

CMNPF Awardees 2021-22 (Batch I)

**Agriculture & Ecological Science**

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Deepu Sivadas	M	University of Kerala, Department of Botany	Documenting the landslides and Post-landslide soil and vegetation recovery in the forest areas of North Kerala	
Dr. Jesiya N.P.	F	National Institute of Technology (NIT), Calicut, Department of Civil Engineering	Investigation of hydrologic regimes in the coastal urban environment of Northern Kerala using machine learning algorithms in the context of climate change	
Dr. Khatawkar Dipak Suresh	M	Kerala Agricultural University, Dept. of Farm Machinery and Power Engineering, KCAET - Tavanur	Design and development of an energy efficient high clearance 4-wheel drive 4-wheel steering electric vehicle for farm operations	
Dr. Neeraja Puthiamadom	F	Kerala Agricultural University, RICE Research Station, Vyttila	Allele mining in rice to unravel the genetic mechanism of salinity tolerance	
Dr. Neethu B.	F	KSCSTE-CWRDM Kozhikode	Development of Hybrid Packaged Wastewater Treatment System Comprising of Moving Bed Biofilm Reactor (MBBR) and Microbial Fuel Cell (MFC).	
Dr. Raji P.	F	ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram	Future climate suitability and regional yield forecasts of major agricultural crops in Kerala: a GIS-based approach	

Dr. Rani Varghese	F	Kerala University of Fisheries & Ocean Studies (KUFOS), Department of Climate Variability and Aquatic Ecosystems	Sustainable Use of Blue Carbon from the Mangroves in Relation to Climate Change Mitigation for the State of Kerala	
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### Chemical Sciences

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Abhilash P.	M	Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology Kerala	2D Quantum Dots Based Fibre Supercapacitors for Wearable Energy Storage	
Dr. Liju Elias	M	Department of Chemistry, University of Kerala	Design and Development of Chemical Recycling Strategies for Handling Concrete Waste in Kerala: A Region-Specific Approach to Reuse Concrete Wastes for Potential Applications	
Dr. Neema P.M.	F	School of Physics, Indian Institute of Science Education and Research (IISER), Thiruvananthapuram	Creative Design of LED Devices: Light Matters	
Dr. Ramya A. R.	F	Department of Chemistry, University of Calicut	Molecular Engineering of Cyclic Tetrapyrroles as Photocatalysts for Solar-driven Hydrogen Production	
Dr. Sherin D. R.	F	Kerala University of Digital Sciences, Innovation and Technology	Unravelling an Effective Phytochemical Scaffold in the Development of NIRF Probe for the Early Detection of Amyloid- $\beta$ plaques: An AI-Based Approach	

Dr. Soumya B.N.	F	Department of Chemistry, Central University of Kerala	Design and Development of Efficient and Economic Catalyst for Hydrodeoxygenation of Lignin Derivatives: Exploration of Late Transition Metal Oxides	
Dr. Soumya S. J.	F	Dept. of Computational Biology and Bioinformatics, University of Kerala	Investigations On Ayurveda Based Analgesics for Targeting Transient Receptor Potential (TRP) Pain Receptors	
Dr. V. S. Dilimon	M	Centre for Renewable Energy and Materials, University of Kerala	Development of high-performance lithium-sulfur and aluminum-sulfur batteries for automobile applications by elucidating their detailed sulfur electrochemistry	
Dr. Vishal Kandathil	M	Department of Applied Chemistry, Cochin University of Science and Technology,	A Step Toward Combating Global Warming by Efficient CO <sub>2</sub> Utilization by Structurally Engineered Single-Atom Catalysts	
Dr. Wilbee D.S.	F	Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram	Identification and modification of RNA Dependent RNA Polymerase (RDRP) Allosteric Inhibitors of SARS CoV2 based on Drug Repurposing Strategy using Well Tempered Metadynamics Simulations.	

