



34th KERALA SCIENCE CONGRESS

Programme Schedule

INAUGURAL & FOCAL THEME SESSION

Venue: Dr.Thanu Padmanabhan Hall, Mar Ivanios College, Thiruvananthapuram

Day 1 10th February 2022, Thursday	
09.30-10.45 hrs	Inaugural Programme
Welcome Address	Dr. S. Pradeep Kumar General Convenor, 34 th Kerala Science Congress & Member Secretary, KSCSTE
About 34 th Kerala Science Congress	Dr. Saji Gopinath Chairman, 34 th Kerala Science Congress & Vice Chancellor, Kerala University of Digital Sciences, Innovation & Technology
Presidential Address	Prof. K. P. Sudheer President, 34 th Kerala Science Congress & Executive Vice President, KSCSTE
Inaugural Address and Presentation of: • <i>Chief Minister's Young Scientist Gold Medal Awards</i> • <i>Dr. S. Vasudev Award</i> • <i>Science Literature Awards</i>	Shri. Pinarayi Vijayan Hon'ble Chief Minister, Kerala & President, Kerala State Council for Science, Technology and Environment
Release of Abstract and Address	Shri. M. C. Dathan Mentor, Science, Govt of Kerala
Special address	His Beatitude Baselios Cardinal Cleemis Major Archbishop & Manager Mar Ivanios College
Word of Thanks	Dr. Samson Mathew Director, KSCSTE- NATPAC



11.00 – 13.45 hrs Focal Theme Session - Science, Technology & Innovation for Transition to a Knowledge Economy	
Welcome and Introducing the speaker	Dr. V. Ajit Prabhu Chief Scientist, KSCSTE
Chairman	Dr. Saji Gopinath Vice Chancellor, Kerala University of Digital Sciences, Innovation & Technology
Presentation of Focal Theme	Prof. Konstantin Sergeevich Novoselov Nobel Laureate in Physics Tan Chin Tuan Centennial Professor, Centre for Advanced 2D Materials, National University of Singapore.
	Prof. V. K. Ramachandran Vice Chairperson, Kerala State Planning Board
	Shri. S. Somanath Chairman, Indian Space Research Organisation, Govt of India
Word of Thanks	Dr. Binuja Thomas Principal Scientist, KSCSTE
National Anthem	

Dr. Thanu Padmanabhan Memorial Lecture (online platform) 14.00 – 14.45 hrs Venue: KSCSTE-HQ Hall: P.T. Bhaskara Panicker Hall	
Welcome and Introducing the Speaker	Dr. K.R. Lekha Senior Principal Scientist, KSCSTE
Commemorative Lecture	Dr P. Sreekumar Former Director, Indian Institute of Astro Physics (IIAP)
Word of Thanks	Dr.E.S. Anil Kumar Scientist, KSCSTE



Dr. P. K. Gopalakrishnan Memorial Lecture (online platform) 14.45 – 15.30 hrs Venue: KSCSTE-HQ Hall: P.T. Bhaskara Panicker Hall	
Welcome and Introducing the Speaker	Dr.C. Arunan Principal Scientist,KSCSTE
Commemorative Lecture	Dr. K. N. Harilal Former Member, Kerala State Planning Board
Word of Thanks	Er. Anish Kini Scientist,KSCSTE-NATPAC

Day 2

11th February 2022 Friday

P.T. Bhaskara Panicker Memorial Lecture (online platform) 09.15 – 10.00 hrs Venue: KSCSTE-HQ Hall: P.T. Bhaskara Panicker Hall	
Welcome & Introducing the Speaker	Dr.C. Anil Kumar Senior Principal Scientist,KSCSTE
Commemorative Lecture	Prof. Sabu Thomas Vice Chancellor, Mahatma Gandhi University, Kottayam
Word of Thanks	Dr. A.R. Sarika Scientist,KSCSTE

Technical Sessions of 34th Kerala Science Congress (online platform)	
Paper & Poster Presentation and Evaluation for Best Paper & Poster Awards (Parallel Sessions)	
Agriculture & Food Science - 10.00 – 14.00 hrs Venue: KSCSTE-NATPAC - Hall : Dr. P.K. Gopalakrishnan Hall	
Welcome and Introducing the Speaker	Dr. K.K. Sabu (Co-Chairperson) Scientist,KSCSTE-JNTBGRI
Lead Speaker	Prof. K.P. Sudheer , (Chairperson) Kerala Agri.University
Word of Thanks	Er. Anish Kini , (Hall Manager) Scientist, KSCSTE-NATPAC



01. AGRICULTURE AND FOOD SCIENCE	
Oral Presentation	
Sl No.	Title
1-01	Ozone treatments for improving the quality parameters and surface decontamination of tomato Ardra C Babu and Rajesh G K
01-02	Vacuum impregnation- process optimisation Binuja Thomas, Sankalpa K.B and Sudheer K. P
01-03	Investigation on the potential wild Indian bananas for breeding programmes Rajeesh E.P and M. Sabu
01-04	Impact of fenugreek seeds intake on type-2 diabetic patients Sreekavya.S.H and Krishnaja. U.
01-05	Optical and microwave satellite RS for mapping cropland area - a study of Kuttiyadi command area,Kozhikkode District, Kerala K.Ch.V NagaKumar, Ansa Peter, Athira Jose T, Kavya B Krishnan, Girish Gopinath, V.P Dinesan
01-06	Plant growth promoting potential of Ragi Rhizobacteria isolated from Attappady hill tract Gayathri M., Chitra N., Anith K. N., Anu Rajan S., and Soumya V. I.
01-07	Potash solubilizing microbes in flood affected soils of Kerala Haseena A. and K Surendra Gopal
01-08	Potential actinobacteria for fruits and vegetable waste management Panchami. P.S, K. Surendra Gopal, Reshma K.S, and Saeed T
01-09	Vulnerability of sesame accessions to phyllody at higher temperature in Onattukara Lovely B., Resmi A. R. and Jayapal, A.
01-10	Characterization and management of leaf fleck disease in Sugarcane Sanju Balan, Viswanathan R, K. Nithya and Anita Cherian K
01-11	Technology capability of coconut enterprises in Kerala Shilpa P., Lokesh S. and Binoo P. Bonny
01-12	Assessment of variability in soil parameters under different land use types of banana cultivation- A case study in Kozhikkode, Kerala Naveena K, Rahna K V, and Surendran U
01-13	Managing leaf blight of <i>Amaranthus tricolor</i> L. from above and below ground: Use of Phylloplane Antagonistic Bacteria and the Root Endophytic Fungus <i>Piriformospora indica</i> Gayathri Nair, S. Divya and K. N. Anith
01-14	Bacterial endophytes for hardening and establishment of tissue culture banana Anu Rajan S and Radhakrishna D
01-15	Isolation of silicate bacteria from paddy rhizosphere and its screening under in vitro conditions Akhila P Subhash, K S Meenakumari, K N Anith and Chitra N
01-16	<i>Paenibacillus</i> sp- A potential novel nitrogen fixing bacteria for an enhancement of growth and yield of ginger (<i>Zingiber officinale</i>) Saeed, T., Surendra Gopal, K. and Panchami, P.S.
01-17	<i>Paraponyx diminutalis</i> a pest of submerged aquatic weed <i>Hydrilla verticillate</i> Saeed, T., Surendra Gopal, K. and Panchami, P.S.
01-18	Evaluation of numerical response of <i>Amblyseius largoensis</i> on two species of tetranychus (ACARI: Tetranychidae) - A comparative Study Sheeja U. M., Sebastian C. D. and Ramani N.

