

Dr. Avik Chatterjee

Sr. Principal Scientist, CSIR-CMERI

Dr. Avik Chatterjee has more than 26 years experience in Design and Manufacturing in the domain of product development in Mechanical Engineering. Currently he is the Head of Adv. Design and Analysis Group at Central Mechanical Engineering Research Institute (CMERI), Durgapur, under Council of Scientific and Industrial Research (CSIR), Ministry of Science and Technology, Govt. of India. He received B.Tech in Mechanical Engineering from Regional Engineering College, Durgapur (currently known as National Institute of Technology, Durgapur) in 1989 and subsequently M.Tech and PhD from the same Institute. He had experience in Machine Tools and Watch manufacturing divisions of HMT Ltd. before joining CSIR-CMERI in 1996.

His research interests are in Concurrent Engineering spanning Concurrent Design through study of system kinematics and dynamics by virtual prototyping and Agile Manufacturing. He has contributed in approx 25 scientific papers in various journals and conferences related to engineering design, analysis and prototyping of particle accelerators, kinematics of redundant serial linkages, modeling of human grasping kinematics for remote handling, stability analysis in continuous and discrete time domain etc. He has also contributed in 8 technical reports, 5 copyrights and 1 international patent.

He successfully led various projects of National importance in strategic and industrial sector of Mechanical Engineering, where there were constant technology denial and restrictions. Design and Development of 3.2m Radio Frequency Quadruple LINAC (Linear accelerator) was the most significant National achievement as after its successful deployment, as an output of collaborative research between VECC(DAE) and CSIR-CMERI, India joined the club of USA, Canada, France, Germany, Israel, Japan and Russia, for indigenous development of this highly guarded technology. Other important projects like Design and Analysis of high 'Q' 75 MHz Radio Frequency (RF) Cavity for DRIFT Tube LINAC (Q factor- 10K-20K) and Design and Development LINAC Re-buncher, which were funded by VECC (Dept. of Atomic Energy), are few to be worth mentioning.

Currently he is leading the team on Design and Development of Beam Catchers for Facility for Antiproton and Ion Research (FAIR Project), which is a Mega International Science Project, coming up at GSI (Helmholtzzentrum für Schwerionenforschung), Darmstadt (Hesse), Germany through an International collaboration signed by 10 countries and approx. 100 participating R&D Institutes throughout the world. He is also sharing various techno-administrative responsibilities of the Institute, like Intl. business development, technology dissemination, scientific audit, technology transfer, project review, manufacturing resource planning etc.