



**Prof./Dr. SWAPAN CHATTOPADHYAY** is a Special Scientist and Associate Laboratory Director at Thomas Jefferson National Laboratory (Jefferson Lab) in Newport News, Virginia, US responsible for its Accelerator Division housing the national CEBAF accelerator and its Free Electron Laser – world-wide unique facilities using microwave superconductivity in linear accelerators to probe the frontiers of particle physics and various photon sciences. He also holds the position of Governor's Distinguished CEBAF Professor of Physics at the University of Virginia at Charlottesville. A Fellow of the American Physical Society (APS), a Fellow of the American Association for the Advancement of Science (AAAS), and internationally recognized for his contributions in high energy particle accelerators, synchrotron radiation sources, free electron lasers and ultra-fast phenomena, Dr. Chattopadhyay serves on various executive, advisory and editorial boards of the American, European and Asian Physical Societies, International Committee on Future Accelerators, US Particle Accelerator School, Physical Review as well as European journals and DOE/NSF reviews.

Born and educated in India till completion of his undergraduate studies from St. Xavier's College of Calcutta University (B.Sc., 1970, Honors in Physics) and Indian Institute of Technology (M. Sc., 1972, Physics, Special Topic: Elementary Particle Physics) as a National Scholar and a National Science Talent Scholar of the Government of India, he received his Ph.D. in Physics from the University of California at Berkeley in 1982 and immediately joined CERN as a Scientific Attaché, working on stochastic cooling of antiprotons in search of the W and Z bosons. Returning to Berkeley in 1984, he made leading contributions to the conception, design, construction and operation of the Advanced Light Source, the design of the Superconducting Super Collider, pioneered the accelerator physics foundation of the Berkeley-Stanford asymmetric B-factory (PEP-II) in search of fundamentals of CP violation in collaboration with Pier Oddone, and initiated the Berkeley Femto-second X-ray Source development program to study ultra-fast phenomena in collaboration with Charles Shank. He was a Senior Scientist, a Visiting Professor at UC Berkeley and the Founder/Director of the Center for Beam Physics (including the l'OASIS lab) at Berkeley Lab/UC Berkeley until his move to Jefferson Lab in 2001.

Since joining Jefferson Lab, after almost 25 years of service to the University of California and Lawrence Berkeley National Laboratory, Dr. Chattopadhyay has consolidated and restructured Jefferson Lab's core competencies by founding and creating two centers of excellence – the Center for Advanced Studies of Accelerators (CASA) and the Institute of Superconducting Radio Frequency Science and Technology (ISRFSST), which together with the Free Electron Laser, Operations and Engineering departments, are responsible for all advanced R&D and future initiatives. Dr. Chattopadhyay leads a multi-disciplinary team of more than 350 in a multi-faceted high-tech environment involving the physics of particles and light beams, forefront electronics, superconductivity, surface science, cryogenics and computer process control applications with an budget of about \$50M. This team took part, from 2001-2005, in the multi-lab effort to provide design, engineering and construction support for the \$1.4 billion Spallation Neutron Source in Oak Ridge, Tennessee and recently completed the construction of its superconducting linac. The team has also joined the international collaborations for linear electron-positron colliders based on Superconducting radio-frequency technology. In addition, Dr. Chattopadhyay is spearheading the research on Energy Recovering Linacs in promoting forefront research and development of unique sources of coherent, powerful and ultra-short pulses of light of all colors for various applications in basic

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and applied sciences/industry. He has promoted interactions between academia, national lab, and industry via various Cooperative Research and Development Agreements.

Named a Fellow of the American Physical Society in 1994, Dr. Chattopadhyay shared the Halbach Team Prize (1996, LBNL, USA) and received the U.S. Department of Energy's Certificate of Distinction for Mentorship in Energy Research Undergraduate Laboratory Fellowship Program. In 1995, he was honored by the Japan Atomic Energy Research Institute (JAERI) as a Distinguished Visiting Scientist of the Year. He is cited in the 2000 Outstanding Scientists of the Twentieth Century, Cambridge, for "Outstanding Contributions in Particle Physics, Beams and Femto-Science". He is the author of many significant refereed papers, served as the Editor-in-Chief (western hemisphere) of the international journal Particle Accelerators from 1991-2000, currently serves in the editorial board of Physical Review Special Topics – Accelerator and Beams, and is frequently invited to present lectures internationally and engage in public discourse on the history of science, including the John Adams Institute of Accelerator Science Inaugural Lecture at Oxford University, UK (2004), the Raja Ramanna Memorial Inaugural Lecture for the Department of Atomic Energy in India (2005) and the BBC Radio 4 Interview on the production of "The Indian Particle Man" on Prof. S.N.Bose, broadcast on January 7, 2005. He is currently engaged in the writing of a monograph on S.N.Bose and his legacy for Oxford University Press, a reference book by the same publisher on Statistical physics of Beams based on Berkeley Graduate Lectures in Statistical Physics, Phys 211 and 212, given in the Physics Department and on the completion of a chamber music composition honoring Bose and Einstein and their love of music, for archiving in the AIP Niels Bohr Library.

Dr. Chattopadhyay has contributed extensively to the development of accelerators in North America, Europe (Italy, Germany, Switzerland, UK), Middle-East (Turkey, Jordan, Israel, Egypt) and Asia (Japan, Peoples Republic of China, Taiwan, Korea, India). He has mentored many scientists who hold distinguished leadership positions throughout the world and has established long-standing collaborations between US and the world, e.g., with CCLRC (Oxford University Adams Institute, Daresbury Lab, UK), US-PRC (Academia Sinica, Peking University, Institute of High Energy Physics in Beijing, Shanghai Light Source, etc.), US-Brazil (CBMM technologies), US-India (DAE institutions: TIFR, CAT, VECC, SINP and IURC), US-Japan (JAERI Spring-8, NARA Advanced Photon Research Institute, KEK, etc.). Since 2002, he serves on the Governor's Advisory Board of Virginia.