

RRCAT Past Director's Profile (sr no 1.1(vi))



Feb, 1987- Oct 31, 2003

Dr. Dilip Devidas Bhawalkar is an Indian optical physicist and the founder director of the Centre for Advanced Technology (CAT) later renamed as Raja Ramanna Centre for Advanced Technology (RRCAT).

Dilip Bhawalkar obtained his BSc (1959) and MSc (Physics) (1961) from Sagar University, after which he earned a Masters in Electronics (1963) and PhD in Lasers Physics (1966) from Southampton University. He joined Southampton as a Lecturer but returned to India to join the Bhabha Atomic Research Centre (BARC) in 1967. Dr. Bhawalkar is one of the pioneers of laser in India and one of the early doctoral scholars in the technology when the discipline was at its nascent stage. During this period, he was instrumental in setting up various laboratories and facilities of CAT and developing a *National Laser Programme* for the country. He is credited with pioneering research in optics and lasers in India. During his tenure, CAT became a partner in the International Linear Collider and Large Hadron Collider experiments of the European Organization for Nuclear Research (CERN).

Dr Bhawalkar received the Shanti Swarup Bhatnagar Award (1984), UGC National Lecturer (1984), Goyal Award for Physics (1997) and Firodia Award (2000). He was elected a Fellow of Indian Academy of Science, Bangalore; National Academy of Sciences (India), Allahabad; Optical Society of America and a Foreign Fellow of Russian Academy for Natural Sciences. The Government of India awarded him the fourth highest civilian award Padma Shri in the year 2000.



Nov 01, 2003- July 31, 2009

Dr. Vinod Chandra Sahni Distinguished Scientist, took over the charge of new Director on Nov 1, 2003 after Dr. D.D. Bhawalkar laid down his office.

Dr. V. C. Sahni has made outstanding and sustained contributions to several research and development programmes of national importance in the Department of Atomic Energy. He led a team that studied superconducting materials and a U.S. patent for a superconducting switch was obtained. For his outstanding contributions to basic sciences as well as to the development of new technologies and their applications, the Indian Physics Association conferred him the Murli M. Chugani Award 2004.



August 01, 2009- July 31, 2016

Dr. Parshotam Dass Gupta, Distinguished Scientist, assumed the charge of Director RRCAT on 1 August, 2009 after the superannuation of Dr. V. C. Sahni.

Dr. P. D. Gupta received B.Sc. and M.Sc. degrees from Punjab University, Chandigarh with Gold Medals. He joined Bhabha Atomic Research Centre, Mumbai in August 1973 after graduating from the 16th batch of BARC Training School, where he topped among all disciplines and was awarded Homi Bhabha Gold Medal. He received his Ph.D. in 1984 in the field of laser plasma interaction from Mumbai University and did his post-doctoral work at the Department of Electrical Engineering, University of Alberta, Canada during 1984- 86. In 1990. He was bestowed the Young Scientist Award of the Indian National Science Academy for the year 1984.

Dr. P. D. Gupta moved from BARC to RRCAT, where he set-up an ultra-intense laser plasma interaction laboratory of international standards. He has scientifically contributed in the fields of laser plasma interaction, laser driven particle acceleration, coherent x-ray generation, ultra-short pulse table-top terawatt lasers, high power Nd:glass laser, ultra-fast optical and x-ray diagnostic systems, capillary discharge plasma, etc. Dr. P. D. Gupta is an internationally known laser-plasma physicist. He was elected Fellow of National Academy of Sciences in 2004.



August 01, 2016- August 31, 2016

Dr. Pradeep Kumar Gupta, Distinguished Scientist & Associate Director, assumed the charge of Acting Director of RRCAT after the superannuation of the outgoing director Dr. P. D. Gupta on July 31, 2016.

Dr. P. K. Gupta joined the Laser Division, BARC in the 1974. He got his Ph.D. degree in 1981 from the Herriot Watt University, UK where he worked as Commonwealth Research Scholar during November 1979 to November 1981. Dr. P. K. Gupta moved to RRCAT in 1990 and initiated work on CO laser 2 pumped FIR laser and set up a word class laboratory for pursuing biomedical applications of lasers.

Dr. P. K. Gupta has been awarded the Homi Bhabha Science and Technology Award of the Department of Atomic Energy for the year 1998 in recognition of his contributions on biomedical applications of lasers. He won the prestigious Satyamurthy Memorial Award of the Indian Physics Association for the year 1988 in recognition to his contributions to the research and development of lasers in the mid infra-red region. Dr. Gupta received the annual award of Society for Cancer Research and Communication for the year 2006. Dr. Gupta received Distinguished Faculty Award by Homi Bhabha National Institute (HBNI) in 2015. Dr. Gupta is a Fellow of the Optical Society of America, Indian Academy of Sciences, Bangalore and National Academy of Sciences, Allahabad.



September 01, 2016- March 31, 2019

Dr. Prasad Anant Naik, Distinguished Scientist assumed the charge of Director RRCAT from Dr. P. K. Gupta on September 01, 2016.

