



Details of Speakers



The Second International Symposium on

Remote Sensing for Ecosystem Analysis and Fisheries

15-17 January 2018, Kochi



Organised by:
Indian Council of Agricultural Research
Central Marine Fisheries Research Institute



Dr. Trilochan Mohapatra,

Secretary, Department of Agricultural Research & Education
Director General, Indian Council of Agricultural Research
Ministry of Agriculture and Farmers Welfare, Govt. of India,
New Delhi -110 001

Trilochan Mohapatra born on 1962 at Cuttack, Odisha completed his B.Sc. Agriculture in OUAT, Bhubaneswar and did M.Sc (1987) and Ph.D (1992) in Genetics from Indian Agricultural Research Institute (IARI), New Delhi. He is currently holding the position of Secretary, Department of Agricultural Research & Education (DARE) & Director General, Indian Council of Agricultural Research (ICAR). Prior to this, he worked as Director of IARI, New Delhi and the Director of National Rice Research Institute, Cuttack, Odisha. He had research and teaching experience over 27 years at National Research Centre on Plant Biotechnology, IARI, New Delhi. His area of specialization includes molecular genetics and genomics. Dr. Mohapatra has over 160 research papers in national and international journals of repute and several book chapters. Research achievements also includes development of the first high yielding Basmati rice variety resistant to bacterial leaf blight through molecular marker assisted selection and physical mapping and genome sequencing of rice and tomato. Mega research programs in frontier areas of genomics, phenomics, bioprospecting of genes, allele mining and induced metagenesis for functional genomics were also initiated by him. For successful product development, he created vast pool of trained manpower. He had received several prestigious honours and awards including INSA Young Scientist Award, Prof. L.S.S. Kumar Memorial Award, NASI-Reliance Industries Platinum Jubilee Award, Shri Om Prakash Bhasin Award 2016, IMS Diamond Jubilee Memorial Award 2016 and Dr. D. Sundaresan Memorial Oration Award 2017. Dr. Mohapatra is an esteemed Fellow of Indian National Science Academy, New Delhi. He has been conferred doctoral degree (honoris causa) by Amity University, Orissa University of Agriculture & Technology, YS Parmar University of Horticulture & Forestry and Siksha 'O'Anusandhan University.



Dr A Gopalakrishnan

Director, ICAR-Central Marine Fisheries Research Institute, Kochi

Dr. Gopalakrishnan has worked on the different aspects of genetic stock identification of fishes using DNA markers and DNA barcoding of fishes using mtDNA markers. Through his research he has proved his skills and expertise in the fields of Ecology and Evolution, Population Genetics, Genetic Diversity, Molecular Markers, Conservation Genetics, DNA Barcoding, Microsatellite Genotyping, Molecular Taxonomy and Cryopreservation.

For his contributions to science, he has won various awards and recognitions, which include Fellow, National Academy of Science (2012), V. G. Jhingran Swaran Padak 1992, Senior Scientist Award 1992 etc. He is a member of International Consortium of Barcode of Life; WWF-The Nature Conservancy, USA; Contributor to Freshwater Eco-regions of the World (FEOW) -Region Eurasia, and Collaborator (Code No. 1148) - Fishbase, World Fish Center

He is also the leader of the projects such as the ICAR sponsored 'Genetics, genomics and biotechnological applications in mariculture' and 'Fishery resources management and Outreach activity on fish genetic stocks' as well as the MoES sponsored 'Global learning for local solution: Reducing vulnerability of marine dependent coastal communities'.



Dr. B. Meenakumari

Chairperson, National Biodiversity Authority, Chennai

Dr. B. Meenakumari is currently the Chairperson of National Biodiversity Authority. She was Deputy Director General

(Fisheries) of the Indian Council of Agricultural Research (ICAR), New Delhi prior to joining NBA. She is the first women scientist to occupy this prestigious position as DDG in ICAR. Earlier to this, Dr. Meenakumari, who has more than 38 years of service in ICAR, was the Director of Central Institute of Fisheries Technology (CIFT), Cochin. She is basically a marine biologist and a renowned scientist in the field of fisheries, fishing technology and biodeterioration with more than 150 research publications to her credit. Before becoming the Director of CIFT, she was the head of division of fishing technology at CIFT and served as Scientist, Senior Scientist and Principal Scientist in the same institute. Her areas of research includes development of newer fishing gear for coastal and deep sea fishing, conservation of fishery resources, upgradation of gear systems for reservoirs and responsible fishing, introduction of ecofriendly fishing methods, remote sensing and validation of PFZ, pollution monitoring, environment impact assessment, marine corrosion and bio-fouling. She is the recipient of prestigious awards like Young Scientist Award of Kerala Science & Technology, Women and Technology Innovation Award, Panjab Rao Deshmukh Agricultural Scientist Award, VASVIK Award, Marie Curie Mahila Vijnana Puraskar, Dr. M. S. Randhawa Memorial Award and Society of Fisheries Technologist Award. She has been conferred D.Sc by Vidyasagar University, West Bengal for her study on the 'Innovations in Fishing Technology'. As Chairperson of the National Biodiversity Authority she is committed for conservation of the bioresources and its sustainable use in the country.

.....



Lasse H. Petterson

Director, International Cooperation and Marketing, Nansen Environmental Remote Sensing Centre, Norway

Lasse H. Petterson is a physical oceanographer with main research interests are within studies and monitoring of harmful algal blooms, waters quality and marine ecosystems and established the marine and coastal optical remote sensing research at the Nansen Environmental and Remote Sensing Center in Bergen, Norway. He has more than 30 years of experience with research and applications of satellite Earth observation data for marine and sea ice environmental and climate studies and applications.

He has published about 70 refereed publications, eight books, several book contributions, teaching material, more than 140 technical client reports and 35 popular scientific publications. He has extensive experience in international research and educational cooperation, in particular with Russia (since 1992), with India (1998) and Bangladesh (2010).

.....



Dr Rodney Forster

Director, Institute of Estuarine and Coastal Studies, Reader in Applied Estuarine and Marine Sciences

Rodney has been passionate about marine biology since an early age, following his research interests during work in Germany (Helgoland, Rostock), The Netherlands (NIOO), and the UK (Cefas), obtaining his Ph.D from Queens University, Belfast in 1992, before moving to Hull to become Director at IECS.