### Climate Change & Geological Studies

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Ajmal Khan A.T.	M	University of Kerala, Department of Economics in collaboration with Department of Asian Studies, University of Victoria, Canada.	Addressing the Challenges of Climate Change in Kerala: Building Climate Resilient Regional Development Plan for Kuttanad	

Dr. Deepu A. Gopakumar	M	Cochin University of Science and Technology	Cellulose Nanofiber Based Polymer Composite Membranes and Aerogels from Underutilized Coir and Bamboo waste as a Sustainable Solution for Water Purification	
Dr. Dhanya P.	F	Department of Geography, Government College-Chittur, University of Calicut	Augmenting climate change adaptive capacity and mitigation potential among the rice farmers of Bharathapuzha basin areas in Palakkad through ICTs and ecosystem-based adaptation (EbA) interventions.	
Dr. Lakshmi N.B.	F	National Centre for Earth Science Studies, Atmospheric Science Group	Aerosol-Cloud interaction in the changing patterns of rainfall events over Kerala	
Dr. Muhsin M.	M	National Institute of Technology (NIT)-Calicut	Retrieval of the atmospheric aerosol optical properties affecting climate radiative forcing	
Dr. Priyitha R. G.	F	University of Kerala Department of Environmental Sciences	Influence of Indian Monsoon on Water Vapor : Link With Climate Change	
Dr. Shijeesh M.R.	M	International School of Photonics, Cochin University of Science and Technology	An integrated energy storage system based on triboelectric nanogenerator and supercapacitor	
Dr. Shini Renjith	F	University of Kerala Department of Computer Science	An intelligent disaster forecasting framework using Deep Hybrid Learning for proactive identification of recurring natural disasters in the state of Kerala	

### Digital Science & Engineering

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert
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Dr. Adithya V.	F	Department of Information Technology, Kannur University	Development of Efficient Methodologies for Automatic Speech-Gesture Recognition to Enable Natural and Multimodal Human Computer Interaction	
Dr. Ansal K.A.	M	Indian Institute of Information Technology (IIIT), Kottayam, Kerala	Isolation enhancement of MIMO antenna array with reduced mutual coupling for low latency connectivity	
Dr. Raji C.G.	F	Department of Computer Science, University of Kerala	Machine Learning Techniques based Survival Forecast in Organ Transplantation Patients over Kerala State	
Dr. Sreeja M.U.	F	Cochin University of Science and Technology Department of Electronics	A smart system for Ischemic Heart Disease (IHD) prediction through Explainable AI	
Dr. Vijender Kumar Sharma	M	Kerala University of Digital Sciences, Innovation and Technology	CAD Tool for Power Delivery Analysis and on-Chip Implementation of Variable Negative Impedance Circuits (CADT-PDA-VNIC)	
Dr. Vivek R.	M	Department of Computer Science, Cochin University of Science and Technology	AI based detection of buried human bodies using Ground Penetrating Radar during landslides	

### Life Sciences

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
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Dr. Ahlam Abdul Aziz	F	Kerala Agricultural University, Vellanikkara, Thrissur	Structural Elucidation, Molecular Docking and Bioprospecting of Secondary Metabolites from Callus Cultures of Curcuma Angustifolia Roxb. Elicited with Biogenic ZnO Nanoparticles	
Dr. Amrutha Nisthul A.	F	University of Calicut	Synergistic Antitumor Activity of Cucurbitacin B With BRAF Inhibitors/Natural Chemopreventives Against Melanoma in Vitro	
Dr. Anu K.	F	Department of Biotechnology and Microbiology, Kannur University	Exploration of Black Pepper-Microbiome for Developing Biosynthetic Bacterial Consortia for Enhancing Sustainable Crop Productivity, by a Combined Metagenomics, Metabolomics, and Synthesized Microbiome Approach	
Dr. Asha Raj K. R.	F	Department of Zoology, Christ College, Irinjalakkuda, University of Calicut	Effects of Predicted Climate Change Scenarios on Ecosystem Functions and Life History Traits of the Spider Pardosa Sumatrana (Thorell 1890)	
Dr. Hareesh P.S.	M	ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram	Development And Evaluation of Artificial MicroRNA Gene Constructs Suitable for Transformation of Cassava (Manihot esculenta Cratz.) for Cassava Mosaic Geminivirus (CMG) Resistance	
Dr. Hazeena S. H.	F	Central University of Kerala, Kasargode	Integrative Approach for the Valorization of Dairy Wastes for the Production of Xanthan Exopolysaccharides	
Dr. Jeswin Joseph	M	National Centre for Aquatic Animal Health, Cochin University of Science and Technology	Novel dsRNA of STAT Gene Based 'Drug' to Protect Shrimp from White Spot Syndrome Virus	
Dr. Joyous T. Joseph	F	Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram, Kerala	CRISPR/Cas9 Mediated Epigenetic Editing of Genes Orthologous to Soft-Rot Disease Susceptibility Genes of Ginger in P. Myriotylum Susceptible Nicotiana Benthamiana	

