



**CGCRI, Kolkata and EMSI, EAST ZONE**

**ORGANISES**

**ONE DAY THEME MEETING ON**

***PRECESSION ELECTRON DIFFRACTION - SOLUTION TO CRYSTAL  
STRUCTURE FROM NANOPARTICLES AND 3D TOMOGRAPHY***



**VENUE - CGCRI, Kolkata.**

**DATE - 19<sup>th</sup> FEBRUARY (Tuesday), 2019**

**ABOUT :**

Electron Diffraction has played a pivotal role in establishing crystal structure of nano-particles, even if its amount is less than required for X-ray diffraction. However, the interaction of electrons with atoms being stronger than X-rays, leads to dynamic diffraction conditions. Hence, complete solution to crystal structure has not been possible for many decades. The Precession Electron Diffraction opened up new vistas for both solution to crystal structure and three dimensional electron diffraction tomography, in the last two decades. The main focus of the one day theme meeting is the presentation of the fundamentals of these advances in transmission electron microscopy, in addition to demonstration of the associated software packages.

**FOR WHOM :**

All those who are familiar with X-ray diffraction, can in principle be benefitted by the lectures and demonstrations. The scientists, research scholars and those establishing frontier laboratories for materials analysis will find the meeting useful, especially since India has not yet established 3D electron diffraction tomography.

**PARTICIPATION :**

The total number of participants is expected to be around 30 only. Scientists or research scholars engaged in materials research, in national R&D laboratories or universities or advanced colleges, may be nominated.

**Registration Fees :**

The registration fee for EMSI Life members : **Rs. 500/-**

Non-members : **Rs.1000/-**.

Participation: Priority is given to Life members of EMSI.

We plan to arrange accommodation at IOP guest house at nominal rates. TA is not given, in general. In an exceptional cases, EMSI would sponsor SL (Sleeper Class) train fare by shortest route would be reimbursed. EMSI, in collaboration with Nanomegas, would be covering few selected students registration fee waiver as well.

**Fee Waiver:** Please write to Prof. P. V. Satyam at [president.emsi@gmail.com](mailto:president.emsi@gmail.com)

**Contact Address:**

**Dr. K. Muraleedharan**

**Director, CGCRI – Kolkata**

Or

**Prof. P. V. Satyam, President, EMSI**

**Institute of Physics**

**Bhubaneswar**

**EMSI acknowledges M/s. Technos for sponsoring this meeting financially and CGCRI for all logistical and academic support.**

**TECHNICAL PROGRAM**  
**ONE DAY THEME MEETING ON**  
**PRECESSION ELECTRON DIFFRACTION - SOLUTION TO CRYSTAL STRUCTURE**  
**FROM NANOPARTICLES AND 3D TOMOGRAPHY**

TIME	TOPIC	SPEAKER
8.45	REGISTRATION	
9.00	WELCOME ADDRESS and Inauguration	Dr. K. Muraleedharan
10.00	TEA	
10.05	ADVANCED TRANSMISSION ELECTRON MICROSCOPY - APPLICATIONS IN MATERIALS ANALYSIS	Dr. K. Muraleedharan CGCRI, Kolkatta
11.00	PRINCIPLES OF PRECESSION ELECTRON DIFFRACTION (PED 01)	Dr.M.Vijayalakshmi, Retd IGCAR, Kalpakkam
12.00	APPLICATIONS OF PED IN TEM	Mr. Vrettos Stelliou, Nano Megas, SPRL.
13.00	LUNCH	
14.00	HRTEM FOR STRUCTURE ANALYSIS or	Dr. P.V. Satyam/ Dr. S. Bysakh
15.00	HYBRID PIXEL DETECTORS	Mr. Hans Radheo, Amsterdam Scientific Instruments.
17.00	VOTE OF THANKS	