His work uses sensors, satellites and models to understand the patterns and processes which control marine ecosystems, with a focus on the primary production of phytoplankton and seaweeds. Much of his work is applied ecology working with industry and government to understand, use and protect the seas. He has received grants for projects including DSC4COP-Data Cube Service for Copernicus-H2020 to deliver satellite-based commercial services to marine and maritime users, HIGHROC - FP7-HIGH spatial and temporal Resolution Ocean Colour (HIGHROC) project to carry out the research and development necessary for the making the most of Europe's new Sentinel satellites and DEVOTES - FP7 project to develop innovative tools for improving the efficiency of biodiversity monitoring (2012-2016).



Prof. (Dr.) N. R. Menon

Chairman, Nansen Environmental Research Centre India, Kochi

Chairman of Nansen Environmental Research Centre India (NERCI), Emeritus Professor, Cochin University of Science and Technology, Dean, Faculty of Climate Variability and Aquatic Ecosystems, Kerala University of Fisheries and Ocean Studies (KUFOS), Member, Governing Council and the Senate, KUFOS, Subject Expert, Kerala Coastal Zone Management Authority, Kerala.

Dr. Menon has worked in various scientific capacities at different institutes for more than thirty years now. He has more than 150 scientific publications. He has worked as a senior scientist in International Indian Ocean Expedition (IIOE). His research interests include Marine and freshwater ecosystem studies, marine pollution, Harmful Algae Bloom studies, Coastal Zone Management, Taxonomy and Ecology of Marine Foulers, Marine Biodeterioration.



Dr. J. K. Jena

Deputy Director General (Fisheries Science), Indian Council of Agricultural Research, New Delhi.

His research areas include Freshwater aquaculture and Population genetics. Awards/Honours received for his scientific contributions include Special One Time Award of ICAR, 1998; Young Scientist Award & Scientist of the Year Award of Bioved Research Centre, 1999 & 2000; Best Young Scientist Award of Dr. Hiralal Choudhuri Fisheries Foundation, 2001; ICAR Award for Team Research, 2000 & 2008; Prof. H. P. C. Shetty Award of AFSIB, 2008; Pillay Aquaculture Award, 2011; Dr.

S. Z. Qasim Medal, 2011; Rafi Ahmad Kidwai Award of ICAR, 2013. He is the President of Asian Fisheries Society and the Chairman of Asian Fisheries Society Indian Branch, Member of Zoological Society of India, Bodh Gaya; Academy of Sciences for Animal Welfare; Zoological Society of India, Bhubaneswar; Bioved Research Society and Communication Centre; Academy of Science, Engineering and Technology (FASET), Bhopal.



Dr. T. V Sathianandan

Principal Scientist & Head, Fisheries Resource Assessment Division, CMFRI, Kochi

Joined Agricultural Research Service under the Indian Council of Agricultural Research in 1989 as Scientist and is serving as a scientist at CMFRI from 1990 onwards. A Ph.D in Statistics from University of Calicut, Dr. Sathianandan has worked on time series modeling and forecasting, management of database on marine fish landings, development of computer software, fish stock assessment, design and management of the national level sample survey for estimation of resource wise, gear wise and fishing zone wise marine fish landings and simulation modeling. He is a member of the committee constituted by Government of Kerala to study and report the impact of fishing ban on the fishery in Kerala and a Member of the subcommittee constituted by Govt. of India to revalidate the potential yield and fleet size for the Indian EEZ.



Dr. T. Pankajakshan

Scientist-in-Charge

CSIR-National Institute of Oceanography (Regional Centre), Kochi

Dr. T. Pankajakshan is one of the renowned physical oceanographers having three decades of experience in research and administration. He is presently the Scientist-in-Charge of Regional Centre of NIO, in Kochi. Had his Master of Science in School Marine Sciences, CUSAT, Kochi, in 1984. He had secured Doctor of Philosophy, from Tokai University, Japan during 1991-1995. He is working in the field of Physical Oceanography, mainly dealing with ocean observing System and ocean modelling. His research interests include Atmospheric Physics & Ocean Dynamics, Marine Meteorology & Air-sea interaction, Ocean Observing Systems, Ocean Modelling. He is a member of International committee / bodies like Co-Chair, CLIVAR/IOC-GOOS Indian Ocean Region Panel Member, International Argo Steering Team, Member, and Scientific Steering committee of SIBER (Sustained Indian Ocean Biogeochemical and Ecological Research).



Dr. Hayley Evers King

Scientist

Plymouth Marine Laboratory, UK

Dr. Hayley Evers King's areas of expertise understand the sensitivity in reflectance that can be attributed to various optically significant constituents, how phytoplankton community characteristics such as particle size distribution, intracellular properties, and functional types influence ocean colour. He is involved in development of novel algorithms for application to in situ and satellite ocean

colour data, particularly in the coastal zone using the emerging generation of ocean colour sensors. She also works on extending the use of ocean colour archive for new applications e.g., for the management of Harmful Algal Bloom, for coupling to physical and biogeochemical models and to understand how the light environment can impact ocean physics and ecosystems.



G. Syda Rao

Former Director, ICAR-CMFRI, Kochi

Dr. G. Syda Rao completed his M.Sc. in Zoology with Marine Biology and Ph.D in Marine Ecology from Andhra University. He had enrolled in ICAR in first batch of ARS in 1976. His entire service was in CMFRI (1977-2013) and served in different places, Kochi, Mangalore, Kakinada and Visakhapatnam. His salient research contributions include: Technology of onshore Marine Pearl Culture, and has worked in Bivalve Culture, and Capture Fisheries. He has more than 120 publications to his credit. His achievements as Director of CMFRI include: Cage Culture- Design Testing, All India Demonstrations, Standardization of Technology, formulations of Scheme and Adoption by Govt. of India (the first scheme from marine fisheries) Nutraceuticals from Green Mussel and Algae - Initiation of R&D product development, testing and commercialization, breeding and seed production of cobia, silver pompano and grouper for the first time in India and satellite tagging of yellowfin tuna.



Dr. A. P. Dineshbabu

Principal Scientist, CMFRI, Mangalore.