Poster Presentation	
01-P1	Piriformospora indica protects black pepper plants from piper yellow mottle virus infection Lekshmi R. Krishnan and Joy Michal Johnson
01-P2	Beneficial effects of endophytes Piriformospora indica and Glomus fasciculatum in small cardamom Aishwarya M., Dhanya M. K., Joy M. Johnson., Beena R., Ambily Paul
01-P3	<i>P. indica</i> enhances yield production in tomato and decreases severity of tolcV in the field Saru Sara Sam and Joy Michal Johnson
01-P4	Investigating the complex microbial symbiotic associations within the gut and fungus comb of termite <i>Odontotermes longinathus</i> Holmgren Alina Ann Joseph and Sebastian C. D.
01-P5	Application of yeast-lab consortium from dahi for the development of a novel cereal based fragmented milk product Archana Chandran, Beena A.K, Linsha C.K, Harikesh Manu and Rejeesh R
01-P6	<i>Piriformospora indica</i> significantly affects mechanisms involved in mitigating drought stress in rice Ameena M., Madhuri Mani, Joy, M., Shalini Pillai, P., Jacob John and Beena R
01-P7	Rice husk ash a potential soil ameliorant for homestead vegetable cultivation Mini V., Rahnabai, P.J. and Sreeparvathi, P.
01-P8	Biotic and abiotic constraints of cabbage cultivation in South Kerala Shruthy. O. N., Smt. Divya. P, I. Sreelathakumary
01-P9	Characterization of humic substances in selected organic manures and soils Faniya Toby, M.P. Sujatha and Nithya E.D.
01-P10	Biology and developmental parameters of <i>Aphis gossypii</i> glover, 1877 (hemiptera: aphididae) on chilly plant, capsicum annum under laboratory conditions Archana M. N. and Sebastian C. D.
01-P11	Biochemical characterization of lodging resistance in mutagenated rice Jyothilekshmi, S. and Dijee Bastian
01-P12	Insecticidal and biological activities of four different essential oils against stored grain pests V.Vinayaka, Thania sara Varghese, Rajani kurup S.R, B. Sabulal, V. Gayathri
01-P13	Pre-sowing seed invigouration with a combination of KNO ₃ and pseudomonas improves germination and growth parameters in vegetable seedlings Arya S., Dicto Jose, Pradeepkumar T. and Anitha P.
01-P14	Profiling of rice varieties of Kerala for amylose content using molecular markers: An approach towards diabetes management Deepa John and Maya Raman
01-P15	Pegylated iron oxide nanoparticles smart nanovector for seed germination and mineral fortification Shily C., Unnikrishnan B.S., Swapna Alex
01-P16	Endophytic bacillus promotes plant growth and suppresses web blight disease of bush cowpea (<i>Vigna unguiculata</i> (L.) Walp.) Siva M., Sreeja S. J., Anith K. N., Susha S. Thara and Heera G.
01-P17	Soil carbon dynamics under long term fertilization in rice-rice cropping sequence of Onattukara Kavyasree G. and Mini V.



01-P18	<i>Piriformospora indica</i> helps in establishment of TC banana plantlets and tolerance to BBrMV in field Sinijadas K., Elizabeth T. Jojy and Joy Michal Johnson
01-P19	Profitability of Tannia grown in coconut gardens as influenced by tillage and nutrition A. Jayapal, O. K. Swadija, B. Lovely and A. R. Resmi
01-P20	Productivity enhancement in watermelon through fertigation drip irrigation and vertical training under rain shelter S.K. Nisha and I. Sreelathakumary
01-P21	Estimation of heterosis for yield and yield attributing traits in tomato (<i>Solanum lycopersium</i> L.) under protected conditions Lekshmi S. L, V. A. Celine and Jyothilekshmi, S.

Life Sciences 10.00 – 14.00 hrs	
Venue: KSCSTE-NATPAC Hall : Dr. E.K. Janaki Ammal Hall	
Welcom and Introducing the Speaker	Dr. N. S. Pradeep (Co-Chairperson) Senior Scientist, KSCSTE-MBGIPS,
Lead Speaker	Dr. P. E. Rajasekharan , (Chairperson) Principal Scientist, IIHR, Bangalore
Word of Thanks	Er. Arun Chandran , (Hall Manager) Scientist, KSCSTE-NATPAC

Life Sciences	
Oral Paper Presentation	
Sl. No.	Title
07-01	Antimicrobial peptides from sin croaker, johnius dussumieri Anju M V, Archana K, Ajit Antony, Adarsh P P, Rosamma Philip
07-02	Sulfated polyglucosaminopyranosyl arabinopyranan from seafood amphioctopus neglectus attenuates angiotensin-ii prompted cardiac hypertrophy Soumya Krishnan, Kajal Chakraborty
07-03	Targeting NRF2 mediated mdr regulation in cancer stem cells using rxra agonist bexarotene Joby Issac, Midhunaraj K, Pooja S R, Ani V Das
07-04	In silico investigation of anti-dengue lead from annona reticulata linn Lekshmi RK, Biju CK & Sreekumar S
07-05	Comparative study of antimicrobial activity and phytochemical analysis of lagenandra toxicaria dalz. and its endophytic fungus Pooja Pushkaran and N.S. Pradeep
07-06	Faunal diversity of anopheles (diptera : culicidae) in north malabar and its possible role in malaria transmission in the future Vipinya C , Sumodan P K
07-07	Screening of marine diatoms for hydrocarbons of biofuel significance Indira.K and Valsamma Joseph



07-08	Cyclophilin a impairs efferocytosis and advances atherosclerotic lesions Vinitha A, Abdul Jaleel, Surya Ramachandran
07-09	Rice straw ethanol: Evaluation of pretreatment method and the performance of low-cost commercial acid cellulases Meena Sankar, Reshma M Mathew, Ashok Pandey, Rajeev K Sukumaran
07-10	Antibiotic-active heterotrophic firmicutes sheltered in seaweeds: Can they add new dimensions to future antimicrobial agents? Chesvin Varghese, Kajal Chakraborty, Sumayya Asharaf
07-11	A review of the genus spilomena shuckard (hymenoptera: crabronidae) with the description of six new species from india Tessy Rajan, P. Girish Kumar, P. M. Sureshan and C. Binoy
07-12	Antioxidant effect of a glutathione enriched polyherbal formulation on experimental diabetic model Sheethal S and Ratheesh M
07-13	Growth enhancement of cardamom upon root colonization by endophytic fungus <i>Piriformospora indica</i> Anjana H. Nath, Anith K. N., K. K. Sabu
07-14	Effect of nutritionally rich microalgal species on growth, survival and reproduction of copepod oithona rigida Soumya S. Prakash, Mary Jincy P. J, K Thasreefa, Sajeevan T.P., IS Bright Singh, Valsamma Joseph
07-15	Antimalarial and antimicrobial potentials of a marine actinomycete nocardopsis synnemataformans MCCB 972 isolated from an arctic fjord Namitha R, Pratima Vasistha, Dhaneesha M, K.P. Krishnan, Sajeevan T P
07-16	In vitro anti-inflammatory activities and gc- ms profiling of essential oil from thottea siliquosa (lam.) ding hou, an ethnomedicinal plant Athira M, Shaiju P.N , Suja S.R.
07-17	Screening and isolation of cold active lipase producing strain for biodegradation of lipid rich wastes Hafsa Kattatheyl, Vishnupriya. S, A. A. Mohamed Hatha
07-18	Contact toxicity and fumigation effects of methanolic extracts of annona squamosa, syzygium aromaticum and citrus aurantifolia against sitophilus oryzae Sandra Maria B and Jeejakumari V K
07-19	New records of pemphredonid wasps (hymenoptera: crabronidae) from Kerala with an updated checklist Tessy Rajan & P. Girish Kumar
07-20	Nitela latreille, 1809 (hymenoptera: crabronidae: crabroninae): first record from india and a new record from Kerala State 1N.V Ayisha Mawadda and 2P. Girish kumar
07-21	First record of methocha taprobane krombein (hymenoptera: tiphiidae: methochinae) from India K.P. Hanima Raveendran and P. Girish Kumar
Poster Presentation	
07-P1	Marine endophytic actinomycetes as potential producers of industrially important enzymes Anjali S Mohan, C K Radhakrishnan and Rosamma Philip
07-P2	Bioactive potential of endophytic fungi from marine seagrass thalassia hemprichii of Lakshadweep islands Anjali S Mohan, C K Radhakrishnan and Rosamma Philip



