

### About AMET

AMET which is India's first maritime University, the one and only university from India to be a member of the International Association of Maritime Universities. With quality, commitment, knowledge and excellence as its corner stones. AMET's uncompromising strides of excellence in the field of maritime education and training laced with its capacity to feed the global shipping industry with an unrivalled maritime human resource secured it the status of becoming the first university in India for maritime education, training, research and development activities on the 21<sup>st</sup> August 2007.

AMET serves as an ocean of knowledge for over 4000 students pursuing courses ranging from B.Sc to Doctoral programs through 9 schools and 23 intensive research and training centers for marine and marine related activities. Equipped with an excellent infrastructure for research and development, cocurricular and extracurricular activities.

### About the Department

The Department of Physics, AMET was established in the academic year 2001-02. Physics being an integral part of every scientific innovation, teaching the principles of Physics to engineers is to lay a strong foundation to future technology. The Department offers Physics as allied subject to various branches of B.Sc., and B.E., courses. The curriculum is enriched to expose the students to various theoretical and practical aspects of basic Physics. Students who are to sail and work in the offshore environments are benefited by the knowledge gained. We strive and make them competent in understanding and applying Physics in their respective fields. Presently the department has a team of eight faculty members. The faculty members are well experienced and have an academically sound background with several projects and publications.

### Scope

- ❖ Photocatalytic material/nanomaterial growth and assembly techniques, advanced characterization (physical, chemical and biological), modelling, disinfection and depollution of water or air, by heterogeneous photocatalysis
- ❖ Surface functionalization for self-decontamination and photosensitization for solar energy applications
- ❖ Material/nanomaterial growth techniques, advanced characterization, modelling and device fabrication for the production of hydrogen or fuels by photocatalytic and photo-electrochemical water splitting or CO<sub>2</sub> reduction
- ❖ Photocatalytic activity in the visible region of the solar spectrum and improvement of the electronic properties (conductivity and band position engineering)
- ❖ Pilot studies, prototypes and small scale applications of the use of these materials in water and air remediation, water splitting and CO<sub>2</sub> reduction

### Topics to be Covered

- ❖ Nanostructured photocatalytic semiconducting materials (e.g. TiO<sub>2</sub>, ZnO, Cu<sub>x</sub>O, Fe<sub>2</sub>O<sub>3</sub>, CdS, GaP, ZnS, InS, etc)
- ❖ The application of photocatalysis for water treatment and disinfection
- ❖ Self-cleaning/disinfecting surfaces for healthcare applications
- ❖ Photoelectrolytic and photocatalytic splitting of water to yield H<sub>2</sub>
- ❖ Energy recovery from wastewater by reforming of pollutants to yield H<sub>2</sub>
- ❖ Carbon Dioxide reduction- artificial photosynthesis
- ❖ Kinetics and modelling

### Who can participate

PG students, M.Phil., students, research scholars, post doctoral fellows and Faculty Members in disciplines of **Materials Science** and **Physical Sciences**.

## WORKSHOP ON PHOTOCATALYTIC TECHNOLOGY AND INNOVATION

**WPTI-2K18**

**On 24-25 September 2018**

**Organized by**

**Department of Physics**



**Academy of Maritime Education and Training**

**Deemed to be University**

**(under section 3 of UGC act 1956)**

**135, East Coast Road,**

**Kanathur, Chennai-603112**

**in Collaboration with**



**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, KANCHEEPURAM**

### Key Speakers

Prof. C.Vijayan, IIT Madras, Chennai.  
Prof. A.Subrahmanyam, IIT Madras, Chennai.  
Prof. E.Prasad, IIT Madras, Chennai.  
Prof. S.Nagarajan, M.S.University, Tirunelveli.  
Prof. Sudhir Vardharajan, IIITDM, Kanchipuram.  
Dr. Jayachandra Bingi, IIITDM, Kanchipuram.  
Dr. V.Eswaraiah, SRM University, Chennai.

### Organising committee

#### Patrons

Dr.J.Ramachandran, Chancellor.  
Dr.R.Rajesh, Pro Chancellor.  
Col.Dr.G.Thiruvasagam, Vice Chancellor.  
Dr.P.Saravanan, Registrar.

#### Convenors

Dr.Anita.R.Warrier, Asst. Professor,  
Dept. of Physics, AMET.  
Dr. Jayachandra Bingi, Asst. Professor,  
Dept. Of Physics, IIITDM.

#### Members

Dr. R. Baskaran, Head, Associate Professor.  
Mr.M. Suresh Kumar, Asst. Professor.  
Dr. K. Anandan, Asst. Professor.  
Dr. K. Rajesh, Asst. Professor.  
Dr. K.Thanigai Arul, Asst. Professor.  
Dr. K. Gayathri, Asst. Professor.  
Dr. Anitha Rexalin Devaraj, Asst. Professor.

Venue  
DNV Hall - II,  
AMET campus

### Registration details

Registration is open for research scholars, post graduate students, post doctoral fellows and faculty members of all academic and research Institutes.

#### Registration fee

**PG students - No cost**

**Research scholars (M.Phil./Ph.D.,) - Rs.250**

**Post Doctoral Fellows – Rs.500**

**Faculty/Industry persons – Rs.1000**

\*spot registration also accepted\*

(The registration fee includes the kit, lunch and snacks)

Registration fee can be paid as a DD in favor of **AMET** payable at Chennai.

The filled in registration forms should reach the address given below along with DD on or before 24-09-2018. Those who want to register through e-mail may sent the details to [wpti18@gmail.com](mailto:wpti18@gmail.com).

The fee can be paid on the spot (cash/DD) by producing the registration form signed by the participant.

### ALL THE CORRESPONDENCES SHOULD BE ADDRESSED TO

**Anita R Warrier**

**Assistant Professor**

**Nanophotonics Research Laboratory**

**Department of Physics**

**AMET**

**Chennai 603112**

[wpti18@gmail.com](mailto:wpti18@gmail.com)/[anitawarrier2@gmail.com](mailto:anitawarrier2@gmail.com)

### WORKSHOP ON PHOTOCATALYTIC TECHNOLOGY AND INNOVATION

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**Department of Physics**



### Registration Form

**Name:**.....

**Designation:**.....

**Organisation & Address:**.....

**Email:**.....

**Mobile :** .....

**Place:**

**Date:**

**Signature of the Participant**

**Signature of the Guide/HOD**

**N.B.- All correspondence will mostly be via email only.**

**Website :** <http://www.ametuniv.ac.in/>