

Date 2-3 October 2025

EVENT REPORT

1st Edition (Virtual) International Conference on Frontier Innovations in Interdisciplinary Sciences, Ecology, and Biotechnology for Sustainable Development (INSECT 2025)

Date: 2–3 October 2025

Organized by: Global Research Conference (GRC)

The Global Research Conference (GRC) successfully hosted the 1st Edition (Virtual) International Conference on Frontier Innovations in Interdisciplinary Sciences, Ecology, and Biotechnology for Sustainable Development (INSECT 2025) on 2–3 October 2025, bringing together over 175 participants from diverse scientific domains. The conference served as a dynamic platform for interdisciplinary collaboration, knowledge exchange, and innovation, featuring 36 oral presentations and 45 poster presentations that showcased cutting-edge research in environmental science, biotechnology, and sustainability.

Day 1 (2 October 2025) commenced with a vibrant Inaugural Ceremony, presided over by the GRC President and Vice-President. The session was followed by three insightful keynote lectures:

- Dr. Behzad Shahmoradi (Iran) – *Artificial Intelligence and Big Data for Environmental Solutions*
- Dr. Athanasia Amanda Septevani (Indonesia) – *Transforming Electronic Waste into Sustainable Technologies*
- Dr. Kitirote Wantala (Thailand) – *Alkaline Catalyst-Assisted Biofuel Production from Biomass*

Subsequent Technical Sessions (1–3), chaired by Dr. Sharangouda J. Patil, Dr. Shivaraju H. P., Dr. Prithiviraj Nagarajan, Dr. Sumana K., Dr. Kantesh B. M., Dr. Anilkumar K. M., Dr. Yashas R., and other eminent experts, facilitated in-depth discussions on climate modeling, green technologies, and emerging environmental research trends.

Day 2 (3 October 2025) featured an engaging series of keynote talks covering frontier topics such as emerging viral pathophysiology by Dr. Siddappa Byrareddy (USA), sustainability in health systems by Dr. Yogendra K. (India), solar PV applications by Dr. Prashant V. Thakre (India), microbial engineering for sustainable agriculture by Dr. Suriyanarayanan S. (India), and decentralized energy systems by Dr. Shivaprasad K. (India). The Technical Sessions (4–5) encouraged vibrant interdisciplinary dialogue and collaboration.

The conference concluded with a Valedictory and Award Ceremony, recognizing exceptional research contributions through the following honors:

Best Oral Presentations

- Ragini Dolhey (OP-011)
- Nidhi Ravindran (OP-014)
- Nishanth B (OP-010)

Best Poster Presentations

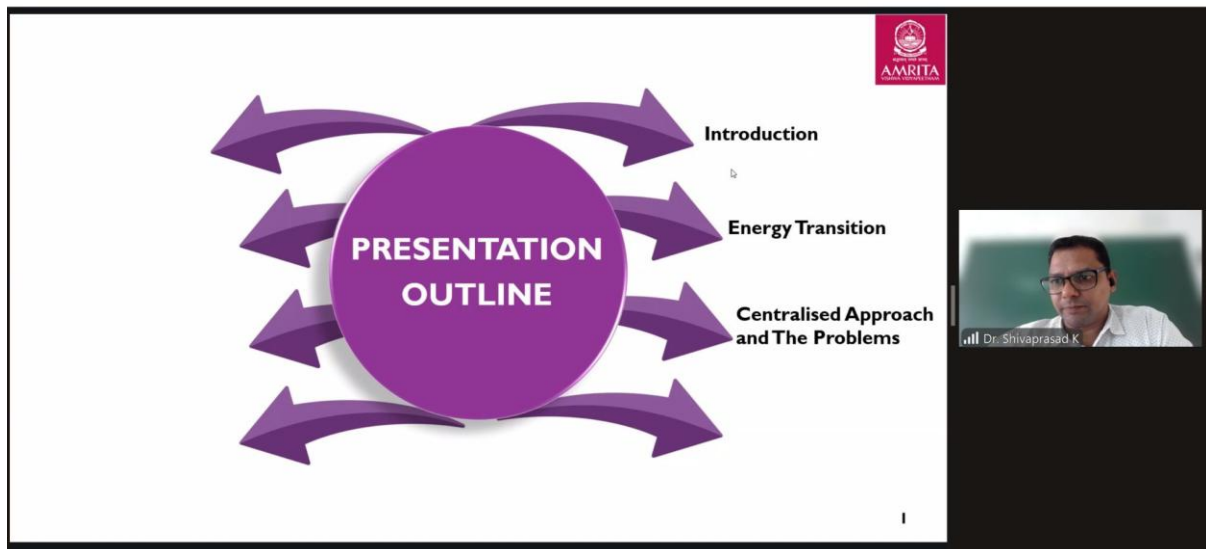
- Jovita V. Mathew (PP-029)
- Divya Vinod (PP-005)
- Sahana S. A. (PP-007)
- S. Suchithra (PP-047)