Dr. P. A. Naik joined Laser Division of BARC in 1982, and moved to RRCAT in the year 1990. He was awarded Ph.D. degree by University of Mumbai in 1992. During 1993 to 1995, he was "NSERC Canada International Fellow" at University of Alberta, Edmonton, Canada. As an internationally known laser scientist, Dr. Naik made outstanding contributions in the fields of laser plasma interaction, high-power lasers, capillary discharge plasma, plasma diagnostics systems, x-ray laser etc. At RRCAT, he contributed in development of high-power laser chains and diagnostics for investigating various processes in laser-plasma interaction. He has more than 550 research publications to his credit of which 177 are in peer-reviewed journals.

He was awarded Homi Bhabha Science & Technology Award by DAE in 2002. He was awarded Distinguished Faculty Award in 2015 by Homi Bhabha National Institute (HBNI).



April 01, 2019- June 30, 2019

Shri Satish Chandra Joshi, Distinguished Scientist assumed the charge of Director RRCAT on April 01, 2019 from Dr. P.A. Naik who superannuated on March 31.

Shri Joshi completed degree in Mechanical Engineering from the Government Engineering College, Ujjain in 1981. He graduated from the 25th Batch of BARC Training School in 1982. At BARC, he worked in the area of design and development of cryogenics systems and moved to RRCAT in 1986. At RRCAT, Shri Joshi steered various important projects which include the indigenous development of cryo-refrigerator, turbo molecular pumps, UHV devices, development of superconducting cavities testing at 2 K etc. and played a pivotal role in setting up of infrastructure facilities for super conducting radio frequency cavities fabrication, processing and characterization at low temperatures at RRCAT. He spearheaded the programme for the development of the high-power pulsed proton accelerator for spallation neutron source.

He was a Visiting Scientist at High Energy Accelerator Organization, KEK, Japan during 2000-2001. Several Group Achievement Awards of DAE have been conferred upon him and his team in recognition of the important contributions to the ongoing programmes of DAE.

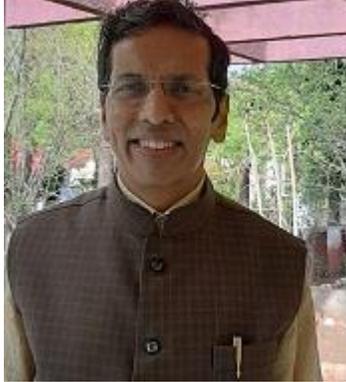


July 01, 2019- May 31, 2021

Shri Debashis Das, Distinguished Scientist & Director, E&I Group, BARC took over the charge as Director, RRCAT from the former Director Shri S. C. Joshi, who retired on superannuation on June 30, 2019.

Shri Debashis Das obtained B.Tech in Electronics Engineering from Mysore university and joined Bhabha Atomic Research Centre (BARC) from 26th batch of training school in 1983. He is Homi Bhabha awardee of BARC training school in Electronics branch. He headed Electronics Division, BARC during the period from January 2015 to October 2016 and subsequently as Distinguished Scientist assumed the office of the Associate Director (E), Electronics & Instrumentation (E&I) Group, BARC from November 01, 2016. Shri Das held the additional responsibility of Chairman & Managing Director (C&MD) of Electronics Corporation of India Limited (ECIL), Hyderabad from November 2016 to June 2018.

Shri Das has been conferred with DAE Excellence and Group Achievement Awards and has been the recipient of the DAE special Contribution Award.



June 01, 2021 – June 30 2024

Dr. Shankar V. Nakhe, Distinguished Scientist, assumed the charge of Director RRCAT on June 01, 2021, from Shri Debashis Das who superannuated on May 31, 2021.

He graduated from Walchand College of Engineering, Sangli in 1985 with first rank in Electrical Engineering (under Shivaji University). Post that, he worked with Meltron Semiconductors Ltd. for one year. He joined RRCAT after graduating from the 30th batch of BARC training school in 1987. He subsequently obtained M.S. (Engg.Sc.) from Indian Institute of Science, (IISc) Bengaluru.

At RRCAT he has worked on design, development and utilization of various laser and electronic systems. His main areas of work are high voltage pulse power supplies, electronic instrumentation, and control electronics for various laser systems. Many laser and photonics systems developed under his leadership are being used at various institutes. He played a key role in the development of the fiber Bragg grating inscription facility at RRCAT. This unique facility developed at RRCAT is being used for the development of specialized sensors for niche application areas of temperature and strain measurement. He played a pivotal role in the transfer of technology of point-of-care biomedical instruments developed at RRCAT. He took a leadership role in setting up the incubation centre at RRCAT.

Dr. Nakhe served as the General Secretary of Indian Laser Association and later as its President. He has been conferred with many awards, which include DAE ESET awards and best paper awards. He is the author/ co-author of about 60 peer reviewed journal papers, articles in professional magazines, and about 130 conference papers.