Dr. Leya Thomas	F	Kerala Agricultural University	Transcriptomic Profiling of Xylan Utilisation System of a Potent Bacterial Isolate during the Growth on Agro-Residue Under Solid State Fermentation	
Dr. Manomi S.	F	National Centre for Aquatic Animal Health, Cochin University of Science and Technology	Development of Low-Cost Multivalent Non Antibiotic IgY-Based Oral Edible Vaccine (Lomna-IOV) as Bio-Therapeutics to Combat Major Bacterial Diseases Affecting Aquaculture in Kerala	
Dr. Megha K.B.	F	Toxicology Division, Bio Medical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram	Peptide (HHC-36) Coated 3D Print Montmorillonite Scaffold for Bone Regeneration	
Dr. Mithun Padmakumar	M	Kerala University of Digital Sciences, Innovation and Technology	Effects of Ultrasonic Neuromodulation on Nucleus Accumbens Neurons: A Computational Study	
Dr. Remya Chandran	F	Laboratory for Computational and Structural Biology, Jubilee Centre for Medical Research, Kerala University of Health Sciences	Ayurvedic Nootropics as Countermeasures for Alzheimer's Disease: Strategic Thinking and Reverse Pharmacology Assisted Scientific Expositions	
Dr. Reshma Silvester	F	School of Industrial Fisheries, Cochin University of Science and Technology	Mapping Antimicrobial Use and Antimicrobial Resistance in Aquaculture Farming in Kerala	
Dr. Seena Jose	F	National Centre for Aquatic Animal Health, Cochin University of Science and Technology	Protection of Shrimp from White Spot Virus: Development of A Marine Invertebrate Permanent Cell Line Susceptible to the Virus Through Reprogramming Shrimp Lymphoid Cells	
Dr. Sharrel Rebello	F	National Institute of Plant Science Technology, Mahatma Gandhi University	Microbe Mediated Synthesis of Cellulosic Nanocomposites from Agrowastes	

Dr. Shine V. J.	M	Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram, Kerala	A Highthroughput BSL2 Compatible Assay Development for Screening of Natural Products and Compound Libraries against SARS-Cov-2	
Dr. T.R. Resmi Pulari	F	ICAR-Central Tuber Crops Research Institute	CRISPR/Cas Gene Editing Strategies to Develop Resistance Against Sweet Potato Infecting Begomoviruses	
Dr. Tripti Raghavendra	F	Department of Biotechnology, Cochin University of Science and Technology	Bacterial Diversity of Water and Sediment Under Anthropogenic Influence of Kochi Maritime Facilities	
Dr. Unnikrishnan B. S.	M	Kerala Agricultural University, College of Agriculture, Vellayani, Thiruvananthapuram	Exploring the Role of Ionic Liquids in the Conversion of Agricultural Wastes into Commercially Valuable Products	
Dr. Vineetha R.C.	F	Regional Cancer Centre, Thiruvananthapuram, Kerala	MicroRNA Profiling in Different Cytogenetic Subtypes of Acute Myeloid Leukemia Patients	

## Materials Science

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Alex Joseph	M	Mahatma Gandhi University, School of Chemical Science	Bimetallic Transition Metal Modified Hierarchical Structure Electrodes for Electro Catalytic Applications – Towards Green Hydrogen Energy	
Dr. Aswathi K.	F	Indian Institute of Science Education and Research (IISER), Thiruvananthapuram	Hexagonal Perovskites as Quantum Spin Liquid Materials for Magnetic Applications	



Dr. Hijas K.M.	M	School of Physics, Indian Institute of Science Education and Research (IISER), Thiruvananthapuram	Selective Crystallisation of Preferred Polymorph Using Terahertz Irradiation	
Dr. Manju Perumbil	F	Department of Physics, School of Physical Sciences, Central University of Kerala	Atom Interferometry in Space: Improving quantum sensors for Space Environments	
Dr. Reshmi S.	F	University of Kerala, Dept. of Physics	Development of MoS <sub>2</sub> , MoSe <sub>2</sub> /Graphene Composites for Solar Cell Applications	
Dr. Sivadasan A. K.	M	Centre for Materials for Electronics Technology, Thrissur	An Indigenous Development of Economical and Eco-Friendly Perovskite Solar Cells	
Dr. Vineetha P. K.	F	Mahatma Gandhi University, Advanced Molecular Materials Research Centre (AMMRC)	Ladder-like Donor–Acceptor Polymers as Dopant-Free, Hole-Transporting Materials for Perovskite Solar Cells	