After taking Masters in mariculture (1985) he joined Prawn Farm Project

complex under MPEDA, Kochi in 1987. In 1993 he joined ARS and CMFRI, serving in Veraval RC (1995-2001) and in Mangalore RC as Scientist -in-charges in both centres for three and six years respectively. He demonstrated the utilities of application of GIS in Indian marine fisheries and is presently focusing on spatial planning in marine fisheries management and sustainable mariculture development. In 2006 he obtained his Ph.D from Mangalore University. He has also worked and has expertise in crustacean fisheries/ biology and trends in Indian trawl fishery. He developed and popularized CBA and small scale cages suited for finfish culture in coastal waters.



Ms. Shivani Sharma

Science & Innovation Network, British High Commission, New Delhi.

Shivani Sharma is a Senior Advisor with Science and Innovation Network Team, based out of British High Commission New Delhi. She leads on Science and Innovation Policy, Oceans and STEM. Previous to this role she was Knowledge Economy Advisor based in the British Deputy High Commission Chandigarh where she led on Healthcare, Skill & Education and Science & Innovation. She has also worked as Deputy Director with Federation of Indian Export Organisations, New Delhi, undertaking primary research based studies for Ministry of Commerce, Government of India. While working with leading Chamber Confederation of Indian Industry, she had close interaction with industries based in North India and State Government, especially with Himachal Pradesh. She has 12 years of experience in liasoning and networking with various sector leaders, be it in academia, life sciences, IT, Textiles, engineering etc. Shivani is an MBA from Institute of Marketing & Management, New Delhi and an Economics Graduate from Delhi University.



Dr. A. K. Mishra

Scientist SF, Indian Institute of Remote Sensing, Dehra Dun

A. K. Mishra is a scientist of Indian Institute of Remote Sensing, Dehra Dun. He has been working on satellite remote sensing related applications and was involved in training, research and related academic activities at Indian Institute of Remote Sensing, Dehra Dun.



Prof. (Dr.) P. S. B. R. James

Former Director, ICAR-CMFRI, Kochi

Dr. P. S. B. R. James served for 35 years in fisheries education, research and administration. He has conducted extensive research on several groups/ species of marine fishes, managed and coordinated research at ICAR, New Delhi. He is a world authority on two groups of marine fishes - ribbonfishes and silverbellies. His specializations include fish taxonomy, fishery biology, marine fisheries, sea farming, fish and marine mammal osteology. He is the recipient of Dr. S. L Hora Gold Medal for Contribution to the Development of Fisheries in the country. He has published over 250 scientific and other papers in national and international journals including a memoir on ribbonfishes. He has served as National Coordinator, FAO/UNDP Regional Sea Farming Development and Demonstration Project, Member, Advisory Committee to the World Bank on International Study of Fisheries Research, President, Marine Biological Association of India, Member, Editorial Board, Journal of Basic and Applied Sciences, Iraq. He has established the first professional College of Fisheries at Mangalore, including the writing of the syllabus for the Degree of Bachelor of Fisheries Science in 1969.

Chairman of the Committee appointed by the Agricultural University, Andhra Pradesh. He had assisted the Indian Council of Agricultural Research to reorganize fisheries research and establish four new research institutes.



Dr. K. K. Joshi

Principal Scientist & Head, Marine Bio-diversity Division

Dr. K. K. Joshi, currently serving as Principal Scientist & Head-in-Charge Marine Bio-diversity Division. After taking masters in Zoology with Fishery Biology as specialization in 1984 and Ph.D in Marine Ecology in 1992, he joined CMFRI since 1992. He mainly focused on fishery biology, stock assessment of marine fishes, taxonomy of marine fishes, biodiversity inventorisation and biodiversity valuation. He worked on understanding the fishery biology and population dynamics of threadfin breams, taxonomy of carangids, siverbellies, tunas, biology of elasmobranchs, taxonomy of fishes of Gulf of Mannar Ecosystem, cataloguing and inventoring of marine organisms in the marine repository. His research area include marine and coastal biodiversity conservation and management.



Dr. Marie-Fanny Racault

Earth Observation Scientist, Plymouth Marine Laboratory, UK.

Dr Marie-Fanny Racault is an Earth Observation scientist studying climate impact on marine ecosystem resources, fisheries, and the oceanic carbon cycle. She has key expertise in developing applications of earth observations (using *in-situ*, remote-sensing, modelling data), analyses of year-to-year and long-term changes in oceanic productivity, investigations of

biophysical interactions and climate processes such as El Niño extreme events. She has developed phenology algorithms to quantify plankton seasonal cycle in the global oceans, and in regional ecosystems such as the Red Sea coral reefs, the Mediterranean Sea, and the Gulf of Guinea upwelling system.



Dr. N. P. Singh,

Director, National Institute of Abiotic Stress Management, Baramati

Prof (Dr.) Narendra Pratap Singh initially served at various capacities at Nagaland University, Medziphema, Nagaland. He was the Joint Director, ICAR Research Complex for NEH Region, Tripura Centre. He was then appointed as the Director ICAR Research Complex for Goa. Presently he is the Director, ICAR National Institute of Abiotic Stress Management (Deemed to be University), Baramati, Maharashtra. He is also a nominated member in many scientific and management committees at national levels (Executive Council member of the World Noni Research Foundation, International Society for Noni Science, Chennai, member in Consultative committees in various activities of the Developmental Departments, viz. Agriculture, Animal Husbandry, and Veterinary Services, Fisheries, Water Resources, Horticulture, Developmental Corporation, NABARD, Rashtriya Krishi Vigyan Yojana, and National Horticulture Mission, Dept. of Biotechnology, State Medicinal Plant Board, member in Academic Council of Goa University and Goa Institute of Management, Advisory Committee of the Goa Science Centre, Managing Committee of the Goa State Medicinal Plant Board and the State Level Committee of Coconut Development Board- Govt. of Goa, Goa Oil Palm Projects Management, and Member of State Variety release Committee) He has also released 15 varieties of different field and horticulture crops. He has developed various technologies in crops, fruits, flowers, tuber crops, spice and also in respect of animal's i.e. rural poultry and composite fish culture. He served the Indian Society for Agronomy and Indian Society for Weed Science as a councilor for three terms and was also conferred the "Fellow" of the Indian Society of Agronomy for the year 2009 and "Fellow" of the Society of Extension Education for the year 2011. Recently he was awarded the Indian Society for Agronomy (ISA) Gold Medal for the year 2012.



