

**Title of the talk: "*Sustainability in agriculture attained through seaweed based bio-stimulants*"**

**Prof. Arup Ghosh**

Abstract: The topic of the talk would be sustainable agriculture mediated by macroalga-based liquid biofertilizers and their environmental impact. A brief overview will be provided on the active ingredients in bio-stimulants, agronomic, physiological and molecular (transcriptome) understanding of mechanisms in plants with special reference to drought stress, soil biology (metagenomics) and biochemistry and **quantitative benefits across several environmental categories by Life cycle assessment**. This talk will also share a little of nano fertilizer work carried out by in our laboratory, especially related to nitrogen and potassium fertilization.

Short CV: Dr. Arup Ghosh is Senior Principal Scientist in CSIR-Central Salt & Marine Chemicals Research Institute, Bhavnagar, Gujarat, India and also is Professor in Academy of Scientific and Innovative Research, Ghaziabad, U.P., India. He has done his doctorate in Agriculture in the specialized area of Agronomy. He is currently heading Applied Phycology and Biotechnology Division of CSIR-CSMCRI and is the Divisional Chair. Dr. Ghosh has interest in varied areas. He has multidisciplinary expertise in several areas and has taken several assignments related to development of sustainable and industrial relevant agricultural technologies w.r.t. devising agronomic practices, studies on soil physicochemical, biochemical, microbiome and degraded land reclamation. Development of agro-techniques and organic farming products such as seaweed based biostimulants for enhancing crop productivity, quality, moisture stress tolerance and understanding the physiological and molecular basis of crop improvement in plants, Life cycle assessment are his main research interests. Microalgae, new biostimulant/biofertilizer nanofertilizers, biofuel, halophytes are his other research interests including development of seaweed based animal feed additives for health and productivity of animals. He has more than 110 research papers published in peer reviewed national and International journals and has several book chapters and popular articles to his credit. He was the **lead Awardee of CSIR Award for S&T Innovations for Rural Development (CAIRD)** for 2012 and also received the **Best Technology Transfer Award** for the year 2018 by CSIR-CSMCRI, Bhavnagar. He has successfully led more than 15 national and International research projects worth several crores and has been involved in transfer of technology to more than 15 clients. Dr Ghosh has been elected as Associate Fellow, Gujarat Science academy in 2015-16 and was awarded CSIR Raman Research fellowship (March-June 2018 at University of Applied Sciences, Bielefeld, **Germany**). He is member of several important committees in India and also has been instrumental in assisting several committees in formulating policy guidelines related to seaweeds and seaweed biostimulants. Dr Ghosh has convened many national/international conferences and workshops on Seaweeds and its allied areas.

