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## **PRESS-RELEASE**

### **IIT (ISM) Dhanbad Professor Sanjeev Kumar Raghuwanshi Co-Authors Book “Introduction to Microwave Photonics” Published by SPIE**

IIT (ISM) Dhanbad proudly announces the publication of “*Introduction to Microwave Photonics*”, a comprehensive book authored by Prof. Sanjeev Kumar Raghuwanshi, Department of Electronics Engineering, IIT (ISM) Dhanbad, along with Prof. Mandeep Singh, Dr. Ritesh Kumar, and Prof. Santosh Kumar. The book has been released by SPIE – the international society for optics and photonics, as part of its prestigious PM Series (PM363).

Microwave photonics, a rapidly evolving field at the intersection of microwave engineering and photonics, promises transformative applications in high-speed communications, radar, aerospace, defense, biomedical sensing, and signal processing. The book delves into both theoretical foundations and experimental techniques, with focused discussions on photonic generation and processing of arbitrary microwave waveforms, dispersion compensation through fiber Bragg gratings, microwave photonic sensor systems, highly steerable beamforming, and photonic excitation of antennas.

Prof. Sanjeev Kumar Raghuwanshi, the lead author, is a distinguished academician whose research interests span Numerical Methods of Optical Waveguides, Optical Sensors, Microwave Photonics, Optical Fiber Communication, Plasmonic Waveguides, and Specialty Optical Fibers. Over the past decade, he has made significant contributions to the field of photonics and optical communication, with more than 100 peer-reviewed SCI journal articles, six books, and seven Indian patents to his credit.

Prof. Raghuwanshi received his B.E. in Electronics and Instrumentation Engineering from Shri Govindram Seksaria Institute of Technology and Science, Indore (1999), M.Tech. in Solid-State Technology from IIT Kharagpur (2002), and Ph.D. in Fiber Optics from IISc Bangalore (2009). He was also a Postdoctoral Research Fellow at the City University of London (2014–2015) under its Instrumentation and Sensor Division.

His international recognition includes the Erasmus Mundus Scholarship for Ph.D. studies and the Best Research Award (Canara Bank Publication Award) at IIT (ISM) Dhanbad (2016–2018). Prof. Raghuwanshi has served as a reviewer for several leading IEEE journals and continues to contribute as an associate editor with reputed platforms such as IEEE Sensors Journal, IEEE Access, Springer Nature, and Optica.

The publication of “*Introduction to Microwave Photonics*” with ISBN 978-1-5106-6639-9 marks another significant academic milestone for IIT (ISM) Dhanbad, further cementing the institute’s role in global research and innovation.

Rajni Singh  
**Dean (Corporate Communications)**