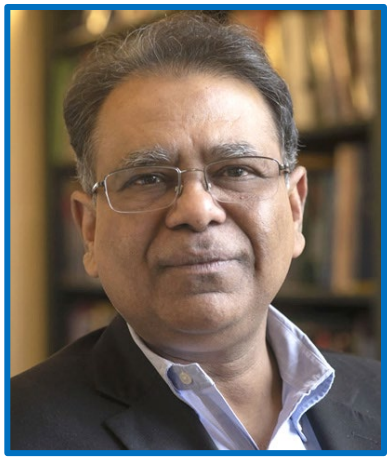
Arup K. Chakraborty



Dr. Arup K. Chakraborty is currently one of the 12 Institute Professors at MIT, the highest rank awarded to a MIT faculty member. He holds the John M. Deutch Institute Professorship. He is also a Professor of Chemical Engineering, and Professor of Physics and Chemistry at MIT. He served as the founding Director of MIT's Institute for Medical Engineering and Science and is currently a core member. He is also a founding steering committee member of the Ragon Institute of MIT, MGH, and Harvard.

After obtaining his PhD in chemical engineering from the University of Delaware and postdoctoral studies at the University of Minnesota, he joined the faculty at the University of California at Berkeley in December 1988. He rose through the ranks, and ultimately served as the Warren and Katherine Schlinger Distinguished Professor and Chair of Chemical Engineering, Professor of Chemistry, and Professor of Biophysics at Berkeley. In September 2005, Dr. Chakraborty moved to MIT. His career has been focused on work that brings together approaches from different disciplines to understand diverse phenomena and harness that knowledge toward practical ends. After an early career in guiding the engineering of catalysts and polymers using quantum and statistical mechanical calculations, since 2000, Chakraborty's work has largely focused on bringing together immunology and the physical and engineering sciences. His interests span T cell signaling, T cell development and repertoire, and a mechanistic understanding of HIV evolution, antibody evolution, and vaccine design. Since 2016, he has also been interested in the role of phase separation in gene regulation. He has co-authored over 230 publications and had delivered over 475 invited lectures. Dr. Chakraborty is a co-author of the book, *Viruses, Pandemics, and Immunity* intended for a general audience.

Dr. Chakraborty's work at the intersection of disciplines has been recognized by numerous honors, including the *NIH Director's Pioneer Award*, the *E.O. Lawrence Medal for Life Sciences* from the US DOE, a *Guggenheim Fellowship*, the *Allan P. Colburn* and *Professional Progress* awards from the *AIChE*, a *Dreyfus Teacher-Scholar award*, and a *National Young investigator award*. Dr. Chakraborty was elected a member of the *National Academy of Sciences* and the *National Academy of Engineering* for different bodies of work. He is also a member of the *National Academy of Medicine*, making him one of very few individuals who are members of all three branches of the US National Academies. He is a Fellow of the *American Academy of Arts & Sciences* and the *American Association for the Advancement of Science*. He is a member of the Board of Governors of the Wellcome Trust, has served on the Defense Science Board, and is a consultant for biotechnology companies associated with Flagship Pioneering. Chakraborty also serves on the Advisory Board of the Lincoln Laboratories. Chakraborty has received seven teaching awards for his classroom teaching at Berkeley and MIT.