IEEE Photonics Society Bangalore Chapter
in association with
IEEE-IISc Photonics Student Chapter

Technical talk on 16 May 2020, 9.30am-10.30 am

International Light Day Program

Venue - Online through WebEx Platform

Program

- **Welcome - Dr. S Malathi, Chair IEEE Photonics Society Bangalore Chapter (1 min).**
- **Light Excellence Award announcement by Prof. Nandhini V L, Vice Chair, IEEE Photonics Society Bangalore Chapter.**
- **Technical talk (45 min) - Dr. Gopalakrishna M Hegde, Center for Nano-Science and Engineering, Indian Institute of Science**
- **Topic: Non-interferometry based optical imaging technique for quantitative high.**
- **Concluding remarks (5min)**
- **About the activities of IEEE Photonics Society Bangalore Chapter, by Dr. Preeta Sharan, Photonics Students Chapters Coordinator.**

All are welcome

No registration Fee

Please confirm your participation on the following link
https://forms.gle/a5qHL7E21qZWXmWD6

Meeting Link Details

https://meetingsapac17.webex.com/meetingsapac17/j.php?MTID=mecccd10e76eed8628e89bde1a9bb4a2d
Meeting number:583 306 492
Password: 2UNmhmm3a2j (28664663 from phones and video systems)

ILD-2020 Talk: Dr. Gopalakrishna M Hegde

Title: "Non-interferometry based optical imaging technique for quantitative high speed flow diagnostics"

Abstract: Optical imaging, sensing and communication systems are the integral part of the aerospace, civil aviation and, defence applications and research. Optical imaging, sensing techniques also played crucial roles in aerospace research especially in ground based test facilities. The most commonly employed diagnostics in aerodynamics studies include quantitative imaging (optical flow visualization) of the flow field, surface measurements of pressure, temperature/ heat transfer, forces and skin friction on the space vehicle models placed in the free stream. This talk will present some of our recent work on optical imaging technique, developed to study various aspects of aerodynamics in hypersonic research facilities. Development of non-interferometry, non-Visualization will be discussed. Present and future challenges and advantages of these techniques will be highlighted. It can anticipated that the laser based density-sensitive visualization flow research, however they are expensive and complicated for implementation for huge test facilities.

Gopalkrishna Hegde received his M.Sc and Ph. D in Physics, all in India. He is currently the Bio Systems Science and Engineering and Aerospace Engg. Dept, also was with CeNSE, Indian Institute of Science, Bengaluru. He was an Assoc. Prof. Ngee Ann Poly and in UK Open Univ. Singapore, and Research Director at the NP-AEM Centre of Innovation, Singapore (1996 international, national journals and conference proceedings mainly in the areas of photonics. He has granted/filed seven patents and has guided many PhD and MS/M Tech students. He talks/key notes at various international conferences and institutions. He has been advisory/review/organizing member of many international and national conferences and workshops and a reviewer for many international journals. He has completed many sponsored research projects in India and in Singapore. He is the member of Board of Management, council and board studies of few Universities in India.He was a consultant to many industries in Singapore. He was Visiting Professor/Scientist Institute, Université de Franche-Comté, France, Univ. of Rennes France, Univ. of California, LA USA, La Trobe University Australia and NTU Singapore. His current research interests are in the areas of photonics, optical sensors, integrated optics, nano photonics, photovoltaic, optical flow visualization, micro and opto-microfluidics. He is multitalented as performing artist of Yakshagana, Hindustani Tabala and a Marathon runner, a progressive farmer.He has over 180 publications in has presented in the area of photonics.