

INSTITUTE OF  
SMART STRUCTURES  
AND SYSTEMS



## PROF. SELVARAJAN MEMORIAL LECTURE

JOIN THE TALK ON

**24<sup>th</sup> Sept 2022,  
Saturday**

4:00 p.m. IST

GOOGLE MEET

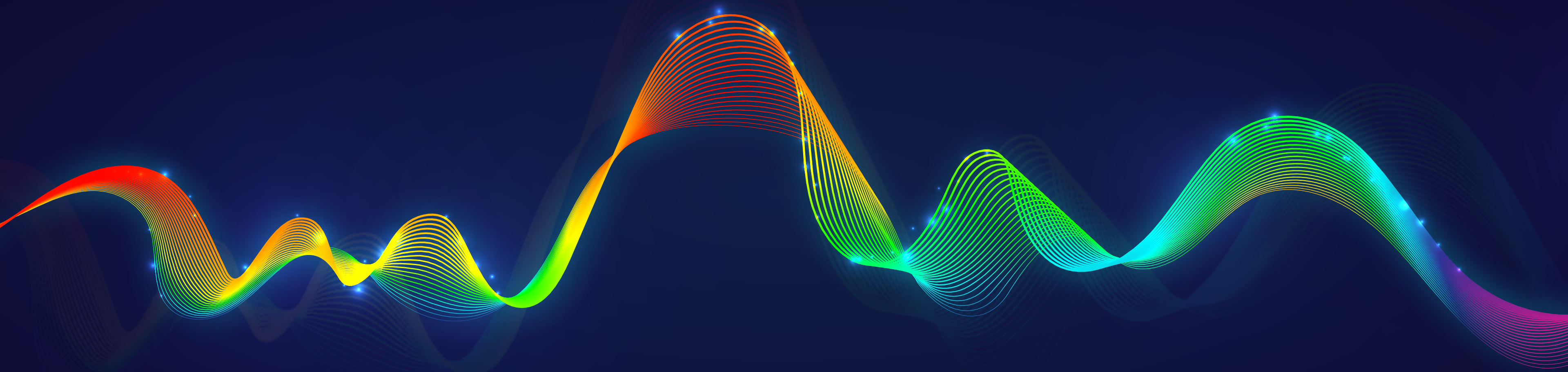
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REGISTRATION

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## FIBER BRAGG GRATING (FBG) SENSORS – Recent Novel Applications in the Chemical, Environmental and Bio Medical Domains

Fiber Bragg Grating (FBG) Sensors have been traditionally used for sensing strain, temperature, vibration, etc., and have found applications in Structural Health Monitoring. In the recent times, several new applications of FBG sensors have emerged in the bio-medical domain including measurement of radial arterial waveforms, gait analysis, eyeball movement, etc. Further, clad etched, functionalized FBG sensors, coated with polymers & nanomaterials, have been found to exhibit several orders of magnitude higher sensitivity compared conventional sensors in the detection of biomarkers. In addition, functionalized, clad etched FBG sensors have found applications in environmental pollution monitoring, chemical sensing, etc.

This talk will highlight some recent applications of FBG and etched FBG sensors in the Chemical, Environmental and Bio Medical Domains.

### ABOUT THE SPEAKER



#### **Prof. Asokan S**

*Department of  
Instrumentation and  
Applied Physics,*

Indian Institute of Science,  
Bangalore

Prof. S. Asokan received his M.Sc. degree in Materials Science from the College of Engineering, Anna University, Madras, India, and the Ph.D. degree in Physics from the Indian Institute of Science, Bangalore, India. He is currently the Chair of the Department of Instrumentation and Applied, Indian Institute of Science. Prof. Asokan edited two books and published more than 275 papers in international journals/Books. He has 18 national and international patents and has graduated more than 45 students for Ph.D. degree.

Prof. Asokan has received many awards and honors including Martin J Foster Gold Medal for best Ph.D. thesis in the Division of Physical and Mathematical Sciences, Indian Institute of Science, Young Scientist Medal of the Indian National Science Academy, Indian Institute of Science Alumni award for excellence in research in Engineering, MSIL Chair Professorship, etc. He is a Fellow of the National Academy of Sciences, India.

His research interests include high pressure science & technology, amorphous semiconductors, phase change memories, thermal wave spectroscopy and fiber optic sensors.