07-P3	Genetic diversity analysis of <i>trichopus zeylanicus</i> subsp. <i>travancoricus</i> accessions using SCoT markers Angala M, Geethalakshmi C, Anto M, Siju S, Sabu KK and Anilkumar C
07-P4	Genome-wide analysis of clinical <i>staphylococcus aureus</i> isolate reveals the presence of a strain-specific integrated resistance plasmid with antibiotic resistance genes Jiffy John, Narendrakumar L., Sabu Thomas and Shijulal Nelson-Sathi
07-P5	Phenology, seed development and seed storage in <i>mesua ferrea</i> L., a medicinal tree of Indo-Malayan region Mithun Venugopal, Pradeep N.S., Krishnan P.N.
07-P6	Hidden mycobiont of mangrove, <i>avicennia officinalis</i> as a source of anticancer enzyme L-asparaginase Neema Job, Ashly Augustine, Nevin KG
07-P7	Global climate change poses a threat of malaria transmission in Coastal Kerala, India Shamna A K and Sumodan P K
07-P8	Green synthesis of silver nanoparticles using <i>merremia vitifolia</i> (burm f.) hallier (convulvaceae) leaf extract; comparing the effectiveness of larvicidal activity on n-hexane extract against <i>aedes albopictus</i> L. (diptera: culicidae) V. Rinshidha, P. Nimisha and Shibu Anand
07-P9	Modulation of microbial virulence by activated furan compounds Jayalekshmi H, Ajmal Sadik, Sobha V Nair
07-P10	Microplastic as a "macro" concern – problems and solutions C K. Sreeparvathi, K M. Remia, K S. Anoop Das
07-P11	Silibinin's inhibitory activity on bacterial gelatinases Dhilna Sunny C., Usha Bhagirathan and Leyon Varghese
07-P12	Lipofection-mediated gene delivery and transgenic expression of <i>dsred2</i> in the primary cell culture from the crustacean model <i>daphnia pulex</i> Sreevidya C P, JayeshPuthumana
07-P13	A study on climate change impact on selected three endemic and threatened trees: implications and adaptive strategies Anuraj K., Jose P. A. and Gokul K.G.
07-P14	Copepods infecting the fishes of North Malabar coast of Kerala: Diversity, occurrence and fecundity Anitta Cherian, Nikhila Reshmi, Chythanya K. V., Priya Jose and Sudha K.
07-P15	Fruit morphology and nutritional content of frugivore dispersed trees: identifying drivers for the foraging preferences of fruit-eating birds and animals in Shola forest of Western Ghats, India. E S Nimisha and V B Sreekumar, Forest Botany, Kerala Forest Research Institute, Peechi
07-P16	Hormone receptor heterogeneity in breast cancer cells: Understanding the receptor dynamics in hormone resistance. Aswathy S, T R Santhosh Kumar
07-P17	Phytochemical investigation of the indian pitcher plant, <i>nepenthes khasiana</i> Gokul B S, Anil John J, V. Gayathri and B. Sabulal
07-P18	Understanding mangrove salt tolerant strategies using anatomical traits Aarathi, M.S., Abdulla Naseef, S.A and Sreejith, K.A.
07-P19	<i>Thismia</i> (Thismiaceae): a fungal-like flowering plant often neglected by the taxonomists V.S. Hareesh & M. Sabu

07-P20	Diversity of endemic, threat category of plant species of Chemunji hillock, Agasthyamala, Western Ghats Arvind George and G. Rajkumar
07-P21	Comparative screening of jacalin and anticancer activity in wild and cultivar varieties of jackfruit Sreeja Devi P S, Neethu S Kumar, Sathees C Raghavan and Sabu K K
07-P22	Genotoxic study of clerodendrum infortunatum L. in human lymphocyte culture using CBMN assay Ammu. S. P, Sheela. S and Sreejaya . S. B
07-P23	A study on Indian spalangiinae (hymenoptera: pteromalidae) with new records to Kerala K. S. Surya & Pavittu Meethal Sureshan

Physical Sciences		10.00 – 15.00 hrs
Venue: KSCSTE-HQ		Hall : Dr. P.K. Iyengar Hall
Welcome and Introducing the Speaker	Dr. S. Dipu (Co-Chairperson) Scientist, KSCSTE-CWRDM	
Lead Speaker	Dr. Rajiv N. Kini , (Chairperson) IISER,Thiruvananthapuram	
Word of Thanks	Er. Wilson K.C , (Hall Manager) Scientist, KSCSTE-NATPAC	

PHYSICAL SCIENCES	
ORAL PRESENTATION	
Sl. No.	Title
9.01	Assessment of natural radioactivity levels in rocks of Kuthiran tunnel and hills Kerala India. Vishnu C. V. and Antony Joseph
9.02	Charge radii of Thorium nuclei lying between the drip lines Ummukulsu. E and Antony Joseph
9.03	A simulation study on enhanced electromagnetic interference shielding in multilayered composites Athira Rajan, K. S. Sibi and G. Subodh
9.04	Luminescent polymer composite film made of glucose derived carbon dots embedded into polyvinyl alcohol matrix for the detection of Pb^{2+} in water Soumya Ravi, M. K Jayaraj
9.05	Solid polymer electrolyte (spe) films based on PEO-PVdF-LiNO ₃ -Al ₂ O ₃ for the development of next generation all solid-state Li- ion cells Merin K. Wilson, Cyril Augustin, Abhilash A., M K Jayaraj, S. Jayalekshmi
9.06	On-demand assembly of Au NPs over solid surfaces from sessile droplets by thermoplasmonically-controlled liquid flow S. N. Varanakkottu, C. Farzeena

9.07	Electrochemical detection of imidacloprid using MoS ₂ nanowire cluster modified electrodes Haritha V S, Sarath Kumar S R and Rakhi R B
9.08	Facile, low - cost hydrothermal synthesis of plasmonic Ag/ β -Ga ₂ O ₃ nanohybrids with enhanced UV-VIS-NIR absorption - a promising candidate for solar - powered environmental remediation and fuel production. Keerthana C S, Anjana S Nair, and Saritha A C
9.09	Energy efficient WO ₃ -x thin films by RF magnetron sputtering for NIR shielding application Anjana S Nair, Keerthana C S, Saritha A C
9.10	Molybdenum disulfide nanosheets for efficient electrocatalytic hydrogen evolution reaction Shilpa R, K. S. Sibi, S. R. Sarath Kumar, R.B. Rakhi
9.11	The main radioactive decay modes of super heavy nuclei 290 120 Tinu Ann Jose, K. P. Santhosh and N. K. Deepak
9.12	Dual functional exciplex with a simple device design for blue, yellow and white organic light emitting diodes Kavya Rajeev, C. K. Vipin, Anjali K. Sajeev, K. N. Narayanan Unni
9.13	Effect of co and ni dopant on boosting the thermoelectric properties of cuo for heat energy harvesting Nabeela K V and P. P. Pradyumnan
9.14	Room temperature ammonia sensors using morphology-controlled organic field-effect transistors Vibhu Darshan, V. R. Rajeev and K. N. Narayanan Unni
9.15	Modelling the knot emissions of active galactic nuclei jets Amal Abdulrahman, Sunder Sahayanathan and P A Subha
9.16	Design and performance analysis of flexible organic thermoelectric generator Vijitha, C. Vijayakumar, Biswapriya Deb

POSTER PRESENTATION

Sl. No.	Title
09.P1	Unravelling phonon assisted thermographic response in Eu ³⁺ activated Sr ₂ NaMg ₂ V ₃ O ₁₂ for dual mode temperature sensing B. Amrithakrishnan, I. N. Jawahar, G. Subodh
09.P2	High-frequency EMI shielding and microwave absorption in Mayenite electride (C12A7:e-) with the smallest anions, induced porosity and graphene interfaces Vidhya Lalan, Subodh G
09.P3	Study of central light distribution in nearby early type galaxies hosting nuclear star clusters K. Sruthi and C. D. Ravikumar
09.P4	Novel ways to access lower energy levels in GaAsBi quantum well pin diode S. J. Sreerag, Sandeep S and Rajeev N. Kini
09.P5	Hydrothermally synthesized Van Der Waal layered structure of 2D Ws ₂ for Tft application Saranya Sasi, Swathy B Saseendran, Christeena Thomas, Asha A.S & R Reshmi

09.P6	Synthesis and characterization of Mn-doped MoS ₂ for electrochemical sensing of folic acid Christeena Thomas, Saranya Sasi, Asha A S, Alex Mathew, R Reshmi
09.P7	Copper oxide doped polyaniline as a bifunctional interlayer for performance enrichment of Li-s cell E M Sreeja a, A Abhilasha, V Sasidevana, S Jayalekshmia
09.P8	Improved optical limiting property of carbon wrapped zinc sulfide core-shell nanostructures Athulya K.S and Chandrasekharan K
09.P9	Nd: YAG laser ablated non-hazardous Platinum-Gold alloy nanoparticles for catalytic degradation of methylene blue dye. R Fathima and A Mujeeb
09.P10	All-optical diode action from nonlinear photonic crystal-metal hybrid structure Nikhil P P and Chandrasekharan K
09.P11	Monte carlo simulation and validation of beam characteristics of 10MV flattening-filter-free photon beam of truebeam® medical linear accelerator Sarin. B, Bindhu. B, Saju. B, Raghu Kumar P
09.P12	Modification of optical and structural properties of PCD deposited ZnSe nanostructured thin films P M Geethanjali K Deepa, Lisha Damodaran and T L Remadevi
09.P13	Pairing correlations in the isotopes of Cobalt in the light of hartree-fock-bogoliubov theory Nicemon Thomas, Anjana A V and Antony Joseph
09.P14	Two proton decay of 19mg 22Si 26S 30Ar Isotopes Saeed Abdulla N.P and R K Biju
09.P15	Liquid-liquid interface decorated with self-assembled Au NPs array as an optofluidic modulator C. Farzeena S. N. Varanakkottu
09.P16	Elucidating the multifunctionality of NaGdMgTeO ₆ :Eu ³⁺ Double Perovskite in Ratiometric thermometry and solid-state lighting Sreelekshmi. A. K, Sariga C. Lal, Subodh G.