Prestigious GREENS Award

Date 2-3 October 2025

- Dr. Vishwajit Basavaraj Darekar, Assistant Professor, Department of Postgraduate Studies and Research in Zoology, Sharnbasva University, Kalaburagi

The INSECT 2025 Conference marked a significant milestone in promoting scientific excellence, interdisciplinary collaboration, and sustainable innovation. It provided a global platform for researchers and professionals to exchange ideas, discuss challenges, and explore pathways toward a more sustainable and resilient future.



Date 2-3 October 2025

GREENS
Research Connect
INSECT-2025

Sustainable Microbial Engineering for Agriculture

(Harnessing Microbial Innovations for Sustainable Farming)

Prof. Dr.S.Suriyanarayanan
Associate Dean Research
03.10.2025



Dr. Suriyanarayanan S. (Sun)

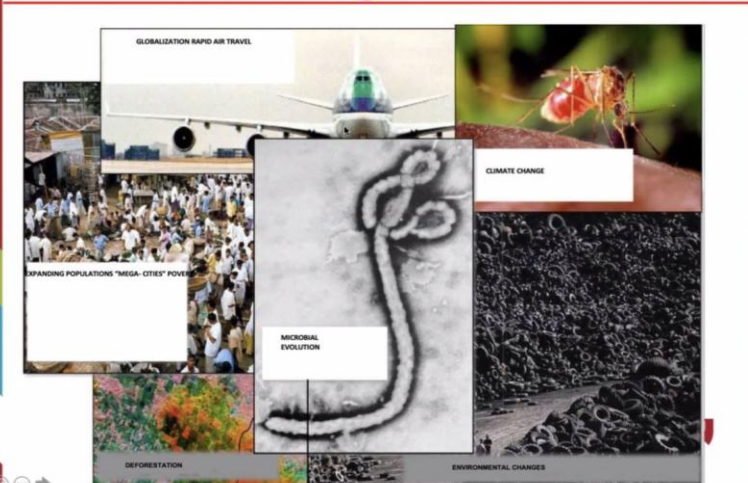
GREENS
Research Connect
INSECT-2025

The Sustainability Challenges- *Health* & Environment



Prof. Yogendra K

Convergent Forces of Disease Emergence




GLOBALIZATION RAPID AIR TRAVEL

EXPANDING POPULATIONS "MEGA-CITIES" POCKETS

MICROBIAL EVOLUTION

DEFORESTATION

ENVIRONMENTAL CHANGES



Dr. Siddappa Byrareddy

CROP MODELLING

To simulate crop yields and crop production based on pixel-wise data (grid point wise) using a crop model. This will be undertaken by considering the impact of extreme weather events and general climate trends on crop growth and yields.

Climate Data

- Solar Radiation
- Maximum and Minimum Temperature
- Rainfall

Crop Management

- Cultivar
- Fertilizer Management
- Planting Date

DSSAT Crop Model

Crop Production and Crop Yield

Dr. Srivatsan Raghavan

BRIN

BADAN RISET DAN INOVASI NASIONAL

From Waste to Innovation: Advancing Electronics and Environmental Sustainability

GREENS

Research Center

1ST EDITION (2025)

INTERNATIONAL CONFERENCE ON FRONTIER INNOVATIONS IN INTERDISCIPLINARY SCIENCES, ECOLOGY, AND BIOTECHNOLOGY FOR SUSTAINABLE DEVELOPMENT (INSECT 2025)

Athanasia Amanda Septevani

Research Center for Electronics
National Research & Innovation Agency (BRIN)
2025

Dr. Athanasia Amanda Septevani

PROGRAM SCHEDULE

Day 1 (02.10.2025)-INSECT2025

TIME	SESSION	DETAILS
10:30 – 11:00	Inaugural Ceremony	GRC President and Vice-President
11:01 – 11:30	Keynote Talk-1	<p style="color: red; font-weight: bold; font-size: small;">Double-Edged Sword: Harnessing AI and Big Data for Environmental Solutions Without Crushing the Planet</p> <p>by Dr. Behzad Shahmoradi, Senior Professor, Department of Environmental Health Engineering, Kurdistan University of Medical Sciences, Iran</p>
11:31 – 12:00	Keynote Talk-2	<p style="color: red; font-weight: bold; font-size: small;">From Waste to Innovation: Advancing Electronics and Environmental Sustainability</p> <p>by Dr. Athanasia Amanda Septevani, Researcher Professor at the Research Centre for Electronics, National Research and Innovation Agency (BRIN), Indonesia</p>

