

# CENTER FOR ATOMIC, MOLECULAR, AND OPTICAL SCIENCES & TECHNOLOGIES (CAMOST)

भारतीय प्रौद्योगिकी संस्थान तिरुपति

TIRUPATI

A joint research initiative of IIT Tirupati and IISER Tirupati

Inauguration Program: 14 August 2020 16:00 - 18:00 IST

#### **About CAMOST**

Atomic, Molecular, and Optical (AMO) sciences encompass significant areas of human activity directly impacting quality of life through applications in health, communication, navigation, metrology, and space sciences. Center for Atomic, Molecular, and Optical Sciences & Technologies (CAMOST) has been established to address key challenges in frontier areas of AMO science and technology of the 21st century. One of the major objectives of CAMOST is to facilitate exchange of information, collaboration and consolidate the cross-fertilization of ideas relevant to the frontier areas of AMO science and technologies by allowing researchers from institutions pan-India to communicate and collaborate with each other under the aegis of CAMOST.

#### **Vision**

Inspire tangible solutions to frontier problems in AMO Science & Technologies through innovative research initiatives in basic and applied science domains.

#### **Mission**

To advance AMO Sciences & Technologies by:

- Developing innovative solutions to frontier problems of AMO quantum Science and Technology
- Contributing to solving key problems in atmospheric, space, and bio sciences
- Fostering human resources to meet 21<sup>st</sup> century challenges in AMO Quantum Sciences and Technologies

#### **Thrust Areas**

- Ultrafast dynamics in atoms and molecules
- Quantum communication and Quantum technology applications
- Cold plasma applications for food processing and water treatment
- Laboratory astrophysics, Laboratory astrochemistry, and Atmospheric sciences
- Optical tweezers for biomedical applications
- Single molecule magnetism for high-density data storage
- Quantum chemistry & Statistical mechanics
- High technology devices

# Organizational Structure Administrative Advisory Council

K N Satyanarayana (Director, IIT Tirupati) K N Ganesh (Director, IISER Tirupati)

#### **Mentor & Convener**

P C Deshmukh (Adj. Professor, IIT Tirupati)

#### **Scientific Advisory Council**

Dilip Angom (PRL, Ahmedabad)
E Krishnakumar (RRI, Bangalore)
C P Safvan (IUAC, New Delhi)
Dmitry Budker (JGU Mainz & UCB)
John Costello (Dublin City University)
Bhanu P Das (Tokyo Institute of Technology)
S T Manson (Georgia State University)
G Ravindra Kumar (TIFR, Mumbai)
Roland Wester (University of Innsbruck)
Jan Michael Rost (MPI for Complex Systems)

#### **Core Administrative Members**

Arijit Sharma (Coordinator, IIT Tirupati) S Sunil Kumar (Coordinator, IISER Tirupati)

#### **Ex-Officio members**

Koteswara Rao (HoD Physics, IIT Tirupati G Ambika (Chair Physics, IISER Tirupati)

#### **Principal Investigators**

#### **IIT Tirupati:**

Arijit Sharma Arun K Manna
Debashish Mondal N N Murty
P C Deshmukh Rajib Biswas
Reetesh K Gangwar Swapnil Bhuktare
Vijaya K Gurugubelli Vinay P Majety

#### **IISER Tirupati:**

Padmabati Mondal Raghunath O Ramabhadran

Soumit S Mandal S Sunil Kumar

#### **Adjunct Members:**

Dhananjay Nandi (IISER Kolkata)
G Aravind (IIT Madras)
Koushik Saha (IIT Dharward)
R Hari Varma (IIT Mandi)
Jobin Jose (IIT Patna)
Rajesh K Kushawaha (PRL Ahmedabad)
S Sivakumar (KREA University)
Sivarama Krishnan (IIT Madras)
Ramachandra Rao Yalla (Uni. Hyderabad)
G V Pavan Kumar (IISER Pune)

#### **Program**

#### 16:00 - 16:06 Welcome

Professor P C Deshmukh (Mentor and Convener, CAMOST)

#### 16:06 - 16:18 Directors' Address

Professor K N Satyanarayana (Director, IIT Tirupati) Professor K N Ganesh (Director, IISER Tirupati)

### 16:18 – 16:23 *On the Origin of CAMOST*

Dr C P Safvan, IUAC, New Delhi (President, Indian Society of Atomic and Molecular Physics)

### 16:23 – 16:45 Video & Brochure release and INAUGURAL SPEECH

Dr Arabinda Mitra (Scientific Secretary, Office of the Principal Scientific Advisor to Government of India)

# 16:45 – 17:00 Atomic collisions with meso-nano-bio systems and interdisciplinary science

Professor Lokesh Tribedi, TIFR, Mumbai

## 17:00 – 17:15 Recent development in quantum technologies

Professor Aditi Sen De, HRI, Prayagraj

#### 17:15 – 17:30 Physics with Extreme Light

Professor G Ravindra Kumar, TIFR, Mumbai

# 17:30 – 17:40 Aspirations by program coordinators

Dr Arijit Sharma (IIT Tirupati) Dr S Sunil Kumar (IISER Tirupati)

# 17:40 – 17:46 Aspirations by adjunct members

Dr Koushik Saha (IIT Dharwad) Dr Jobin Jose (IIT Patna) Dr Rajesh Kushawaha (PRL, Ahmedabad)

#### 17:46 - 17:56 Remarks

Members of the Scientific Advisory Council

#### 17:56 - 18:00 Vote of Thanks

Professor G Ambika, Chair Physics, IISER Tirupati