Environmental Science, Forestry & Wildlife 10.00 – 14.00 hrs Venue: KSCSTE-HQ - Hall : Dr. P.R. Pisharoty Hall	
Welcome and Introducing the Speaker	Dr. C. Anil Kumar (Co-Chairperson) Senior Principal Scientist, KSCSTE
Lead Speaker	Prof. E. V. Ramasamy , (Chairperson) School of Environmental Sciences, MG University
Word of Thanks	Er. R. Chandra Prathap , (Hall Manager) Scientist, KSCSTE-NATPAC



Environmental Science, Forestry and Wildlife	
Oral Paper presentation	
Sl. No.	Title
12.1	Open burning of municipal solid wastes and human health impacts – A critical study in Indian context Ajay S.V., Kirankumar P.S. and Dr. K.P. Prathish
12.2	Conservation and management studies of selected NTFP plants of western ghats:A participatory approach Jithin Jose and P.A. Jose*
12.3	Diversity and seasonality of odonates in kole wetlands Vivek Chandran A & Subin K. Jose
12.4	ATR-FTIR and HRMS analysis of dust from different indoor environments in a tropical metropolitan area M. Vishnu Sreejith, K.S. Aradhana, M. Varsha, M.K. Cyrus, C.T. Aravindakumar, Usha K. Aravind
12.5	Assessment of environmental conditions and determination of ecosystem health score of an urban wetland in Kerala Nimmi N, Vishnu Maya T M, Harikumar P S
12.6	Thermal sensitivity of soil organic carbon under continuous teak rotations in the midland laterites of Kerala Binsiya T K and Sandeep S
12.7	Occurrence, distribution and ecological risk assessment of microplastics in the Ashtamudi wetland, Kerala Y.S. Harithaa, T.K. Hridhyaa, V.M. Sachina and P.S.Harikumara
12.8	Are we exposed to emerging contaminants through drinking water? A study of rooftop plastic drinking water storage units Amitha Unnikrishnan, Usha K Aravind
12.9	Development of thermally stable coir fibre using eco-friendly bio extracts of <i>Spinacia oleracea</i> Simimol A S, Ajith S, Ratheesh Kumar, Anita Das Ravindranath
12.10	Development of neutral and adaptive genomic markers for management of <i>Santalum album</i> linn Reshma Bhasker T., Suma Arun Dev, Swathi Balakrishnan and Modhumita Dasgupta
12.11	Design and development of innovative batch and flow based sorbent systems for bromate removal from water Rothish R Nair Jiffin Sam, Sooraj E V and Prathish K P
12.12	The inevitable role of Rhizophora species in carbon sequestration: A case study from Kannur district, Kerala 1M Swedha Madhavan, K T Chandramohanan and P Sreeja



12.13	Heavy metal scavenging of carbon nano tubes deciphered from forest floor humic acid Ninu Jose M., Sandeep S.
12.14	Diurnal flux in CO ₂ associated with growth response of <i>Terminalia cuneata</i> roth. and <i>mimusops elengi</i> l. under controlled growth conditions Aparna Sreekumar, Sashna N.C., Harilal C.C.
12.15	Impact evaluation of renovated ponds in Palakkad district Babu Mathew, Venu Prasad H D and Sunisha K
12.16	Causes and consequences of intensive climate change on Kerala during the recent decades Micky Mathew, Sreelash K, Padmalal D
12.17	Specimen matters for diagnosis-tackling the menace of elephant endotheliotropic herpes virus infection Ajithkumar, GS, Nandakumar, S, Prathiush, PR, Shiju, SV and Mini Jose
12.18	Assessment of biochemical composition and organic matter quality of Beypore estuary, South West India Sruthy Kumar, Rose Santhosh, Renjith K.R, and Celine George
12.19	Landfill site suitability analysis using geospatial techniques and analytical hierarchy process in Pudukkottai panchayat, Palakkad district, Kerala, India Malavika A S, Anand Sebastian, Vivek Asokan, Haritha S, Athulya J, Rakendu K J, Rajan M, J Sundaresan Pillai, S Sreekumar
12.2	Monitoring the soil phytolith and its dynamics in natural and manmade ecosystems Sandeep S., Panchami Jaya, Gayatri A S , Tomjo
Poster Presentation	
12.P1	Genome wide and genic markers to study adaptive genetics in <i>Korthalsia laciniosa</i> Paremmal Sarath, Suma Arun Dev, Sreekumar VB, Modhumita Dasgupta
12.P2	Cost effective treatment of chloride contaminated effluent from gelatin industries via friedel's layered double hydroxide formation Jiffin sam, Vaishna V R, Kirankumar P S, K P Prathish
12.P3	High energy faceted superhydrophilic anatase TiO ₂ for self-cleaned anti-fog wind shields Dhanu Treasa Mathew, Manoj N and Honey John
12.P4	Ecosystem based approach in aquaculture can be adopted by regulating three critical environmental processes Keerthana P.V., Suresh K., Rakesh V.B., Valsamma Joseph and I.S.Bright Singh



12.P5	Groundwater quality in coastal regions of Northern Kerala with special reference to saline water intrusion Rahul Jayaraj and Dipu Sukumaran
12.P6	Population dynamics and histopathological effects of potentially toxic bloom forming cyanobacterium microcystis aeruginosa from aquatic ecosystems of Central Kerala (South India) Renju Mohan* Lathika Cicily Thomas and K. B Padmakumar
12.P7	Anthropogenic impact on carbon neutrality towards the interaction between socio economic sectors and climate Sruthi. K.V. & Manoj P Samuel
12.P8	<i>Callitriche</i> L., unveiling an unrecognized genus from Kerala Vishnu Mohan and Santhosh Nampy
12.P9	Assessment of total carbon content of Pneumatophores from selected mangrove wetlands of Kannur district P Silshalakshmanan, KT Chandramohanan, P Sreeja
12.P10	Short term variability of benthic diatoms of Cochin estuary- Southwest coast of India Amal K. S, Niya Benny and K. B Padmakumar
12.P11	Assessment of spatio-temporal variation of urban heat island in Palakkad municipal area using various remote sensing indices Athulya J, Anand Sebastian, Haritha S, Vivek Asokan, Malavika A S, Rakendu K J, Rajan M, J Sundaresan Pillai, S Sreekumar
12.P12	A green bio-economy through microalga - <i>scenedesmus</i> spp. potential species for biodiesel production, bioactive molecule and bioremediation Jasmin K. A., Saramma A.V and Jabir T.
12.P13	Effect of substrate inoculum ratio on the anaerobic degradation of sugarcane bagasse for biogas production and natural fibre extraction Chithrajith B
12.P14	Extraction and enumeration of microplastics from the soils of mangalavanam bird sanctuary – a protected mangrove forest in Kerala, India Riya Kumbukattu Alex, Madhuraj Palat Kannankai, Suja P. Devipriya
12.P15	Geo chemical variations in contrasting ecosystems of the southern Western Ghats Navya M , Tomjo C.P and Sandeep S
12.P16	Effect of bio control agents on post-harvest disease management and organoleptic properties of banana Susha S. Thara, Deepa R. Chandran, Saranya Krishnan, Aashitha Joy and Divya S
12.P17	Cyanobacteria as indicators of water quality, a case study in Chaliyar river, Kerala Dipu Sukumaran