Date 2-3 October 2025

12:01 – 12:30	Keynote Talk-3	Alkaline Catalyst-Assisted Biofuel Production from Biomass in a Packed-Bed Reactor: Toward Green Energy Solutions by Dr. Kitirote Wantala , Professor, Department of Chemical Engineering, Khon Kaen University, Thailand
12:31 – 13:30	Technical Session-1	Session Chair: Dr. Sharangouda J Patil , NMKRV College for Women, India Session Co-Chair: Dr. Mahesh Pattabhiramaiah , Bangalore University, India
13:31 – 14:30	BREAK	
14:31 – 16:00	Technical Session-2	Session Chair: Dr. Shivaraju HP , JSS Academy of Higher Education and Research, India Session Co-Chair: Dr Nagendra Prasad HS , JSS Science and Technology University, India
16:01 – 16:30	Keynote Talk-4	Climate Change and Climate Modelling for future food security by Dr. Srivatsan Raghavan , Professor, Tropical Marine Science Institute, National University of Singapore (NUS), Singapore
16:31 – 18:00	Technical Session-3	Session Chair: Dr. Prithviraj Nagarajan , Vinayaka Mission's Research Foundation, India. Session Co-Chair: Dr. Anilkumar KM , JSS Academy of Higher Education and Research, India

Day 2 (3.10.2025)-INSECT2025

TIME	SESSION	DETAILS
9:30-10.00	Keynote Talk-5	Pathophysiology of emerging and reemerging viruses by Dr. Siddappa Byrareddy , Professor and Vice Chair of Research in the Pharmacology and Experimental Neuroscience Department, University of Nebraska Medical Center in Omaha, NE, USA.
10:01-10.30	Keynote Talk-6	The Sustainability Challenge: Health and Environment by Dr. Yogendra K , Professor, Department of P.G. studies and research in Environmental Science, Kuvempu University, India
10:31 – 12:00	Technical Session-4	Session Chair: Dr. Kantesh B , JSS Academy of Higher Education and Research, India Reporter: Dr Yashas S R , JSS Science and Technology University, India
12:01 – 12:30	Keynote Talk-7	“Exploring Solar Photovoltaic Technology and its Application to Electric Vehicle System” by Dr. Prashant V. Thakre , Associate Professor, Sandip Institute of Technology and Research Centre, Nasik, India
12:31 – 13:00	Keynote Talk-8	Sustainable Microbial Engineering for Agriculture

Date 2-3 October 2025

		by Dr. Suriyanarayanan S , Deputy Director Research, JSS Science and Technology university
13:01 – 14:00	BREAK	
14:01 – 14:30	Keynote Talk-9	Decentralised Energy System: A Pathway to Sustainable Energy Transition By Dr. Shivaprasad K , Associate Professor, Amrita Vishwa Vidyapeetham, Mysuru Campus, India
14:31 – 16:30	Technical Session-5	Session Chair: Dr. Sumana K , JSS Academy of Higher Education and Research, India Session Co-Chair: Dr. Anilkumar KM , JSS Academy of Higher Education and Research, India
16:31 – 17:00	Award ceremony and Closing wrap up	Vice-President, GRC

Note: Oral presentation maximum of 8 min and Poster presentation maximum of 5 min

DETAILS OF PRESENTERS AND THEIR TITLE OF TALK

Sl. No.	Abstract No	Name of Presenter	Title of Presentation
TECHNICAL SESSION 1			
1	OP-011	RAGINI DOLHEY	Comparative Analysis of Biofilm Formation in Bacillus subtilis J-35 and Bacillus subtilis 3610 Under Metal Stress
2	OP-007	MOJDEH JAMALI HESSARI	In silico molecular docking analysis of anticancer activity of Saponins from Brahmi (Bacopa monnieri).
3	OP-009	POULAMI MUKHERJEE	Functionalized Biochar-A Sustainable and Affordable solution for Carbon Sequestration and Utilization
4	OP-033	SAJANA M	Targeting Leukemia Through Flavonoid-Induced Oxidative Stress and Cell Cycle Modulation
5	OP-021	DR. CHANDAN C	Biotechnological Advancement in Oral Enzyme Delivery: Preparation and Evaluation of Papain - Solid Lipid Nanoparticles
6	OP-024	DR. SRILATHA MUNDLA	Inhibition of Colorectal Cancer Metastasis by RKIP
7	OP-035	AARZOO SHRIVASTAVA	Mycorrhizal-Inspired Distributed Pathogen Surveillance: A Bio-Hybrid AI Framework for