Dr. V. Kripa,

Principal Scientist and Head, Fishery Environment Management Division, CMFRI, Kochi

Dr. Kripa joined ICAR in 1986 and during the past 31 years she served in three divisions of CMFRI including Mariculture and Molluscan Fisheries Divisions. She has a Master's Degree in mariculture from CMFRI and Ph. D. from Cochin University of Science and Technology in Marine Biology. She is presently working on marine habitats, small pelagic fishery fluctuations; ecosystem services, ocean acidification and climate adapt programs. Represented India for Scoping meeting of IPCC on Climate Change and Oceans and Cryosphere held at Monaco in December 2016. Prepared a report on Marine Food Security and presented in UN-International workshop. She has been awarded T. V. R. Pillai Foundation award (Team Member), the National Science Popularization awards - Vigyan Prasar award and the International-Commendable Paper award awarded by Asian Fisheries Society for the work on gender in aquaculture. She has served as Management Committee member of four ICAR Fisheries Institutes. Served as Research Advisory Committee member for UNDP funded projects. Dr. Kripa has served as member of scientific panel of experts for preparing twelfth plan projects of Kerala State Fisheries, especially Livelihood and Women Empowerment. She has more than 170 publications including a textbook on oysters, Asia Pacific reports on success stories in bivalve mariculture and two chapters in books on mariculture.



Dr. Aneesh Lotliker

Scientist D, Advisory Services and Satellite Oceanography Group (ASG), INCOIS, India

Dr. Aneesh Lotliker did his BSc. (Physics), M.Sc (Marine Sciences) and Ph.D in Marine Sciences from Goa University. He has been awarded Senior Research Fellowship by CSIR in 2006. He worked as junior and senior research fellow at Goa University. Later he joined INCOIS as scientist. His research interests includes hydro-optics modelling, ocean colour remote sensing, oceanic bio-physical interaction, marine primary productivity, ecological indicators, phytoplankton optical properties and functional types.



Dr. G. Maheswarudu

Principal Scientist & Head, CFD, Central Marine Fisheries Research Institute, Kochi

Dr. G. Maheswarudu currently serving as Principal Scientist & Head, Crustacean Fisheries Division. He belong to 1985 ARS batch and joined CMFRI in 1986. Since then he has been working in Crustacean Fisheries Division. He obtained his Masters in Marine Biology from Karnataka University, in 1981 and his Ph.D in Zoology from Andhra University in 1991. He has worked on biology and population dynamics of penaeid shrimps and portunid crabs. He developed protocols for seed production and grow-out culture of penaeid shrimps and portunid crab. Experienced with sea ranching and tagging of penaeid shrimps. Also developed protocol for development of captive brood stock of tiger shrimp. Development of captive brood stock and sex reversal of grouper in sea cage; cage culture of asian sea bass and tiger shrimp in floating cage

were his achievements. His research projects include, Trawl fishery of the North east coast of India, Stock assessment of Penaeid shrimps along the Indian coast, Stock assessment of Portunid crabs along the Indian coast. He is the recipient of several awards and recognition, which include; Bharat Jyothi Award and The Best Citizens of India Award, Thomas Edison Award-2013 in Marine Aquaculture, 5th year Anniversary in Who's Who in the World (2010-2014), Photon Research Award-2014 in Genetics, World Endocrinology Research Award-2015 in Veterinary Science.



Dr. A. G. Ponniah

Former Director, CIBA & Emeritus Scientist, CMFRI, Chennai

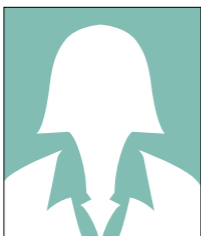
Started his research career as scientist in Indian Council of Agricultural Research (ICAR)-Central Marine Fisheries Research Institute (CMFRI). He also served as Director of Central Institute of Brackishwater Aquaculture (CIBA). Presently working as ICAR Emeritus Scientist in the (CMFRI), Chennai on risk and impact assessment of exotic species, one of the areas he initiated in National Bureau of Fish Genetic Resources (NBFGR), Lucknow as its Director. As Program Leader of Biodiversity and Genetic Resources Research Program (BGRPP), World Fish Center, Malaysia (a CGIAR -World Bank funded institute) was responsible for FISHBASE the most widely used web biological database and of GIFT, the program on tilapia genetic improvement and dissemination of improved strains. He was the coordinator of International Network of Genetics in Aquaculture (INGA). He has coordinated multi country/ multi institutional projects while at World Fish Center and NBFGR and developed public-private partnership research programs at CIBA. He has been a member of scientific committees in Indian Council of Agricultural Research (ICAR), Department of Biotechnology (DBT), National Biodiversity Authority (NBA) and Coastal Aquaculture Authority (CAA). After retirement, he served as Emeritus Scientist in CMFRI for two years and as Associate Editor of Journal of World Aquaculture Society. At present, he is member of Research Advisory Committee (RAC) of ICAR -National Institute of Abiotic Stress, and Chairman RAC, ICAR -Central Freshwater Research Institute. He is also the member Expert Committee on Ministry of Agriculture and Farmers Welfare Inland Fisheries and Aquaculture Policy and ICAR-National Innovations in Climate Resilient Agriculture (NICRA). He has 103 peer reviewed research papers and 161 other publications.



Dr. M. Sudhakar

Director, Centre for Marine Living Resources and Ecology, Kochi

Dr. M. Sudhakar, Scientist-G, Ministry of Earth Sciences, New Delhi, took charge as the Director, CMLRE. He obtained Ph.D from Indian School of Mines, Dhanbad and a Master's degree in Law of the Sea and Marine Policy in 1990 from the London School of Economics & Political Science, UK as a British Council Fellow. He served two premier research institutions National Institute of Oceanography (NIO) & National Centre for Antarctic and Ocean Research (NCAOR) in Goa. He is a veteran Oceanographer with 33 years of professional experience, spent more than 1500 days at sea on-board research vessels, as leader of expeditions to Southern Ocean and Antarctica. Dr. Sudhakar represented India at the Preparatory Commission for the United Nations Law of the Sea (Prep Com) and involved in the deliberations for allocation of Pioneer Area of Polymetallic Nodules in Indian Ocean to India in 1987. Dr. Sudhakar is an Elected Member of the Legal & Technical Commission (LTC) of the International Seabed Authority (ISBA) for the term 2007-2011 and recently elected to the 2nd term (2012-16). He is also a member of Scientific Committee on Ocean Research (SCOR), ICSU, serving for second term until 2014. He was a visiting scientist to the Aachen University of Technology, Germany; a resource person of the International Ocean Institute, Malta; Member, National Steering Committee for Science and Astronomy Olympiads and Member, Scientific Committee, International Geological Congress (2020 to be held in India). He was the "Commissioner General" of Govt. of India for the Yeosu (World) Expo 2012 held in Republic of Korea. He published over 60 research papers in referred International/ National Journals, books and equal numbers presented in conferences and seminars.