12.P18	Miyawaki afforestation, a solution at local level? Rabeea
12.P19	An evaluation of lejeuneaceae on phorophytes P. Neethu and P. Sreeja
12.P20	Phylogrouping and determination of antimicrobial resistance of escherichia coli isolates from faeces of sloth bears (melursus ursinus) in Wayanad wildlife sanctuary, Kerala Nithin Revi ¹ , Chintu Ravishankar ² , George Chandy ³ , Abdul Azeez ⁴
12.P21	Effect of sub-micromolar concentrations of cadmium and lead on the diversity and carbon utilization pattern of bacteria in the water column of cochin estuary Vengalil Jithin, Abdulaziz Anas
12.P22	Investigation on temporal dynamics of two populations of <i>Hopea racophloea</i> dyer of Western Ghats K. A. Sreejith, V.B. Sreekumar, M.S. Sanil and Akhil Murali
12.P23	Distribution pattern of marine seaweeds in the coastal region of Kannur district, Kerala C. V Asha, C. V Sisira, K Rijin
12.P24	Impact of climate change on hydrology in Karamana- Neyyar river basin Aswathy M., Drissia T.K, Ramnas K.C.
12.P25	Germplasm conservation of wild relatives of cultivars from the Andaman archipelago outside the islands Divya N. Murali, Suresh Kumar. P, Sam P. Mathew and M. Abdul Jabbar
12.P26	Isolation and characterization of bioluminescent bacteria and its application in Mercuric Chloride toxicity testing in soil Nikhitha B, Ancila V, and Jithasha B
12.P27	Taxonomic and functional heavy metal resistome profiling of mangalavanam mangrove ecosystem and comparative analysis across other tropical ecosystems Rinu Madhu Puthusseri, Tina Kollannoor Johny and Sarita Ganapathy Bhat
12.P28	Effective adsorption and removal of phosphate from aqueous solutions by calcined friedel salt Jiffin sam, Vaishna V R, Rothish R Nair, K P Prathish
12.P29	Deep learning-based landslide hazard prediction in Southern Kerala A. L. Achua, Girish Gopinath, U Surendran
12.P30	Seasonal variations in physico chemical parameters and nutrient dynamics in Ashtamudi estuary, a Ramsar site, South West coast, India Roshni Mohan., Sudha, A., Vidya, P.V., Gayathri, O.S., Ratheesh Kumar, C.S.,



Biotechnology 10.00 – 13.00 hrs Venue: KSCSTE-NATPAC Hall: Dr. G.N. Ramachandran Hall	
Welcome and Introducing the Speaker	Dr. A.R. Sarika (Co-Chairperson) Scientist, KSCSTE
Lead Speaker	Dr. Ruby John Anto , (Chairperson) Scientist G, RGC, Thiruvananthapuram
Word of Thanks	Shri. Saran M.S. (Hall Manager) Scientist, KSCSTE-NATPAC

BIOTECHNOLOGY	
ORAL PAPER PRESENTATION	
Sl No.	Title
02-01	Recombinant expression of an antimicrobial peptide penaeidin from speckled shrimp <i>Metapenaeus monocytes</i> and its functional characterization Archana K, Anju M. V., Anooja V.V., Athira P. P., Neelima ., Mohammed Musthafa., Rosamma Philip
02-02	Quorum quenching activity of a novel strain of <i>Bacillus velezensis</i> and its application in biofilm control Suryalekshmi V. A. and Krishnakumar B.
02-03	Production and characterization of antineoplastic enzyme L-asparaginase from novel <i>Geosmithia pallida</i> strain KLR04 Neethu R. S., Pradeep N. S., Prakashkumar R.
02-04	Response to induction of the cellulases of <i>Penicillium janthinellum</i> NCIM 1366: The expression of cellulases is preceded by reorganization of metabolic and stress-responsive pathways and their associated regulators Meera Christopher, Athira Raj Sreeja-Raju, Prajeesh Kooloth-Valappil, Digambar Vitthal Gokhale, Ashok Pandey, and Rajeev K. Sukumaran
02-05	Non Polar Extract from <i>Polyalthia korintii</i> Leaves Inhibits Proliferation, Migration, Invasion and Induces Apoptosis in Human Colorectal Carcinoma Cells Tancia Rosalin and K.K.Elyas
02-06	TLX3 is a crucial determinant for early cerebellar patterning Parvathy Surendran, Surya Suresh, Jyothi P Nair, Meera V, Riya Ann Paul, Budhaditya Basu and Jackson James
02-07	Analysing the microbiome of a marine sponge <i>Stellata</i> sp., through cultivation-dependent and cultivation-independent approaches Merlin T.S., Md Umar, Sajeevan T.P
02-08	Development of host-specific bicistronic vector system for crispr/cas-based genome editing in <i>Danio rerio</i> Aswathy C, Valsamma Joseph and Jayesh Puthumana
02-09	Characterization of an amylase producing halophilic archaeon <i>Haloferax mucosum</i> MS1.4 from a solar saltern in Tamil Nadu, South India K. P. Neethu, K. S. Sobhana, Keerthi R. Babu, S. Jasmine, L. Ranjith, H. Jose Kingsley, Eldho Varghese, K. K. Joshi1 and A. Gopalakrishnan



02-10	Machine learning approach for the rapid estimation of biomass chemical composition from FTIR spectra for biorefinery applications Sreejith R P, Meena Sankar, Sivaraman Savithria, Rajeev K Sukumaran
02-11	Mass spectrometry-based proteomic investigation and immunological cross-reactivity studies of <i>Naja Naja</i> (Indian cobra) venom from the Western Ghats in Kerala Muralidharan Vanuopadath, Dileepkumar Raveendran, Bipin Gopalakrishnan Nair, Sudarslal Sadasivan Nair
02-12	Implications of differential HES-1 expression in adult sub-ventricular zone (SVZ) neurogenesis Vadakkath Meera, Suresh Surya, Nair P Jyothi, Jackson James,
POSTER PRESENTATION	
Sl No.	Title
02-P1	Genus level identification of fungal endophytes from Indian mangrove <i>Ceriops tagal</i> Revathy M R, Rosamma Philip
02-P2	YES associated protein- coordinately modulate tnbc cellular fate via LYN-dependent EGFR activation Sulfath T.P and Lakshmi S
02-P3	Quantitative and molecular analysis of coagulant property of plants <i>Moringa oleifera</i> , <i>Azadirachta indica</i> and <i>Carica papaya</i> in water samples Anagha S. Nair, Andrea Antony, Anandha Krishnan, Salini Bhasker
02-P4	Bioactivity of alkaloid fraction from marine sponges of Kerala Coast Ashly Augustine, Neema Job, Nevin KG
02-P5	Exploration of probiotic properties and antagonistic traits of <i>Staphylococcus warneri</i> isolated from fermented rice water Vidhya Prakash, Pradeesh Babu, Meera Prabhakar, Sanjay Pal, Bipin G. Nair
02-P6	Screening of primary and secondary metabolites in <i>Aspergillus niger</i> for its application in waste-water treatment Suja Subhash, Fadila N, Bipin G Nair, Sanjay Pal
02-P7	Association of autophagy in cardiac hypertrophy: an insight into use of autophagy-targeted drugs Vandana Sankar, Kavitha Sasidharan, Bipin Nair
02-P8	Dye and metal ion removal ability of byssus thread complex: a strategic value addition of mariculture waste P.P. Anand and Y. Shibu Vardhanan
02-P9	Mechanistic insight into the interaction of S1 domain Delta and Omicron of SARS-CoV2 spike protein with antibodies: A molecular docking and dynamics studies Sandhya K. S., Achuthsankar S. Nair
02-P10	Industrially important proteases produced by an endophytic <i>Bacillus subtilis</i> strain isolated from a marine macro algae, <i>Ulva lactuca</i> . Swathy S. Anand, Sudarslal S. and Jayashree G.



02-P11	Pharmacopigenetics of Antiepileptic drugs Neethu Mohan and Moinak Banerjee
02-P12	Screening and optimization of antibiotics for use in Molluscan cell culture Soumya Balakrishnan, Jayesh Puthumana and I.S. Bright Singh
02-P13	Preliminary characterisation of a <i>Vibrio alginolyticus</i> specific lytic bacteriophage PhPV1.3 Keerthi R. Babu, K.S. Sobhana, K. P. Neethu, V. S. Jayasree, K. K. Joshi and A. Gopalakrishnan
02-P14	y-chromosome microdeletion analysis of SY255 at AZFC region in infertile males with sperm abnormalities Anagha A T, Alphy Nisa Steaphen, Dr.S.S Muthaih, Girish Kumar M M, Emy Edward
02-P15	Symbiotic effectiveness of <i>Ceratobasidium</i> sps. on the seed germination and seedling development of <i>Rhynchostylis retusa</i> (L.) blume. Lekshmi S, and William Decruse S
02-P16	Valorization of biodegradable waste using microbial consortium: an alternative panacea B. Thazeem, P. N. Damodaran and Chikku Marin John

Mathematical Sciences 13.00 – 14.00 hrs	
Venue: KSCSTE-NATPAC Hall: Dr. G.N. Ramachandran Hall	
Welcome and Introducing the Speaker	Shri. S.S. Sumesh (Co-Chairperson) Asst Professor, Mar Ivanios College
Lead Speaker	Dr. Kalyan Chakraborty , (Chairperson) Director, KSCSTE- School of Mathematics
Word of Thanks	Shri. Saran M.S. (Hall Manager) Scientist, KSCSTE-NATPAC

