



**GITAM**  
(DEEMED TO BE UNIVERSITY)  
(Estd. u/s 3 of the UGC Act, 1956)  
**HYDERABAD**  
NAAC accredited with **A++ Grade**



## Satellite event of ICWIP2023

Workshop on

### Teaching Physics Effectively Online and Women in STEM

8<sup>th</sup> July 2023

Organized by

*Dept. of Physics, School of Science, GITAM – Hyderabad  
and Gender In Physics Working Group (GIPWG)*

#### About Conference

The International Conference on Women in Physics (ICWIP) is a biennial conference conducted by the International Union of Pure and Applied Physics (IUPAP). This year it is being hosted by India in a hybrid mode. In connection with this, ICWIP is conducting a one day workshop on *Teaching Physics Effectively Online and Women in STEM* at GITAM Hyderabad. The event will be followed by a public lecture by Dr Vandana Sharma, IIT Hyderabad.

#### Resource Persons

- Dr. Ram Ramaswamy, IIT Delhi
- Dr. Bindu Bambah, University of Hyderabad
- Dr. Jyotsna Jha, Director,  
Centre for Budget and Policy Studies
- Dr. V Madhurima,  
Central University of Tamil Nadu
- Dr. Venkatesh Chopella's team – IIIT, Hyd.
- Dr. Barilang Mawlong, University of Hyd.

#### About GITAM

Gandhi Institute of Technology and Management [GITAM] (a deemed to be University U/S.3 of the UGC Act, 1956) popularly known as GITAM is an educational institution in Andhra Pradesh, India. Established in 1980, that it was conferred the status of deemed to be university in August 2007 by the UGC, stands testimony to its quality and potential. Subsequently, GITAM Hyderabad Campus was started in 2009, followed by Bengaluru Campus in 2012. GITAM - Hyderabad, an off campus established in the year 2009 currently hosts six schools including Basic Sciences, Pharmacy, Management, Architecture, Social Sciences, Technology and Public Policy. These schools have both graduate, postgraduate programs along with Doctoral programs.

#### Panel Discussion

- Dr. Rukmini Mohanta (University of Hyderabad)
- Dr. Meenakshi Vishwanathan, BITS-Pilani, Hyd.
- Dr. Sai Preeti, GITAM, Hyderabad
- Students

#### Public Lecture

Dr. Vandana Sharma, IIT Hyderabad.  
Will be delivered in hybrid mode

#### Details

Maximum Participants 40 members (Limited seats)

Transport on request can be arranged to and from Miyapur Metro station.

#### Registration Link

<https://forms.gle/R3DSvy3w2pHua4IE6>

Last date for registrations 23 June 2023

Scan here



for Registration



#### Venue

J-211 Seminar Hall

GITAM (Deemed to be University), Hyderabad  
Rudraram, Patancheru Mandal, Sangareddy, Dist.  
Telangana, India - 502 329. [www.gitam.edu](http://www.gitam.edu)

#### Event Coordinators

Dr. Ram Ramaswamy, IIT Delhi  
Dr. V Madhurima, CUTN

#### GITAM Coordinator

For further information please contact

Dr. G. Sai Preeti - +91-77021 88865

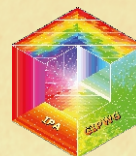
[icwip\\_2023@gitam.edu](mailto:icwip_2023@gitam.edu)



## Program Schedule

09:30 am - 10:00 am	Inauguration by the Coordinators
10:00 am - 10:30 am	<b>Prof. Ram Ramaswamy, IIT Delhi</b> <b>Topic:</b> NEP and online teaching
10:30 am - 11:00 am	Tea
11:00 am - 11:30 am	<b>Dr. Bindu Bambah, University of Hyderabad</b> <b>Topic:</b> Gender and Physics
11:30 am - 12:00 pm	<b>Dr. Venkatesh Choppella team, IIIT, Hyderabad</b> <b>Topic:</b> Handling physics labs online
12:00 pm - 12:30 pm	<b>Dr. V. Madhurima, Central University of Tamil Nadu</b> <b>Topic:</b> Technical Education: How effective is purely online teaching
12:30 pm - 01:00 pm	<b>Dr. Barilang Mawlong, University of Hyderabad</b> <b>Topic:</b> Intersectionality of gender and geography
01:00 pm - 02:00 pm	Lunch
02:00 pm - 02:30 pm	<b>Dr. Jyotsna Jha, Director,</b> <i>Centre for Budget &amp; Policy Studies, Bengaluru, India</i> <b>Topic:</b> The many facets of limited access: the internet, smart devices and learning time
02:30 pm - 03:00 pm	<b>Dr. Rukmini Mohanta, University of Hyderabad</b> <b>Dr. Meenakshi Vishwanathan, BITS-Pilani, Hyderabad</b> <b>Dr. Sai Preeti, GITAM, Hyderabad</b> <b>Students</b> <b>Topic:</b> Panel Discussions: "How effective is physics teaching online?" Perspective from all sides of blackboards
03:00 pm - 03:30 pm	Tea
03:30 pm - 04:30 pm	<b>Public Lecture (Hybrid mode)</b> <b>Vandana Sharma, IIT Hyderabad</b> <b>Topic:</b> Imaging assisting humankind - Fundamental Science to application
04:30 pm - 05:00 pm	Valedictory





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### Public Lecture

#### Imaging Assisting Humankind - Fundamental Science to Application

Our group at IIT-Hyderabad has developed a state-of-the-art reaction microscope which is employed to study ultrafast dynamics in simple and complex molecules. Using the reaction microscope, we have proved that the internal polarizability of Oxygen molecular ion can be exploited to freeze the molecular ion briefly. In addition, we also established that an intermediate intensity can enhance the ionization rate in CH<sub>3</sub>I molecules if it hits the resonance. On one hand we image the small atoms/molecules utilizing intense light sources, at the same time we employed the near infra-red (NIR) radiation to 3D image the veins. We have been actively working in developing a novel 3D Vein Viewer module that not only images the peripheral vein mapping underneath the human skin but also determines the depth of the vein vessel from the top of the skin with micro-meter accuracy. My talk will mainly focus on the imaging equipment which we have built in our lab for fundamental and applied research.

#### About the speaker

Dr. Vandana Sharma did her Ph.D. from PRL in 2007 with Prof. Bhas Bapat. She worked on Momentum Spectroscopic studies of atomic and molecular ionization during his Ph.D. She moved to JILA, University of Colorado at Boulder followed by Max Planck Institute for Nuclear Physics, Germany for her postdoctoral work. She returned to India and joined Indian Institute of Technology Hyderabad as faculty in 2012. She has worked on Ultrafast dynamics of small molecules along with developing different equipment not only for fundamental studies but also for imaging biological samples. She is in editorial board of Frontier of Physics – Atomic and Molecular Physics Journal. She won Sheldon Young Scientist award and recently awarded Sree Rama Krishna Paramahansa Research Grant Award. She loves trekking and sheds all her stresses in mountains.



**Dr. Vandana Sharma**  
IIT Hyderabad

**HYBRID MODE (03:30 PM to 04:30 PM)**

[https://youtube.com/live/8vYe\\_dghrPY?feature=share](https://youtube.com/live/8vYe_dghrPY?feature=share)

