Biography

Roger Narayan MD, PhD has pioneered laser (photon) processing of new biomedical materials and laser-based 3D printing of biomedical devices with features ranging in size from the nanoscale to the mesoscale. This interface between materials and manufacturing of medical devices is absolutely crucial to meet future challenges of medical treatment and improve quality of life. His pioneering contributions have been duly recognized by prestigious awards from biomedical, materials, and manufacturing societies such as ASM International, TMS, ACerS, AIMBE, and ASME. His research work is published both in high-impact materials and medical journals such as Materials Today and MRS Bulletin.

The second editions of his highly popular textbook Biomedical Materials and reference book Rapid Prototyping of Biomaterials were recently published. He is also editor of the very popular ASM Handbook on Materials for Medical Devices; a supplement to the handbook, entitled Additive Manufacturing in Biomedical Applications, is in production. He also serves as Editor-in-Chief of Biomedical Materials & Devices journal (Springer Nature), Biomaterials Forum magazine (Society for Biomaterials), the Encyclopedia of Biomedical Engineering, (Elsevier), and the Encyclopedia of Sensing & Biosensing (Elsevier).

Dr. Narayan has devoted significant efforts to build collaborations with materials science researchers in Asia, Europe, and South America. In 2014, he completed a Fulbright Scholar Program that involved teaching a graduate-level biomaterials course at the University of Sao Paulo and giving research lectures in Rio de Janeiro and Sao Paulo. In 2016, Dr. Narayan completed a Royal Academy of Engineering Distinguished Visiting Fellow Program at University College London, which involved giving lectures on biomaterials at University College London and the University of Cambridge. He has also completed Fulbright specialist projects at the University of Otago (New Zealand) and the National Polytechnic Institute (Mexico). Dr. Narayan's Visiting Advanced Joint Research Faculty Award at the Indian Institute of Technology-BHU commenced in 2018 and renewed in 2020. In addition, he has received funding from the National Science Foundation for international collaborations with colleagues in Austria, Germany, Australia, and New Zealand; these funded efforts have resulted in numerous conference presentations and archival journal papers.

Dr. Narayan has supported numerous activities by the Materials Research Society in the field of biomaterials. For example, he organized the December 2011 special issue entitled "Laser micro- and nanofabrication of biomaterials" in MRS 2011, which included articles from Jackie Ying, Min Wang, Chee Kai Chua, Fabien Guillemot, Koji Sugioka, Shaochen Chen, John A. Jansen, and Doug Chrisey. In addition, he serves as chair of the Materials Research Society Bio Staging Task Force on 3D/Bioprinting, which facilitates conference programming and publication activities related to medical 3D printing for the society. Dr. Narayan is also heavily involved in programming at MRS meetings, having served as one of the chairs of the 2016 Spring Meeting and as a symposium organizer at the 2008 Fall Meeting, 2009 Fall Meeting, 2010 Fall Meeting, 2011 Fall Meeting, 2013 Fall Meeting, 2015 Fall Meeting, and 2018 Fall Meeting. He also served as an Associate Editor of MRS Advances between 2015 and 2019, and is currently serving as a guest editor of the journal's COVID-19 special issue.

In addition, Dr. Narayan served as a leader in several professional societies that serve the biomaterials community. Between 2013 and 2016, he served on the board of directors of The Minerals, Metals and Materials Society (TMS) as director of its Functional Materials Division. The Functional Materials Division serves as a home for additive manufacturing, biomaterials, electronic materials, energy materials, magnetic materials, nanomaterials, and thin film researchers at TMS. Dr. Narayan achieved several noteworthy accomplishments in TMS coverage of biomaterials during his tenure as chair, including continuous growth in symposia and abstract submissions, steady growth in the number of student presentations and posters, and a steady increase in division membership.