MATHEMATICAL AND STATISTICAL SCIENCE	
ORAL PRESENTATION	
Sl. No	Title
08-01	Microstructure of Kerala state open market borrowings a statistical study Rahul T
08-02	Differential quadrature method to numerically approximate the solution of two-dimensional telegraph Athira Babu and Noufal Asharaf
08-03	Identification of differentially expressed gene in Covid-19 gene expression data Bindu Punathumparambath
POSTER PRESENTATION	
08-P1	The legacy of Kerala mathematics G. Indulal
08-P2	New record based transmuted expoenniated inverse weibull distribution and its applications to Covid-19 data Arya P. V.1 and Bindu Punathumparambath
08-P3	Radom transformation and its applications Riddhi Mishra, Shubham Jaiswal, Pole Vennela, Subhendu Pramanick,



Chemical Sciences	10.00 – 12.30 hrs
Venue: KSCSTE-HQ	Hall: P.T. Bhaskara Paniker Hall
Welcome and Introducing the Speaker	Dr. C. Arunan (Co-Chairperson) Principal Scientist, KSCSTE
Lead Speaker	Dr. K.V. Radhakrishnan , (Chairperson) Senior Principal Scientist CSIR-NIIST, Thiruvananthapuram
Word of Thanks	Er. Ebin Sam (Hall Manager) Scientist, KSCSTE-NATPAC

Chemical Sciences	
Oral Paper Presentation	
Sl. No.	Title
03-01	Marine macroalga-derived polygalactan-built metallic nanoparticle for osteogenesis Tima Antony Kajal Chakraborty
03-02	Seaweed polysaccharide-based nanoparticle with promising anti-osteoporotic effect: an in vivo study Shubhajit Dhara Kajal Chakraborty
03-03	Development of Co-rGO supported alloys for enhanced hydrogen evolution reaction in alkaline solution M.S. Meera, Aswathy Sudhakar S and S.M.A. Shibli
03-04	A molecularly imprinted polymer based electrochemical sensor for the selective determination of xanthine Keerthi Kodakat and K. Girish Kumar
03-05	A simple and facile turn on fluorescence sensor for the determination of biliverdin Devika S R and K Girish Kumar
03-06	Electropolymer modified electrode as a sensitive voltammetric sensor for the determination of monoamine neuromodulators: norepinephrine and octopamine Goldamol S Pallam and K. Girish Kumar
03-07	Voltammetric sensor for the simultaneous determination of uric acid, xanthine, hypoxanthine and theobromine Amoolya Chandran and K. Girish Kumar
03-08	A mechanistic insight into electro-reduction of CO ₂ to ethanol by a co-macrocyclic complex Sreejith S S, Shounik Paul, Wolfgang Schöfberger and Soumyajit Roy

03-09	Perovskite nanocrystal/squaraine dye composite for security and nir photography applications Vijayakumar Chakkooth
Poster Presentation	
03-P1	Effect of structural tuning to enhance the nonlinear optical response of Ssalen type Ni(ii) compounds Nithya Mohan, S.S. Sreejith, Vasudevan Kuttippurath, P.V.Mohanana Chandrasekharan Kelothe, and M. R. Prathapachandra Kurup
03-P2	A copolymer based voltammetric sensor for the simultaneous determination of neuroendocrine tumour biomarkers Sonia Sam and K. Girish Kumar
03-P3	A turn-off fluorescence sensor for the detection of histamine using tryptophan-au/ag bimetallic nanoclusters (Tryp-Au/Ag BNCs) Swathy S and K. Girish Kumar
03-P4	Polyether macrolide analogues, marginolides a-b, from marine octopus amphioctopus marginatus: anti-hypertensive leads attenuate angiotensin- converting enzyme Silpa Kunnappilly Paulose and Kajal Chakraborty1
03-P5	Thermally-induced blue to red fluorochromism in a lead-free hybrid halide material Amarjith V. Dev, Vijayakumar Chakkooth
03-P6	Thermoelectric properties of doped benzodithiophene-based copolymer/ single-walled carbon nanotube hybrids Navin Jacob, Biswapriya Deb, Vijayakumar Chakkooth
03-P7	Ligand controlled spectroelectrochemical diversification and molecular permeability in electrochromic metal-organic assemblies Mukkatt Indulekha, Nirmala Anjali, Shankar Sreejith, Ayyappanpillai Ajayaghosh
03-P8	Thermochromic metal organic complexes for multi-state volatile memory and counter operations Anjali Nirmala, Indulekha Mukkatt, Sreejith Shankar and Ayyappanpillai Ajayaghosh



Earth & Planetary Sciences 12.30 – 16.00 hrs	
Venue: KSCSTE-HQ Hall: P.T. Bhaskara Paniker Hall	
Welcome and Introducing the Speaker	Dr. P. Harinarayanan (Co-Chairperson) Principal Scientist, KSCSTE
Lead Speaker	Dr.E. Shaji , (Chairperson) Dept of Geology, Univ.of Kerala
Word of Thanks	Er. Ebin Sam (Hall Manager) Scientist, KSCSTE-NATPAC

EARTH AND PLANETARY SCIENCES	
Oral presentation	
Sl. No.	Title
1	Tracing the precipitation microphysics of mesoscale weather events over Kerala Sumesh R.K., Resmi E.A. and Unnikrishnan C.K.
2	Spatio-temporal variability of PM2.5 over India using multi-year space-borne lidar observations and its implications Lakshmi N B, Resmi E A, and D. Padmalal
3	Chronology and facies of invertebrate fossil assemblages of Central Kerala coast, South India and its implications on late- quaternary sea - level changes M.M. Shaima, L. Alappat, C.S. Ayyappadas, A R. Ravinesh, M.G. Yadava
4	Petrogenesis of charnockites in the western parts of Palghat- Cauvery shear zone, Southern India T. Nanditha Nandan, S. Salini, C. Sreejith
5	Prediction of tropical cyclones over the Indian seas using a weather prediction model cosmo Freddy P. Paul and D. Bala Subrahmanyam
6	A new water extraction technique for wetlands using sentinel 2 MSI image P.S. Smitha, K. Maya, K. Sreelash and A. Padmalal
7	Geospatial evaluation of groundwater conditions in a highland local body, Thrissur district, Kerala Arun P.R., Krishnapriya M.J., Sreeja R., Arjun A., and Ajeesh N. Pillai
Poster Presentation	
Sl. No.	Title
04.P1	Spatiotemporal variation of atmospheric water vapour over Indian monsoon region using satellite data Anila Alex and Anandhakrishna K.C.
04.P2	Variability of ocean features and the frequent occurrence of tropical cyclones over the Arabian sea Athira P Ratnakaran and Abish B



04.P3	Chemical denudation of mountainous catchments in Southern Western Ghats-a case study using hydro chemical tools and modelling Vipin T Raj, K. Sreelash and Padmalal. D.
04.P4	Observations of radar bright band features of mesoscale convective system by using c- band polarimetric doppler weather radar Srinivas Yadav N, Dr. K. V. S. Namboodiri, Dr. Mahesh C. and Dr. Anish Kumar M. Nair
04.P5	Paleo-drainage network identification in Central Kerala using remote sensing and machine learning Ayyappadas C S, Aneesh Sebastian, Linto Alappat

Engineering & Technology 10.00 – 13.00 hrs	
Venue: KSCSTE-NATPAC Hall: M. Visvesvaraya Hall	
Welcome and Introducing the Speaker	Er. S. Shaheem (Co-Chairperson) Principal Scientist, KSCSTE-NATPAC
Lead Speaker	Dr. Ravi Varma , (Chairperson) National Institute of Technology, Calicut
Word of Thanks	Dr. Salini U (Hall Manager) Scientist, KSCSTE-NATPAC

Engineering and Technology	
Oral Paper Presentation	
Sl. No.	Title
11-01	Technology development and adaptation of geopolymer concrete Thomas John .V and Roy M.Thomas
11-02	Instantaneous autonomous self-healing in ionic liquid modified bio-epoxy resin Harikrishnan Pulikkalparambala, Jyotishkumar Parameswaranpillaib, Suchart Siengchina, Jürgen Pionteck
11-03	Climate change impact assessment on stream flow over Vamanapuram river basin K C Ramnas, T K Drissia, A Anaz, P Nikhil, K Ch V Nagkumar and V P Dinesan
11-04	Transient analysis and the risk in a pumping main Arunab K. S., Sumam K. S. and Reeba Thomas
11-05	Realtime monitoring of curing process of fast drying epoxy resin using dynamic laser speckle imaging Keerthana S H, P Radhakrishnan, A Mujeeb
11-06	Traffic operation plan for Erode city Feby Ann Varghese, Ponpriya M, Anish Kini and Shaheem S.
11-07	Development of mobility in Attingal town Jegan Bharath Kumar, A and Murshida, P