Date 2-3 October 2025

			Predictive Zoonotic Disease Detection in Climate-Stressed Ecosystems
8	OP-019	PAVANI DARAPUREDDY	Decadal Shoreline Dynamics in a Climate-Vulnerable Mangrove Estuary of India
TECHNICAL SESSION 2			
1	OP-018	ALLADI RAJA KUMAR	Assessing Climate Resilience in Coringa Wildlife Sanctuary (2014–2024)
2	OP-026	DEEPAK KADAPPA PHASHI	Ungulates of Central Western Ghats: Diversity, Perspectives and Future Research
3	OP-014	NIDHI RAVINDRAN	Analysing the Land Use Land Change of Kozhikode district over the years: 2018, 2021, 2024
4	OP-027	DEEPA H N	Screening for insecticidal activity of the selected essential oils against <i>Musca domestica</i>
5	OP-034	GANDLA SAIPRASANNA	Toxicological impact of microplastic in the aquatic food chain: from contaminated water to human consumption
6	OP-030	DR. MYRENE ROSELYN DSOUZA	Revolutionizing Biomedical Waste Management: Innovative Pathways for Sustainable Healthcare and Environmental Protection
7	OP-032	DR. MUDE THULASI	Exploration of Phytochemical Composition and Optimal Dosage of <i>Emblca officinalis</i> Fruit Methanolic Extract on Albino Rats for Potential Alzheimer's Disease Treatment
8	OP-039	THARANI M	Method development and validation of Icaritin by RP-UFLC
TECHNICAL SESSION 3			
1	OP-006	DR. RAKSHITHA R	Response Surface Methodology (RSM) modeling for the photocatalytic optimization study of paraben removal using CuWO ₄ /NiO nanocomposite
2	OP-010	NISHANTH B	Performance evaluation of Industrial Waste-Based Concrete Composites for the Removal of PPCPs and Dyes from Aqueous Systems
3	OP-012	MOHAMMED MUZAKIR	Harnessing Construction and Demolition Waste for Sustainable Nutrient Pollution Control
4	OP-013	SWARNALATHA KOLLAM	Sustainable and Affordable: A New Era for Phenolic Wastewater Treatment
5	OP-016	KAVYA S	Phenol Adsorption using Industrial Byproduct-Infused Concrete Waste
6	OP-045	BOLLA BHAVANI MADHU MEGHANA	Impact of Smoking and Oral Cancer on Gut Microbial Composition: A Comparative Profiling Study

Date 2-3 October 2025

7	OP-046	SUPREET SUBRAY NAIK	An Insight into Reactivity and Bioactivity Properties of Piceid on Inflammation-Associated Oral Cancer Progression
8	OP-023	SANGEETHA YN	Physico-chemical analysis of soil: Impact of organic manure vs. Chemical fertilizer on Momordica charantia (Bitter gourd) growth and yield
TECHNICAL SESSION 4			
1	OP-037	MANASA M G	Implementing Virulence Gene Profiling to Enhance the Detection of Lymph Node Tuberculosis
2	OP-038	SUPRIYA M S	Bacteriogenic Synthesis and Characterization of Silver Nanoparticles Using Isolates from Fruit and Vegetable Peels and Their Antimicrobial Potential Against Urinary Tract Infection Pathogens
3	OP-040	MRS. USHA S	Solvent Extraction and Evaluation of Antimicrobial Phytoconstituents from Betel and Jatropha Foliage on Staphylococcus aureus causing Atopic Dermatitis
4	OP-032	DR. MUDE THULASI	Exploration of Phytochemical Composition and Optimal Dosage of Emblica officinalis Fruit Methanolic Extract on Albino Rats for Potential Alzheimer's Disease Treatment
5	OP-043	CHANUMOLU.BH AVYA SRI	Biosynthesis of silver nanoparticles using Bacillus subtilis and its applications in food industry
6	OP-049	MUHAMMMED ANAS P	Analysis of Hetero Resistance in Probiotics and Study of its Transferability
7	OP-017	ANJANA B	Antagonistic Impact of Polypropylene Microplastics and DEP on Germination and Growth of Pennisetum glaucum
8	PP-010	KEERTHI S	Antimicrobial Agent from Nano Enabled Material and Detection of Contaminants in Food
9	PP-012	JABEEN FIRDOUSE	Bioconversion of lignocellulosic waste into Bioethanol: Process development and Optimization
10	PP-013	MILISHA GURUNG	Bee Pollen and Bee Products: A Nexus of Sustainability, Nutrition, and Antimicrobial Innovation.
11	PP-023	VIJAY R	Discovery and Multimodal Assessment of Piceid, a Novel CB1 Agonist with Neuroprotective Activity Against Neuroinflammation in Parkinson's Disease
12	PP-017	BRUNDA M	Computational Evaluation of Berberine as a Multitarget Cervical Cancer Therapeutic: STRING PPI Networks, Enrichment Analysis, and Docking
13	PP-024	PRAJWAL N S	Dysbiosis-Driven Microbial Signatures in Cancer Progression, Immune Modulation, and Oxidative Stress

