. Lee will be missed but his impact on us and our profession will last forever.

PURDUE UNIVERSITY | Department of Physics and Astronomy

Memorial Resolution

Ian Shipsey (1959-2024)

Department of Physics and Astronomy
Purdue University

Professor Ian Shipsey was one of the leading experimental particle physicists of his generation. He was a member of the Purdue faculty from January 1990 until September 2013. Professor Shipsey was named the Julian Schwinger Distinguished Professor of Physics in 2007.

In 2013, Professor Shipsey moved to Oxford as the Henry Moseley Centenary Professor of Physics. At Oxford he was later elected Head of the Department of Physics in 2018 and re-elected in 2023.

Born in London, Professor Shipsey took his first degree at Queen Mary in 1982 and his PhD at Edinburgh University in 1986, mostly working on the CERN NA31 experiment. Ian was elected a Fellow of the Royal Society (FRS) in 2022.

Ian's work dealt with the study of subatomic particles to probe the 'Standard Model' of the building blocks of matter and the forces through which they interact. More recently, Ian's research group has characterized with important new detail the decay of the Higgs boson, discovered at CERN in 2012.

He was a powerful supporter of improving provisions for disabled students and colleagues, having himself been profoundly deaf since 1989.

Professor Irene Tracey, Vice-Chancellor of Oxford University, said, "Ian was one of a kind. He was one of the most impactful particle physicists of his generation: he transformed our understanding of heavy quarks, discovered new physics around b-quark & Higgs bosons and broke new ground in understanding dark matter. Ian was charming, determined, funny, energetic and an indefatigable advocate for world-leading physics."

Adapted from source https://www.ox.ac.uk/news/2024-10-08-professor-ian-shipsey-frs

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