11-08	Planning for resilient transport infrastructure in a disaster prone area – A case study of Munnar region Salini P N, Sreelakshmi T M, Nandana Ramesan
11-09	Traffic prediction modelling for major highways in Kerala Anagha Suresh, Wilson K.C, Archana S
11-10	GetMap App - A GIS based android application for road data collection Saran M. S, Dr. Nisha Radhakrishnan and Vishnu V. P
11-11	Calibration of HDM-4 distress models for a National Highway V S Sanjay Kumar and Sangeetha Jayamohan
Poster Presentation	
Sl. No.	Title
11-P1	Prediction of water quality in the upper stretch of Pamba river using water quality model Megha, Vivek B, Jainet P J, Jayakumar P, and S Shantha Kumar
11-P2	Effect of thermal pre-treatment on biogas yield and pathogen removal during anaerobic digestion of STP secondary sludge K Haritha, M K Akhina, B Krishna Kumar
11-P3	A modular onsite waste water treatment system for high strength grey water treatment Sanitha Gopalakrishnan, Dipin Nath and Krishnakumar B
11-P4	Cryogenic chilldown experimentation through coated transfer lines Pooja Ajay, Bindu SS, Jesna Mohammed, K E Reby Roy
11-P5	Parametric sensitivity studies in a SSR FCC unit Anish Thomas and M.V.Pavan Kumar
11-P6	A study on strength behavior of red soil stabilized with different additives Salini U, Scientist, Amritha S, Anjali A, and Paarwathee V K
11-P7	Polydimethylsiloxane/Conducting polymer composites for triboelectric applications Mathew Sunil, K J Saji, Honey John
11-P8	Thermal performance investigation on corrugated plate heat exchangers Ojas Satheesh, Benny T K, Akhil A, Ramzy R, Devakrishna
11-P9	Terrain adaptive position changing E-bike Abhishek Sujithlal, Amijith Sabu, Asif A, Harikrishnan M C, Krishnakumar K
11-P10	Energy optimization on electricity and transport usage in seafood processing units Padmaja P S and Manoj P Samuel
11-P11	Evaluation of the scope of microalgae-based wastewater bioremediation in a polluted urban canal Ihjas K, Ashitha V V, Renjith KR, Digila Rani
11-P12	An introduction to the advancement of conventional chatbots in Malayalam using hybrid approaches for delivering the social security schemes of Kerala Government Praveen Prasannan, Stephy Joseph and Rajeew R.R
11-P13	Electric vehicles opportunities and future for Kerala P.V. Unnikrishnan, V. Athira, Ajit Gerald



11-P14	Automatic generation of text from Indian sign language static images for communication and research Renu S, Deepu C and Rajeev R R
11-P15	Assessing the role of feeder service for encouraging public transport patronage - A review Arun Chandran, Vignesh D and Neetha Maria Aji
11-P16	Mobility pattern variations due to Covid 19 travel restrictions Ebin Sam, V S Sanjay Kumar and Angel Maria Mathew

Scientific Social Responsibility 13.00 – 14.00 hrs	
Venue: KSCSTE-NATPAC Hall: M. Visvesvaraya Hall	
Welcome and Introducing the Speaker	Er. V. S. Sanjay Kumar (Co-Chairperson) Senior Scientist, KSCSTE-NATPAC
Lead Speaker	Dr. N. Anil Kumar , (Chairperson) Senior Director, MSSR-CAB
Word of Thanks	Dr. Salini U (Hall Manager) Scientist, KSCSTE-NATPAC

SCIENTIFIC SOCIAL RESPONSIBILITY	
ORAL PRESENTATION	
Sl. No.	Title
10-01	Development of an equipment for sustainable bark harvesting of NTFP yielding trees with special emphasize on Machilus Macrantha (nees) Kosterm. Kanagaraj R. and P. A. Jose
10-02	Effective counterfeit currency blocking system by Ai and Statistics. C.S.M.Kumar
10-03	Smart learning environment in a knowledge economy through multiple intelligences based multimedia Silpa P.V and K.Y.Benedict
10-04	Mozhi an audio-visual malayalam speech database Bibish Kumar K. T., R. K. Sunil Kumar, Sunil John, Muralleedharan K. M.
10-05	A study on the various preschool systems in Kerala Krishna S. Nair
10-06	Nudge and vulnerability to climate change- a case study on forest dependent tribal community D. Sarada Devi, V. Anitha
POSTER PRESENTATION	
Sl. No.	Title
10-P1	Data of the people by the people for the people data ownership privacy consumption in knowledge economy T A Arvind
10-P2	Identification of plant extracts with cytotoxicity against HT 29 colorectal cancer cell line Sona Ghosh, Kannan Vadakkadath Meethal
10-P3	An integrated citizen s observatory a practical approach from a fast growing city in India Navaneeth A, Sreedha P, Vishnumaya T M, Sanusree P S and Harikumar P S
10-P4	Virtual water foot print of major imported agricultural commodities of Kerala- a case study Jasin S, Rajeev P C, Manoj P Samuel and U.Surendran



10-P5	Illuminating fuel oil from Garcinia Gummi Gutta seeds an R and D innovation of social relevance M. Priya Rani and K. B. Rameshkumar
10-P6	A bioinformatics approach for the development of plant based molecules for use in the treatment of Rheumatoid arthritis, a chronic inflammatory disorder Lhea Blue and Anisha S.

Fisheries & Veterinary Sciences 10.00 – 12.00 hrs	
Venue: KSCSTE-HQ Hall: Prof. E.C.G Sudarshan Hall	
Welcome and Introducing the Speaker	Er. Arjun Prasad (Co-Chairperson) Scientist, KSCSTE
Lead Speaker	Prof. A. Biju Kumar , (Chairperson) University of Kerala
Word of Thanks	Er. Jagam Bharat Kumar A (Hall Manager) Scientist, KSCSTE-NATPAC

FISHERIES AND VETERINARY SCIENCES	
ORAL PAPER PRESENTATION	
Sl No.	Title
05-01	Molecular and functional characterization of a histone H2A-derived Antimicrobial peptide, Hipposin from Milk fish <i>Chanos chanos</i> Athira P P, Anooja V V, Anju M V, Archana K, Neelima S Muhammed musthafa S and Rosamma Philip
05-02	<i>In vitro</i> culture and characterization of a cell line from the spinecheek anemone fish <i>Premnas biaculeatus</i> (Bloch, 1790) Priyanka Poullose, K. S. Sobhana, K. Madhu1, Rema Madhu, K. K. Joshi and A. Gopalakrishnan
05-03	The genomic dissection of diversity among native goats of Kerala farmed under small holder production system Marykutty Thomas, Radhika Gopalakrishnan, Thirupathy Venkattachalapathy and Aravindakshan Thazhathuveetil
05-04	Genetic evaluation of crossbred cattle of Kerala for fertility and production performances Jamuna Valsalan, Tina Sadan, K Anilkumar and TV Aravindakshan
05-05	Viral disease profile of fish culture in Kerala: Molecular epidemiology during 2019-21 Muneer A., Diya Dominic D.V., Linu Eldho, Akshay P.S., Keerthana P.V., Sajeevan T.P. and I.S. Bright Singh
05-06	Post- mortem diagnosis of rabies in animals using microchip-based RT-PCR on nuchal skin specimens for scaling up rabies surveillance Sujatha Aparna, Abraham Susan Swapna, GS Ajithkumar, Sujatha Chintha Joseph Baby

