**When: Friday, October 11, 2019 at 2 PM to 4 PM**

**Where: CLSM BLDG 109 (Class room Building 109)**

**Title: Cyanobacterial Bioprocessing for Agricultural and Industrial Applications**

**By**

**Prof. Malliga Perumal,**

**Chair, Department of Marine Biotechnology,**

**National Facility for Marine Cyanobacteria,**

**Bharathidasan University, Tiruchirappalli, INDIA**

**Email:****malliga.p@bdu.ac.in**

**Other details:**

**Abstract**

The talk will provide a basic background about diversity of cyanobacteria including extreme environments, isolation and characterization techniques, and process development for different industrial applications. This talk will be more focused on harnessing the cyanobacterial strains for their nitrogen fixation abilities, production of plant hormones such as auxin, and production of biopesticides. This presentation will give an overview on scaling up the processes for mass cultivation of cyanobacteria in open ponds. This talk will also cover concepts on organic agricultural practices and ways to approach this in a microbial technology perspective.

**Speaker brief CV:**

Prof. Malliga Perumal is currently serving as the Chair, Department of Marine Biotechnology at the Bharathidasan University, India. She is also affiliated to National Facility for Marine Cyanobacteria\*. Her research areas include Lignin Waste Degradation, Biofertilizers of Cyanobacteria, Organic Farming, and Bioremediation of Industrial Wastes. She has published over 25 research articles, contributed 4 book chapters and authors 2 books. She has developed several products relevant to cyanobacterial processes and is a PI for 2 projects. She is actively involved in industrial consultancy relevant to organic agriculture.

**\*National Facility for Marine Cyanobacteria:**

National Facility for Marine Cyanobacteria (NFMC) funded by the Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India which was established exclusively for the research on marine cyanobacteria. Now the Facility has been upgraded to the level of a National Repository for Microalgae and Cyanobacteria (NFMC). Now the Repository holds more than 1000 Microalgal and Cyanobacterial strains representing 780 mesophilic, 150 psychrophilic (Arctic &Antarctic), 20 thermophilic and 50 halophilic forms. More than 1000 institutes are its beneficiaries which includes Universities and Government research Organizations. NFMC is also a Sub distributed Bio informatics center (BIC) exclusive for cyanobacteria, where it has developed open source database CKB (Cyanobacterial Knowledge Base) of 74 completely sequenced genomes, an exclusive visualization tool for *Synechocystis* PCC 6303 - Syn Rio, Cyanopatt which can search pattern against any cyanobacterial genomic region of the query. Complete Catalog datasheet (with GPS values), the open source tools and Database are available in website ([www.nfmc.res.in](http://www.nfmc.res.in/) )