Dr. Beena Kumari,

Retd. Scientist, Space Applications Centre, Ahmedabad

Dr. Beena Kumari was a Scientist in Space Applications Centre Ahmedabad. She hails from Andaman & Nicobar Islands. She joined the Space Applications Centre, Ahmedabad and has been working on areas related to marine ecosystems and was actively involved in fish harvest related prediction mechanism as well as some of the ecosystem related indices.



Dr. Prakash Chauhan

Group Director, BPSG, Space Applications Centre, (ISRO), Ahmedabad

Dr. Prakash Chauhan, born on May 15, 1969, obtained his Master of Technology degree in Applied Geophysics from Indian Institute of Technology (IIT), Roorkee and he did his Ph. D. in Physics by Gujarat University, Ahmedabad. He joined the Space Applications Centre, (ISRO), Ahmedabad, in 1991 as scientist and since then working for the applications of remote sensing technology for ocean resources and more recently in the field of Planetary Remote Sensing. Presently he is Group Director of Biological & Planetary Sciences Group at Space Applications Centre, (ISRO), Ahmedabad. He has published more than 100 research papers in both National and International Journals and has many conference papers to his name. His major contributions have been towards operational use of ocean-colour remote sensing in the country and lead work in using the hyperspectral data for Lunar surface composition mapping using HySI and Moon Mineralogical Mapper (M3) instruments of Chandrayaan-1. He is also working as Science Principal Investigator for IIRS instrument on-board

Chandrayaan-2 mission. Currently he is leading a team for Mars Orbiter Mission (MOM) data analysis. He is also executive member of International Ocean Colour Co-ordination Group (IOCCG) and representing ISRO. He has also represented ISRO at CEOS as Co-Chair for Ocean Colour Virtual Constellation (OCR-VC). He is also a member of prestigious NASA-ISRO Mars working group. He has been awarded prestigious Prof. P. R. Pisharoty memorial award for the year 2004 by Indian Society of Remote Sensing, Hari Om Ashram Prerit Dr. Vikarm Sarabhai Research Award by Physical Research Laboratory (PRL), Ahmedabad for 2009, ISRO merit award by Indian Space Research Organistaion in 2010 and Satish Dhawan award by ISRS, Dehradun for 2016.

.....



Dr. T. M. Balakrishnan Nair

Head, Information Services and Ocean Sciences Group

Dr T. M. Balakrishnan Nair, currently serving as Head, Information Services and Ocean Sciences Group, obtained his Ph. D in Geochemistry of Settling particles in the Northern Indian Ocean in 2001. He also received the Young Scientist Award from Indian Association of Sedimentologists in 2000, and the Certificate of Merit for outstanding contribution from Ministry of Earth Science, Government of India, 2007. In 2008-09 he was awarded the Silver Award for design and development of the INCOIS website & ocean portal under the category Best Government Website during the National Award for e-governance, instituted by the Government of India. He was presented with the National Geoscience Award in 2014, instituted by Ministry of Mines, Govt. of India from Shri. Pranab Mukherjee, the Hon. President of India, during a function held in Rashtrapathi Bhavan on 5th April 2016, given in recognition of his outstanding contributions in the field of Geosciences. He also obtained a DAAD (Deutscher Akademischer Austauschdienst) Fellowship from the Govt. of Germany for advanced Research in University of Bremen, Germany. His research interests include Ocean Nowcasting and Forecasting, Real time observation systems and Marine Biogeochemistry.



Dr. Shyam S Salim

Principal Scientist, ICAR- CMFRI, Kochi

Over twenty years of research experience in the niche areas on marine fisheries economics, domestic marketing, international trade, climate change, women empowerment, policy research and management. Collaborating and expanding networks within and outside the institute for supporting and implementing state/ country fisheries management and fishers welfare actions and initiatives. Had developed considerable international research and development linkage with Australia India Strategic Research Fund (AISRF), Michigan State University (MSU) and Belmont Forum. Currently leads the international Climate change research project and its implications on food security and livelihoods. Present works of importance include assessing marine fish distribution and consumption in India. Completed around 40 research projects and has over 100 research articles in peer reviewed national and international journals. Developed the Indian fish market grid for better marketing efficiency and methodological tool for assessing the vulnerability of coastal households consequent to climate change. Lead and provide significant contributions to global or regional flagship studies, forge strategic partnerships and alliances to contribute to the CMFRI corporate knowledge agenda in fisheries. Represent CMFRI in various forums, internally and externally, and support resource mobilization. Serve as a team member and occasionally lead activities as Task Team Leader, both in fisheries and multi-sectoral operations.



Dr. A. Ramachandran

Vice Chancellor, Kerala University of Fisheries & Ocean Studies, Kochi

He has done his Post-Doctoral Research from Delft University of Technology, The Netherlands. He served in various capacities at CUSAT. Before joining CUSAT, he has served as Scientist and Senior Scientist under ICAR. He was nominated as Fishery Industry Advisor to the Ministry of Agriculture and Fisheries, Sultanate of Oman, twice as expert by Food and Agriculture Organisation of the United Nations and participated in the working party meetings APFIC Conferences/Symposia. He was selected for JICA International Fellowship (Japan), NUFFIC Grant (The Netherlands) for Post-Doctoral research in Delft University of Technology, The Netherlands during 2002-2003. He was elected as the Vice President of Society of Fisheries of India from 2011-2014, Executive Committee member for three terms, Vice-President of Kerala Society of Science and Technology (India) since 2010 onwards, Chairman, Board of Studies, School of Industrial Fisheries, Cochin University of Science and Technology. He is Life Member of Indian Council of Management Executives (Mumbai) and awarded Order of Merit for Management and honoured as "Samajshri" in recognition of services rendered to the public. He has 245 papers, technical articles/reports, books and policy documents published, 102 publications, 12 FAO publications, 15 International Conference Proceedings.