05-07	Primary hemocyte culture of <i>Penaeus monodon</i> : an in vitro model for shrimp virus investigations and development of antiviral chemotherapy Diya Dominic D.V., Seena Jose., I. S. Bright Singh
05-08	Immobilized <i>Bacillus cereus</i> MCCB101 as a bio-augmentor preparation to support ecosystem-based approach in aquaculture Suresh Kunjiraman, Akshay P.S., Keerthana P.V, Jayesh Puthumana, I.S B Singh
05-09	Application of endophytic <i>Penicillium citrinum</i> extract to control <i>Vibrio harveyi</i> in <i>Penaeus monodon</i> culture system Manomi S, Divya T Babu, Bhavya Kachiprath, Neema Job, Jayesh Puthumana, Swapna P Antony and Rosamma Philip
POSTER PRESENTATION	
SI No.	Title
05-P1	Growth performance and survival of guppy (<i>Poecilia reticulata</i>) in response to chitosan flocculated marine microalga <i>Picochlorum maculatum</i> macc3 supplemented diets Thasreefa K., I. S. Bright Singh, Valsamma Joseph
05-P2	Influence of designer diet and holy basil (<i>Ocimum sanctum</i>) leaves on serum lipid profile of layers A.Kirubakaran
05-P3	Molecular characterization demonstrates the occurrence of phylogenetic similar isolates of <i>V. alginolyticus</i> and <i>V. parahaemolyticus</i> in aquatic environment Minimol V A, Pankaj Kishore, MuthuLakshmi T, Ranjit K. Nadella, Greeshma S, Nilavan E and Mothadaka MP
05-P4	Multidrug resistant <i>Edwardsiella tarda</i> in goldfish, <i>Carassius auratus</i> : a crisis for concern in ornamental fish industry
05-P5	Improvisation of seed production technology of scampi through probiotic and immunostimulant- based interventions K P Vinusree and I S B Singh
05-P6	Feeding habits of the deep-sea pandalid shrimp, <i>Plesionika semilaevis</i> , Spence bate, 1888 from the Southwest coast of India Sreelakshmy, Rekha Devi Chakraborty
05-P7	Food and feeding of deep sea penaeid shrimp, <i>Metapenaeopsis andamanensis</i> wood-mason, 1891, along the South West coast of India. Aghana Muralidharan, Rekha Devi Chakraborty
05-P8	Shell grit as free choice calcium source for gramae male birds Sabarinath E., Senthil Murugan S., Biju Chacko., Surej Joseph Bunglavan, Promod K.,
05-P9	In search of anti-vibrio activity in commonly seen plant species in the region Ahna Ameer, Saranya M and I S Bright Singh
05-P10	First report on <i>Streptococcus agalactiae</i> involvement in the mortality of genetically improved farmed Tilapia (gift) in Kerala, India Ambadi Kannan M.S., Soumya Balakrishnan, Jayesh Puthumana and I.S. Bright Singh
05-P11	Environmental impact study of aquaculture systems through life cycle assessment Razia Mohamed A., Manoj P. Samuel, Leela Edwin and Suriyakala C.D.



Health Sciences	12.00 – 14.00 hrs
Venue: KSCSTE-HQ	Hall: Prof. E.C.G Sudarshan Hall
Welcome and Introducing the Speaker	Dr. E. S. Anilkumar (Co-Chairperson) Scientist, KSCSTE
Lead Speaker	Prof. M. Haridas , (Chairperson) Former Professor, Kannur University
Word of Thanks	Er. Jagam Bharat Kumar A (Hall Manager) Scientist, KSCSTE-NATPAC

HEALTH SCIENCE	
ORAL PAPER PRESENTATION	
Sl No.	Title
06.01	Evaluating the diagnostic potential of liquid biopsy by next generation sequencing in oral tongue carcinoma Noble T Baby, S. Kannan
06.02	Glucose Oxidase – Peroxidase incorporated alginate diamine peg-g-poly(pegma) xerogels for diabetic wound healing Rajalekshmy G P and Rekha M R
06.03	Is Kerala treating its migrant labourers well Shifa J, Dr. Mini Joseph
06.04	Yoga reduces hypercholesterolemia by down regulating pro-inflammatory cytokines and immunophilins Sangeetha Vijay, Nivya, Surya Ramachandran, M Radhakrishna Pillai
06.05	Immunohistochemical profiling of p53 mutation status: a propitious approach for tnbc prognostication Asha Lekshmi, Jagathnath Krishna KM, Thara Somanathan, TR Santhosh Kumar, Beela Sara Mathew, Rajeev KR, Anoop TM, Paul Augustine, Arun Peter Mathew, Kurian Cherian, Rexeena V Bhargavan, K. Sujathan
06.06	Telomere independent nuclear and mitochondrial functions of human telomerase (h TERT) in the regulation of cell cycle and cell death Aparna G J, T R Santhosh Kumar, M Radhakrishna Pillai
06.07	Wound healing and tissue regeneration activities by Thottea siliquosa leaf essential oil and its nanoparticles Greeshma B N, Anil John J, Ajikumaran N S, Chaithra P, Nihila L, Meenu M S, Sreejith PP, Sabulal B, Gayathri V
06.08	siRNA and anti-neoplastic agent tethered gold nanosystem: A promising in vivo co-delivery system for breast cancer management Archana MG, Anusree KS, Reshma PL, Sreelekha T T
POSTER PRESENTATION	
Sl No.	Title
06.P1	Effect of the anti-fungal agent, fluconazole, on reproduction in Drosophila melanogaster Kelvin Joy and Dr. Kannan Vadakkadath Meethal.
06.P2	Bioactivity-guided isolation of α -glucosidase and α -amylase inhibitors from CASSIA MIMOSOIDES L. A. Muhammed Jasim and A. Kumaran



06.P3	Determining the effects of high glucose on placental glucose transporters and insulin receptors using HTR-8/SVneo cells Aswathy S and Surya Ramachandran
06.P4	Alginate-PEG-starch inspired templates for guided cardiac tissue engineering K. C. Soumya and C. O. Joshi
06.P5	Salutary attributes of probiotic human gut lactobacilli Dona V. Idicula, Krishnaprasad R. and Sumi Mary George
06.P 6	Genomic screening of hereditary breast & ovarian cancer; its interpretation and counselling challenges Pavithra R.S, Sangeetha Vijay, Anushree Dileep, Geethu.L, Kanchana S.B
06.P7	In silico evaluation of some potentially active natural phytochemicals as effective antiviral agents on the SARS-Cov-2 Mpro Sunitha P., Sandhya K. S., Rani J. R., Achuthsankar S. Nair

Dr. Janaki Ammal Memorial lecture (online platform) 15.00 – 15.45 hrs Venue: KSCSTE-HQ Hall: P.T. Bhaskara Panicker Hall	
Welcome and Introducing the Speaker	Dr. P. Harinarayanan Principal Scientist, KSCSTE
Commemorative Lecture	Dr. M. Sanjappa Former Director, Botanical Survey of India
Word of Thanks	Er. Arun Chandran Scientist, KSCSTE-NATPAC

Dr. G. N. Ramachandran Memorial lecture (online platform) 16.00 – 16.45 hrs Venue: KSCSTE-HQ Hall: P.T. Bhaskara Panicker Hall	
Welcome and Introducing the Speaker	Dr.K. Vijayakumar Senior Scientist, KSCSTE
Commemorative Lecture	Dr. R. Sankarnarayanan Group Leader, Structural Biology, CCMB, Hyderabad
Word of Thanks	Er. Sabitha N.M. Scientist, KSCSTE-NATPAC

**Day 3****12th February 2022 Saturday**

Children's Science Congress (online platform) 10.00 – 14.00 hrs Venue: KSCSTE-HQ Hall: Dr. P.K. Iyengar Hall	
Welcome	Dr. U.Salini Scientist, KSCSTE
Chairperson	Prof. C.P. Aravindakshan Former Professor, Govt. Women's College, Thiruvananthapuram
Presentation by State winners of National Children's Science Congress (10.00 – 13.00 hrs)	
Presentation by Students of Scientia, Different Art Centre Magic Planet, Thiruvananthapuram (13.00 – 14.00 hrs) Experts for Interaction: Dr. P.E. Rajasekharan, IIHR, Bangalore Dr.T.V. Sajeew, KSCSTE-KFRI, Thrissur	
Word of Thanks	Dr. Shaju T. Scientist, KSCSTE-JNTBGRI

Post Graduate Student Interactive Session (online platform) 10.00 – 13.00 hrs Venue: KSCSTE-HQ Hall: - P.T. Bhaskara Panicker Hall	
Welcome	Dr. M. Rajendraprasad Principal Scientist, KSCSTE-JNTBGRI
Panel of Experts	Prof. K. P. Sudheer , Executive Vice President, KSCSTE Shri. M.C. Dathan , Former Director, VSSC Dr. Saji Gopinath , Vice Chancellor, DUK Dr. Suresh Das , Former EVP, KSCSTE Dr. M.S. Rajasree , Vice Chancellor, KTU Dr. Sabu Thomas , Vice Chancellor, MG university Dr. V. Unnikrishnan Nayar , Former Professor, University of Kerala Dr. C. George Thomas , Chairman, Kerala Biodiversity Board Prof. G.M. Nair , Former Director, JNTBGRI Dr. D. Sivananda Pai , Director, ICCS Dr.K.P. Aravindan , Former Professor, Medical College, Kozhikode
Word of Thanks	Dr.K. Vijayakumar Senior Scientist, KSCSTE