



Karnatak University, Dharwad

(NAAC Accredited with "A" Grade 2022)



ε-Club, Department of Physics & Electronics
and

Dr. M R Gorbhal Foundation, Bangalore

Invites you to the Second Dr. M R Gorbhal Foundation Guest Lecture on

**Advanced Materials Research and Development
for Space Applications**

By

Dr. Girish Manjunath Gouda

Laboratory for Electro-Optics Systems (LEOS)

Indian Space Research Organization (ISRO), Bengaluru

Date: 21-09-2023 Time: 10.30 AM

Venue: S. Chandrasekhar Hall, Dept. of Physics, K.U. Dharwad

You are cordially invited

Shri. Ramesh Gorbhal
President
Dr. M R Gorbhal Foundation

Prof. R. F. Bhajantri
Chairman
Dept of Physics & Electronics

Dr. Girish Manjunath Gouda

Laboratory for Electro-Optics Systems (LEOS)

Indian Space Research Organization (ISRO), Bengaluru

Special Lecture: Advanced Materials Research and Development for Space Applications

Date: 21-09-2023, Time: 10.30 AM

Venue: S. Chandrasekhar Hall, Dept. of Physics, K.U. Dharwad



The talk highlights advanced materials research and development for space applications. The topics include optical thin films, Nano materials, multi component metal oxide etc. A quick glance will be there on applications of satellite with reference to remote sensing and earth observations, space exploration etc.

Dr. Girish Manjunath Gouda is working the areas of design, development and fabrication of optical thin films, Carbon Nano Tube Coatings, electro-ceramic materials and Laser coatings for space applications. He has more than 50 academic publications including peer reviewed papers, conference proceedings, conference presentations, book chapter and a book in Kannada for School children. He delivered invited talks and chaired sessions in national/ international conferences. He obtained his master degree in Physics from Karnatak University Dharwad and PhD from Bangalore University. He is a Scientist at ISRO and currently Head of Thin Films Division at LEOS-ISRO Bengaluru.

Dr. M R Gorbal Foundation, Bangalore:

Dr. M R Gorbal Foundation was established in Bangalore in the year 2022. The Foundation has signed MoU with the Department of Physics, K.U. Dharwad on 18th January 2023.

Objectives: Funding the deserved meritorious Ph.D. students with scholarships and assist the Department of Physics to host guest lectures and seminars from eminent scientists in the domain to promote scientific knowledge.



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Department of Physics & Electronics
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Invites you to Special Lecture
on

Risk of Radiological Dose from
Nuclear Power Plant Accident Release

By

Dr. Shripad T. Revankar

Professor and Director of Multiphase and Fuel Cell Research Labs

PURDUE UNIVERSITY

School of Nuclear Engineering

West Lafayette, IN 47907 USA

&

Indian Institute of Technology Jammu, India

Date: 21-09-2023

Time: 12.00 Noon

Venue: S. Chandrasekhar Hall, Dept. of Physics, K.U. Dharwad

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Dr. Aravind S. Bennal

Chairman ε-Club

Dept of Physics & Electronics

Prof. R. F. Bhajantri

Chairman

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Dr. Shripad T. Revankar

Professor and Director of Multiphase and Fuel Cell Research Labs

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School of Nuclear Engineering, West Lafayette, IN 47907 USA

Indian Institute of Technology Jammu, India

**Special Lecture: Risk of Radiological Dose from Nuclear Power Plant
Accident Release**

Date: 21-09-2023, Time: 12.00 Noon

Venue: S. Chandrasekhar Hall, Dept. of Physics, K.U. Dharwad



Currently there are over 460 nuclear power plant operate in the world with 22 nuclear power reactors in India. The industrial safety record of nuclear plants is better than aviation industry. However nuclear reactors carry radioactive material and a severe accident can lead to release of the radioactive material to the environment. The reactors have safety systems and the sites are zoned to isolate the radiation from public. The talk will introduce 3 major accidents that have led to release of the radioactivity. The talk will address the methods of calculating the risk from such releases resulting from severe accident. When it comes to practical simulation on radiological dose, the source term calculation and the assumption about various weather conditions are considered important. In the dose calculation for sheltering-in-place those who live near the nuclear power plants, the effects of sizes or shapes of shelters are examined. The talk will present recent progresses in dose calculation from such releases.

Dr. Shripad T. Revankar: Dr. Shripad T. Revankar is a Professor of Nuclear Engineering and Director of Multiphase and Fuel Cell Research Laboratory in the School of Nuclear Engineering at Purdue University, West Lafayette, Indiana. He is currently Visiting Senior Professor at the Indian Institute of Technology Jammu. He received his BS, MS and Ph.D. all in Physics from Karnatak University, India and M. Engg. in Nuclear Engineering from McMaster University, Canada. He has worked as a post-doctoral researcher at Lawrence Berkeley Laboratory and at the Nuclear Engineering Department, University of California, Berkeley from 1984 to 1987. He has over 40 years of research experience in advanced reactor systems, reactor safety, reactor thermal hydraulics, composite fuel for advanced nuclear reactors, instrumentation, multi-phase flow and heat transfer, microgravity multiphase flow, direct energy conversion, hybrid power systems, nuclear hydrogen generation, solar energy storage, packed bed reactor, renewable energy, and fuel cell technology. He has published over 400 peer reviewed technical articles in archival scientific journals and conference proceedings and author/coauthor of several books including: *Storage and Hybridization of Nuclear Energy: Techno-economic Integration of Renewable and Nuclear Energy*, Academic Press, November 2018, and *Fuel Cells-Principles, Design, and Analysis*, CRC Press, June 2014. He is Chief Editor of *Frontier in Energy- Nuclear Energy*. He is life member of ASME, ANS (American Nuclear Society) and AIChE (American Institute of Chemical Engineers, Indian Society for Heat and Mass Transfer, and Korean Nuclear Society. He was elected as Fellow of ASME in 2008, Fellow of ANS in 2015 and Fellow of AIChE in 2017. He was recently honored with two major international awards: *Technical Achievement Award* by American Nuclear Society and *Long Service Award* jointly by Nuclear Engineering Division of ASME, Japan Society of Mechanical Engineers and Chinese Nuclear Society, for his significant contributions to reactor thermal-hydraulics through experiments, and modeling of phenomena important in the analysis of nuclear reactor safety and applications, and sustained professional services.

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