Dr. Jayaprakash V. Thomas

Disaster Management Support (DMS), Oceanography and Meteorology Programs of ISRO.

He has completed his Master of Technology in Applied Geology

from Roorkee University in 1991. He was awarded Doctor of Philosophy in Earth Sciences in 1997 from Roorkee University for his work on Evolution of Indogangetic Foreland Basin. He continued his research activities on Paleoenvironmental History of Thar Desert at Physical Research Laboratory from 1997 to 1998. He has joined Earth Observation System Programme office at ISRO headquarters as a Scientist in 1998. Presently he is coordinating the Disaster Management Support (DMS), Oceanography and Meteorology Programs of ISRO.



Dr. R. Narayanakumar

Head, Socio-Economics and Technology Transfer Division, CMFRI, Kochi

Beginning his career as a Lecturer in Agricultural Economics in Annamalai University, Dr. Narayanakumar shifted to ARS in 1992, joining CMFRI in 1993. He is associated in fishery economics and marketing projects of the SEETT Division. After his Ph.D, he joined as Senior Scientist in Kakinada RC of CMFRI in 2001 and conducted research projects in fisheries socio economics, status of fisherwomen and evaluation of ecosystems. He was selected as Head, SEETT Division in 2012 and coordinates and facilitates the research programmes of the division. He is currently involved in marine fisheries policy research programmes and in the Belmont forum project on Global Learning from Local Solutions. His research interests include natural resource economics, production and marketing of marine fisheries, economic valuation of ecosystems and their associated biodiversity, policy research, socio economics and vulnerability studies.



Dr. Antony Joseph

Retd. Scientist, National Institute of Oceanography, Goa.

Dr. Antony Joseph has an oceanographic career of about 36 years. He retired as Scientist from National Institute of Oceanography, Goa. He obtained his M.Sc in Physics from Centre for Post-Graduate Instruction and Research, Bombay University in 1981. He has worked at POL (UK), where part of his Ph.D work was carried out. He served as Scientist F and E-II in National Institute of Oceanography, Dona Paula, Goa. He showed great interest in Development of Sea Level Gauges, Development of Autonomous Weather Station, Test and Evaluation of Oceanographic Sensors, Oceanographic and meteorological phenomena in general. He was member of Panel of Experts on Sea-Level Measurements (Inter-Governmental Oceanographic Commission, UNESCO, Paris, France) since 2000. He led the establishment of a sea-level station at the central east Atlantic coast, the data from which, in the absence of other data from this region, became highly valuable in understanding the global extent of the December 2004 global tsunami. His contribution enables real-time Internet viewing of data in graphical format. He authored two Elsevier books: (1) Tsunamis, (2) Measuring Ocean Currents; published chapters in books, articles in Encyclopedias, research papers in journals.



Dr. E. Vivekanandan

Emeritus Scientist, CMFRI, Chennai.

Dr. E. Vivekanandan works as National Consultant in the World Bank Project on Ocean Partnership - Bay of Bengal, in the

Bay of Bengal Programme Inter-Governmental Organisation, Chennai. Until 2012, he belonged to Agricultural Research Service and worked in various capacities including Head of Division and Principal Scientist in Central Marine Fisheries Research Institute (ICAR, Government of India). He is having over 40 years of experience in marine fisheries research and development. He has pioneered the research on marine fish population dynamics, stock assessment, climate change and marine ecosystem modelling in India. He has authored several research papers, book chapters and books in different areas of marine fisheries. He has travelled widely and is associated with several regional organisations engaged in fisheries research and management.

.....



Dr. Imelda Joseph

Principal Scientist & Head, Mariculture Division, ICAR-CMFRI, Kochi

Dr. Imelda Joseph currently serving as Principal Scientist & Head of Mariculture Division, at the Headquarters, Central Marine Fisheries Research Institute, Kochi. She joined CMFRI in 2001 May in Aquaculture Nutrition and Mariculture. After taking Masters Degree in Mariculture in 1989 and Ph.D in Marine Sciences (Environmental Microbiology) in 1997 from Cochin University of Science and Technology, Dr. Imelda Joseph worked at the Central Institute of Brackishwater Aquaculture till 2000. She has also worked at Krishi Vigyan Kendra of CMFRI at Narakkal from 2000-01. She has developed and standardized solid state fermentation technology for nutritional enrichment of aquafeed ingredients as well as agricultural byproducts, as well as contributed to the technology demonstration and popularization of cage culture in the country. The focal areas of her research include Mariculture of finfishes and Cage Aquaculture, Mariculture Technology Demonstration and Environmental Microbiology.



Dr. P. Jayasankar

Principal Scientist, CMFRI, Kochi

Dr. P. Jayasankar who served as Director, ICAR- Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar, Odhisa, has secured his Ph.D from Cochin University of Science and Technology, Kerala, India. He has done his Post-Doctoral research on genetic studies on Scombroid fishes with the award of National associateship from Department of Biotechnology followed by an overseas training. Dr. Jayasankar started his career as Scientist, Regional centre, ICAR- CMFRI, Mandapam Camp, Tamil Nadu. Participated in pilot expedition to Southern Ocean on board ORV Sagar Kanya and made observations on marine mammals. He has developed molecular taxonomy for cetaceans and sirenia, and standardised PCR- based gender identification, cardinal for their conservation and management. Developed PCR kit to detect hybridization and facilitate seed certification of Indian major carps which is filed for patent. He has 131 peer reviewed research papers, 5 edited books, 2 books, 43 book chapters/manuals and 151 popular articles/symposia papers and over 6000 Gene Bank accessions to his credit. He has guided three Ph.D and five MFSc students as major/Co-guide.



Dr. G. Gopakumar

Emeritus Scientist, CMFRI, Vizhinjam &
Former HOD, Mariculture Division, CMFRI

Dr. G. Gopakumar has 38 years of research experience in CMFRI under various capacities which include Scientist-in-Charge of Regional Centre of Mandapam and head of Mariculture Division

of the institute. He has made significant research contributions in the field of mariculture. His major achievements include breeding, seed production and farming of cobia, silver pompano and a dozen of marine ornamental fishes, rotifer research as live feed for larviculture, live bait research for skipjack, pole and line tuna fishery at Lakshadweep and popularisation of marine aquarium technology. He was deputed to Vietnam for gaining expertise in breeding and seed production of finfish. He had participated in more than 10 scientific cruises for explanatory fisheries survey in the Exclusive Economic Zone of India. As Emeritus scientist he is pursuing his research on the assessment and evaluation of reproductive parameters essential for broodstock development of high value marine finfishes. He has published 90 research papers in national/ international journals and about 70 conference papers/book chapters/teaching resources.