## Medical Sciences

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Abilash Nair	M	Kerala University of Health Sciences	Genetic And Epigenetic Markers of Insulin Resistance in Community Dwelling Non-Obese Youth of Kerala- Unwiring the Time Bomb of Diabetes	

Dr. Simi Mohan J. S.	F	Kerala University of Health Sciences, School of Public Health	Magnitude of Cybercrime Committed Against Children And Exploring the Possibilities of Digital Technology ['Csa Alert' App] for More Efficient Reporting, Action & Follow Up of Child Sexual Abuse Cases in Kerala	
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### Commerce & Management Studies

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Elizabeth Dominic	F	APJ Abdul Kalam Technological University	Examining the Levels and Determinants of Psychological Wellbeing during Epidemic Outbreaks with Special Reference to COVID - 19 : A Study among Health Care Professionals in the State of Kerala.	
Dr. Gowri Vijayan	F	School of Management Studies, Cochin University of Science and Technology	Problems and Prospects in the Transition of Kerala's Agriculture Sector into a Circular Economy	
Dr. Jacob Joju	M	Cochin University of Science and Technology	Digital Transformation in Co-Operative Banking Sector in Kerala And Adoption of Financial Technologies	
Dr. Latha K.	F	Saintgits College of Engineering, APJ Abdul Kalam Technological University,	Adoption of Digital Technology - A Driving Force of Business Growth in the Kerala Co-operative Sector and its impact on organizational performance	
Dr. Radhika P.C.	F	Mahatma Gandhi University, PG and Research Department of Commerce, Sacred Heart College, Thevara	Tourism Destination Cleanliness - A Study to Analyse the Effectiveness of Present System And to Suggest the Way Forward	

Dr. Ruby S.	F	University of Kerala, Fatima Mata National College, Kollam	Promotion of Innovative Women Business Start-Ups Through Local Self Government Institutions for Local Economic Development	
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### Economic Studies

Name & Address of the Research Fellow	Gender	Registering University/Institution	Title of the Research Proposal	View (insert link to report)
Dr. Aravindh P.	M	Department of Atmospheric Sciences, Cochin University of Science and Technology	Vulnerability, Social Resilience and Adaptation Strategies against Climate Change: The Case of Traditional Fisherfolk in Kerala	
Dr. Deepa V.D.	F	Dr. John Mathai Centre, Department of Economics, Thrissur, University of Calicut	Impact of Covid-19 on Income and Employment of Urban Informal Sector Workers in Kerala	
Dr. Muhammed Ashiq V.	M	Indian Institute of Technology, Madras	Assessing the Asymmetric Effect of Tourism Development on Economic Growth in Kerala: A Non-Linear Approach	
Dr. Sabu M.	M	Central Marine Research Institute, Kochi	Assessment of Occupational Hazards and Use of Life Safety Gadgets among Small-Scale Motorised Fishermen in Southern Kerala	

Dr. Swathy Varma P.R.	F	Cochin University of Science and Technology, Gulati Institute of Finance and Taxation, Trivandrum	Fiscal Implications and Effectiveness of Government Sponsored Health Insurance Schemes: An Empirical Evidence from Kerala State	
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### Political Science, Historical Studies, Humanities & Liberal Arts

Dr. Anil Gopi	M	Inter University Centre for Social Science Research and Extension, Mahatma Gandhi University	Human Ecology, Indigenous Knowledge and Survival of Communities: An Anthropological Study of Idukki District, Kerala	View (insert link to report)
Dr. Anu Kuriakose	F	Department of English, University of Calicut	Dissenting Heteronormativity and Mainstreaming Identity: A Critical Assessment of the Digital Turn in Gender-Queer Movements in Kerala	
Dr. Arya K.	F	Institute of English, University of Kerala	<p>□□□□□□ □□□□□□□□□□ □□□□□□ □□□□□□</p> <p>□□□□□□□□□□□□: □□□□□ □□□□□□□□□□□□□□□□□□□□□</p> <p>□□□□□□□□□□ □□□□□□□□□□□□□□□□ (1881-2021)</p> <p>□□□□□□□□□□ □□□□□□□□□□□□</p>	
Dr. Indu V. Menon	F	PG Department of Sociology, Zamorins Guruvayurappan College, University of Calicut	Shamanic Discourses and Religious Cults; A Study Among Selected Tribes of Kerala	
Dr. Lijisha A.T.	F	Department of Linguistics, University of Kerala	Linguistic Documentation of Biodiversity and Indigenous Knowledge among Cholanaikka Tribes in Nilambur, Western Ghats	