IIM AWARDS 2022

IIM-Distinguished Educator Award

The IIM Distinguished Educator Award, established in 2009, is awarded to recognize distinguished services to Metallurgical Education.

The **IIM Distinguished Educator Award 2022** is awarded to

Prof Bikramjit Basu

Professor, Materials Research Centre, IISC Bangalore

Jointly with

Prof M Kamaraj

E.G. Ramachandran Institute Chair Professor,
Dept. of MME, IIT Madras

Professor Bikramjit Basu is widely regarded as a 'teacher in a true sense' in a much broader perspective. In terms of scientific talent mentoring in the field of Engineering Ceramics and Biomaterials, he has been a primary advisor of 31 PhD students (including ten female students and eight ongoing), 25 MTech/MS, 52 research interns, including 32 undergraduates, and 20 post-doctoral research fellows/Project Scientists; 2 PhD students are Prime Minister Research Fellows at IISc. Most importantly, 15 of his former students are currently serving as faculty members at IITs or NITs in India, or serving National laboratories related to Space/Atomic Energy research, or Multinational companies.He contributed largely to the Institute level core courses at IIT Kanpur. As an instructor-in-charge for Introduction to Manufacturing Processes,he taught 290 students from multiple engineering disciplines as well as close to 100 students in Nature & properties of Materials course. Apart from teaching several Institute core and departmental core courses in last one decade, Dr Basu designed and taught a number of new graduate level courses, e.g. Materials for Biomedical Applications, Design and selection of Materials, Tribology of Materials as well as Nanomaterials.

Since joining Indian Institute of Science (IISc), Bangalore in May, 2011, Dr Basu contributed largely to the course curriculum of undergraduate course for 'Materials' program and graduate (PhD) course curriculum for Bio-Engineering students. In particular, he is involved in designing the course content as well as course notes / slides for one course on 'Introduction to Materials Science' and another on 'Introduction to Properties of Materials and living system'. He also designed and taught a new course on 'Introduction to Biomaterials', which was attended by students from Chemical Engineering and Materials Research Centre.

The nominee has mentored dental surgeons to develop research programs at Ramaiah University of Applied Sciences and collaborated with prosthodontists, orthopaedic

surgeons, neurosurgeons and uro-oncologist in six different hospitals. Beyond his research group, Bikramjit has been committed to mentoring several early career researchers/ faculty colleagues at IITs, NITs, and less-endowed academic institutes, for them to develop independent research programs in Materials Science or Biomaterials/ Bioengineering. Beyond academia, he has been regularly mentoring many professionals from corporate, MSME, and start-ups. This has allowed the growth of biomaterials and implants-related business or applications in strategic sectors (space) in India. In addition, the nominee has delivered 148 invited lectures, 74 award lectures/keynote/plenary lectures, one convocation speech; organized 20 conferences/symposiums in India and 24 symposiums in major international conferences. He also taught several Masters Students in Belgium, Slovakia, France, Slovenia, Nepal and UK. All such contributions have left a deep impact on several thousands of young researchers in India and abroad.

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Prof. Kamaraj is currently E.G. Ramachandran Institute Chair Professor (HAG Grade) in the Department of Metallurgical and Materials Engineering (MME) at the Indian Institute of Technology Madras (IIT Madras), Chennai, India. Prof. Kamaraj earned his doctorate in Metallurgical and Materials Engineering at IIT Madras in 1990 and his PhD thesis was awarded with Sudarshan Bhat Memorial Prize for the Best Ph.D thesis. Subsequently he worked as Research Engineer at EWAC Alloys Ltd (L&T Ltd.), Mumbai (1990-94) where he was involved in the development of new wear-resistant coating materials for various applications.

Subsequent to this, he continued as Research Fellow on high temperature fretting fatigue of advanced materials at Nagaoka University of Technology, Japan (1994-96), and as STA Fellow at National Institute of Industrial Safety, Tokyo, Japan (1996-97). During this stay he took keen interest in teaching and mentoring Japanese research scholars in the field of high temperature materials. Later he joined as Guest Scientist at Ruhr-Universität Bochum, Bochum, Germany (1997-99) where he has contributed to the identification of basics of high-temperature micro-deformation mechanisms of high temperature materials. On his return to India, he served as Industrial Consultant at Coimbatore, Visiting Scientist at VSSC, Trivandrum, (1999-2000), and then joined as a Faculty at IIT Madras in October 2000.

As a faculty Prof Kamaraj has inculcated many graduate students and research scholars with creative zeal and passion to address the industrial problems, with the knowledge they gained through their curriculum, to offer practical and sustainable solutions. He has been an active faculty advisor for Master's and Ph.D. students. Prof. Kamaraj is a kind and attentive mentor, loved by all students, and is always generous and encouraging to the betterment of students for their placements and higher studies. He has been very helpful in guiding the students for developing leadership qualities by

encouraging them to organise events like the summer school, materials camp, training courses, and workshops. *Prof. Kamaraj has been cited in the World's Top 2% of Scientists from India in the field of Materials.*

Prof Kamaraj has rich academic experience gained in the last three decades, and currently he is providing innovative ideas to start new academic programmes in tandem with the new national education policy 2020 to keep pace with the demands of Indian industries alongside revamping the existing curriculum to inculcate practice/skill-oriented learning for the engineering education. He is a Fellow of the Indian National Academy of Engineering (FNAE) (2021), ASM International, USA (FASM, 2018), Indian Institute of Metals (FIIM, 2019), The Institution of Engineers (India) (FIE, 2017) and Indian Welding Society (FIWS, 2012).