Dr. Evangelos Spyrakos

Lecturer in Earth Observation, University of Stirling, UK.

Dr Evangelos Spyrakos is Lecturer in Earth Observation at the University of Stirling with background in marine physics (B.Sc. & M.Sc. in Marine Sciences and M.Sc. & Ph.D in Applied Physics). His research interests predominantly lie in the areas of light propagation and light-matter interaction in natural waters and in the use of near-ground, airborne and satellite remote sensing (RS) of aquatic environments including lakes, estuaries, coastal zones and open seas. While his research is centred around RS and underwater light climate, his scientific objectives are driven by fundamental questions on dynamics and processes in aquatic ecosystems and on the impact of human and climate induced environmental change on them.



Dr. M. Jayanthi

Principal Scientist, Central Institute of Brackish Water Aquaculture, Chennai.

Dr. M. Jayanthi is a principal Scientist at ICAR-Central Institute of Brackishwater Aquaculture. Her work focuses on remote sensing and Geographic Information System applications for sustainable aquaculture particularly site selection, environmental impact assessment and planning for climate change.

She has joined Indian Agricultural Research Service in 1993 and started the work on the use of remote sensing data for brackish water aquaculture development and management. She is recipient of Young Scientist Award from Asian Fisheries Society, Dr. H. S. Sen award from Indian Society of Coastal Agricultural Research and the best paper award from the College of Fisheries, Toothukudi. She also published about 30 peer reviewed research papers in reputed journals, five book chapters, to her credit and many presentations in the conferences and symposium.

Dr. Jayanthi earned a Master of Engineering in Agriculture from the Tamil Nadu Agricultural University, and a Doctorate in Civil engineering at Anna University in the subject of "Environmental Impact of Aquaculture on the Pichavaram Mangroves using Remote sensing and GIS".



Dr. Ravishankar C. N

Director, Central Institute of Fisheries Technology (CIFT)

Dr. Ravishankar C. N., Principal Scientist and Head, Fish Processing Division assumed charge of Director, Central Institute of Fisheries Technology (CIFT), Cochin in 2014. Born in Karnataka in 1963.

He earned his Bachelor Degree in Fisheries Sciences from College of Fisheries, Mangalore under the University of Agricultural Sciences, Bangalore in 1984 followed by Post Graduation and Ph.D from the same university in 1986 and 1990. He joined CIFT, Cochin as Scientist in 1991. He had participated in the First Indian Antarctic Expedition and travelled widely abroad for training and consultancy programmes. Areas of specialization include fish processing and packaging and has developed, popularized and transferred more than 47 technologies to the fish processing industries. Published more than 240 International and National research articles and authored 7 books. So far, guided 8 students for Ph.D and 30 students for their post-graduation programmes. He received 15 Awards for excellence in the field of fisheries science and entrepreneurship development. And also awarded as Fellow of National Academy of Agricultural Sciences, New Delhi and Society of Fisheries Technologists (India). Established India's first Business Incubation Centre in the field of Fisheries.

.....



Dr. Sibnarayan Dam Roy

Principal Scientist and Former Director, Central Inland Agricultural Research Institute, Port Blair, Andaman & Nicobar Islands, India

Dr. Dam Roy has bagged a number of national awards for his outstanding research like ICAR Team Research Award, Fakhruddin Ali Ahmed Award, Hooker Award, Dr Rajendra Prasad Award etc. He was bestowed with Lieutenant Governor's commendation award in 2008. In 2017, he has become the Fellow of National Academy of Agricultural Sciences, New Delhi and also became the Fellow of Zoological Society, Kolkata. He is also the Honorary Fellow of Indian Ecological Society, Ludhiana and Fellow of Andaman Science Association. His effort on documentation of biodiversity of Mangrove and corals has been appreciated by C. P. Ramaswamy foundation of Chennai. Society for Plant Research have conferred distinguish Scientist Award 2014 and the lifetime achievement award by Andaman Science Association for documentation of mangrove and coral biodiversity and for socio-economic upliftment of the fishermen of Andaman & Nicobar Islands. He has been the Principal Investigator and Co-Principal Investigator of 17 number of Externally funded Projects, sponsored by SAC Ahmedabad, INCOIS Hyderabad,

DBT Delhi, BRNS Mumbai, NATP, ICAR cess fund, CMLRE Kochi and NABARD Port Blair. Dr Dam Roy, has published 166 Research papers in National and International Journals, He has written 40 books, bulletins, Manuals etc., 30 bookchapters, 74 conference papers and numerous reports including policy documents on fisheries and road map of fisheries development of Andaman & Nicobar Islands. He also served as the Head of Division of Aquaculture in CIFE, Mumbai. Dr Dam Roy, is the President of Andaman Science Association and Vice President of Indian Society of Coastal Agricultural Research.

.....



Dr. Leela Edwin

Head, Fishing Technology Division
ICAR- Central Institute of Fisheries Technology, Cochin

Dr. Leela Edwin completed her Master's Degree in Industrial Fisheries from the Cochin University of Science and Technology in 1985. She was selected as Scientist through the ARS (Agricultural Research Service) examination and joined the Central Institute of Fisheries Technology, Cochin in 1986. While in service she completed her Ph.D in the Ring seine Fisheries for which she received the Jawaharlal Nehru Award 2000 for outstanding Post Graduate Research (best Ph.D Thesis in Fisheries Science in India) in Agriculture from the Indian Council of Agricultural Research, New Delhi. She is the recipient of the National Award for Technology Innovation (Runner Up) in the field of Polymer Science & Technology from Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India in 2013. She has also received the Best Scientific Paper Award 2005 instituted by Society of Fisheries Technologist's (India) and the Best Original Research Paper award at the ISOCRAD International Symposium in 2016. She has received Advanced training in fishing gear designing from the Marine Institute, New Foundland, Canada and has presented research work in conferences, seminars and meetings in the country and abroad including countries like Italy, Thailand, Malaysia. She is an approved Research Guide of the Faculty of Marine Sciences, Cochin University of Science and Technology and has seven research students of which four have received their Ph.D degree. As member of National and State level Committees she has contributed to policy making for the management of Indian Fisheries.



Dr. Mini Raman

Division Head, Space Applications Centre, Ahmedabad

Dr. Mini Raman is a mariculture researcher and space scientist. After obtaining her Master's Degree in Mariculture she joined as a scientist in Space Applications Centre Ahmedabad. She has worked in the area of marine optics and contributed greatly to the field of ocean color optics. She was a pioneer who worked on the comparison of satellite remote sensing data to ocean color data. She did her Ph.D from Mangalore University.



Dr. Mark James

Operations Director, The Marine Alliance for Science and Technology for Scotland (MASTS), UK

As the Operations Director of the Marine Alliance for Science and Technology for Scotland (MASTS), Mark is responsible, together with the MASTS Directorate, for the day-to-day co-ordination and delivery of a £75m Scottish Funding Council research pool involving the majority of Scotland's marine science capacity. Based at the University of St Andrews he also leads the Coastal Resources Management Group and has a number of ongoing research projects with post-doctoral researchers and Ph.D students. He is Principal Investigator (PI) of the (£1.52m) Scottish Inshore Fisheries Integrated Data System (SIFIDS) project, designed to develop a suit of open source systems and processes to improve fisheries management data collection and to inform marine planning. He is also PI of the recently funded (400k Euro) EU MARE fishPi2 project to strengthen regional cooperation in the area of fisheries data collection in the North Sea, Eastern Arctic and North Atlantic.



Dr. B. K. Das

Director, Central Inland Fisheries Research Institute, Barrackpore, West Bengal

Dr. B. K. Das completed his graduation and post-graduation from OUAT and has two Post-Doctoral Fellowship from UK and USA. He has a research experience of over 25 years in cage and pen culture, fish health management in open water and aquaculture pond, sustainable aquaculture in seasonable ponds, livelihood development of tribal community through aquaculture, microbial molecular genetics, fish cytokine genes, drug delivery system, development of medicines from herbs and plankton. The awards and recognitions conferred to him include: Eminent Zoologist Award from ZSI, Gaya, "Krushaka Gaurav", and "Krushaka-Ratna" by Krushka Samaj in 2017 and 2016 respectively. He has guided 16 M.Sc / M.F.Sc and 10 Ph.D students. He has 100 peer reviewed papers and 10 book chapters to his credit. He holds 2 patents and commercialisations include CIFACURE for controlling bacterial and fungal infection in freshwater ornamental fishes, CIFRI-GI cage - for cage in reservoirs.



Dr. Kolliyil Sunilkumar Mohamed

Head, Molluscan Fisheries Division, CMFRI, Kochi

Dr Mohamed had his masters in marine biology in 1981 and Ph.D in crustacean physiology in 1990 and has been working in CMFRI since 1986 on molluscan fisheries and mariculture. He currently heads the division of Molluscan Fisheries in CMFRI. He has contributed to understanding of Indian cephalopod biology and population dynamics. In mollusc mariculture, he has contributed

to the growth of commercial bivalve mariculture in the country. He has interests in marine ecological modelling particularly its application to fisheries management. He is the leader of a team of researchers from CMFRI working on trophic modelling of Indian marine ecosystems and has modelled the Arabian Sea ecosystem off Karnataka State, the northwest coast ecosystem and the Gulf of Mannar ecosystem. He has published more than 200 research articles in international and national journals.

Dr. Mohamed is Secretary of the Marine Biological Association of India for the past 6 years. He has won the Jawaharlal Nehru Award for best Ph.D thesis from ICAR in 1991 and the TVR Pillay Aquaculture Award 2011 for outstanding aquaculture research and extension. Recently he is also the member of the Technical Advisory Board of the Marine Stewardship Council (MSC) which is global non-profit organization fostering certification and ecolabelling of sustainable seafood.



Dr. K. S. Purushan

Former Dean, Kerala University of Fisheries and Ocean Studies

Dr. K. S. Purushan is one of the pioneers of Biological Oceanography in India. He was the Scientist-in-charge of Fisheries Station Puthuvypu, operating under College of Fisheries Panangad. He served as Dean, the erstwhile College of Fisheries, Panangad under Kerala Agricultural University. He was very active in fisheries related research activities and his research interests include environment and ecological issues. He has also raised issues pertaining to island and related ecosystem in various forums.



Dr. P. U. Zacharia

Principal Scientist & Head, Demersal Fisheries Division, ICAR- CMFRI, Kochi

Dr. P. U. Zacharia, currently serving as Principal Scientist & Head-in-Charge of the Demersal Fisheries Division at the Headquarters, Central Marine Fisheries Research Institute, Kochi. He obtained his Masters Degree in Marine Biology from Cochin University, and Ph.D in Biosciences from Mangalore University. Before taking up his current position, he worked in CMFRI Mangalore and Tuticorin Research Centres in various capacities. Some of his major contributions include stock assessment of demersal fishes, biodiversity of marine and estuarine fauna of Karnataka coast, impact of bottom trawling on marine benthos and trophic modelling of different Indian marine ecosystems. He presently functions as the Principal Investigator of the Council sponsored "National Initiative on Climate Resilient Agriculture (NICRA)" project in CMFRI. His research interests include demersal fisheries stock assessment, elasmobranch resources and barcoding, trophic modelling and fisheries management and climate change and its impacts on marine fisheries. He has published over 150 research papers in National / International journals.



Dr. C. Gopal

Member Secretary, Coastal Aquaculture Authority, Chennai.

Dr. C. Gopal, formerly Principal Scientist and Head, Crustacean Culture Division, Central Institute of Brackishwater Aquaculture, Chennai assumed the post of Member Secretary, Coastal Aquaculture Authority, Chennai on 23/10/2017. He has several years of research experience and has been the lead investigator of many projects.

Printing support



The financial assistance received from Research and Development Fund of National Bank for Agriculture and Rural Development (NABARD) & National Biodiversity Authority, India (NBA) towards publication of journal/ printing of proceedings of the Symposium is gratefully acknowledged.



ICAR-Central Marine Fisheries Research Institute

Post Box No.1603, Ernakulam North P.O., Kochi-682 018,
Kerala, India.

Phone: +91 484 2394357, 2394867 Fax: +91 484 2394909
E-mail: contact@cmfri.org.in www.cmfri.org.in