Date 2-3 October 2025

14	PP-028	HAZEL LILLY CHARLIN	Biochemical Profiling of <i>Mamordica charantia</i> and <i>Arachis hypogaea</i> extracts with Molecular Docking Analysis of Neophytadiene
TECHNICAL SESSION 5			
1	PP-009	HARSHITHA P	DEVELOPMENT OF HIGHLY FUNCTIONALIZED AND LOW COST NANOHYBRIDS FOR FOOD SAFETY, PRESERVATION AND ITS ANTIMICROBIAL APPLICATIONS
2	PP-007	SAHANA S A	The Extraction and Characterisation of Chitin and Chitosan from Six Species of Beetles: Demonstrated That Beetles Are a Valuable Source of These Biopolymers
3	PP-030	SNEHA. S. SARIKAR	Moth diversity in different habitat of Kalaburagi district
4	PP-026	DR. OBAIAH JAMAKALA	THE IMPACT OF ENDOCRINE-DISRUPTING CHEMICALS ON WILDLIFE POPULATIONS: CONSERVATION CHALLENGES AND SOLUTIONS
5	PP-027	BIJJALA AJAYNATH REDDY	"Protective Effects of Probiotics, Vitamins C and E, Selenium, and <i>Tribulus terrestris</i> Against DEHP-Induced Renal Toxicity in Rats"
6	PP-011	PADMAPRAJITHR A P C	ANALYSIS OF GROUND WATER QUALITY AND ITS PHYSICO - CHEMICAL PROPERTIES IN RURAL REGION OF DAVANGERE DISTRICT, KARNATAKA, INDIA
7	PP-021	SHILPA, P. RAIKAR	" Nutritional and Yield Improvements in Dairy Cow Milk induced by <i>Azolla filiculoides</i> Supplementation"
8	PP-005	DIVYA VINOD	Evaluation of Ecotoxicity and Identification of Antimicrobial Substances in Urban Environments and AMR Hotspots
9	PP-015	ANIKAIT ASHISH PATANKAR	Harnessing Phytotherapy for Parkinson's Disease: Bridging Symptomatic Relief and Neuroprotection
10	PP-018	SHRISHTI PATNAIK	Green Tea Catechins: Pharmacokinetics, Health Benefits, and Therapeutic Advances through Nanotechnology
11	PP-014	SUSHMA G	Nature's Glowkeepers: A living light for the world
12	PP-019	ADITI PRASAD	Biodegradable Plastics – Can Computational Biology Help Design Better Enzymes to Degrade Plastic?
13	PP-002	SHARMADA N RAJ	Green synthesis of Zinc Bismuth Oxide Nanoparticles using <i>Tinosporo cordifolia</i> as fuel extract and to exploring their photocatalytic application

Date 2-3 October 2025

14	PP-003	BINDU NR	Green synthesis of Zinc Bismuth Oxide nanoparticles using <i>Tinosporacordifolia</i> extract as fuel and exploring their photocatalytic applications
15	PP-029	JOVITA V MATHEW	Synthesis of Copper Nanoparticles and its application in dye degradation
16	PP-008	VINOD R B	ASSESSMENT OF WATER QUALITY PARAMETERS "SPECIAL REFERENCE TO MICROPLASTIC POLLUTION IN KAVERI RIVER BASIN
17	PP-025	CETHANA H BASAVANNA	Millet-Based Dietary Interventions as a Nutritional Strategy for Managing Polycystic Ovary Syndrome: In Silico Approaches
18	PP-020	DR SEENA KX	PHYTOCHEMICAL ANALYSIS AND CYTOTOXICITY SCREENING OF HOMONOIA RIPARAIA LOUR
19	PP-022	ARATHI S NAIR	Antiuro lithiatic Activity and Phytochemical Screening of Ethanol extract and fractions of <i>Clitoria ternatea</i> L.
Oral presentation moved to poster presentation			
20	OP-033	SAJANA M	Targeting Leukemia Through Flavonoid-Induced Oxidative Stress and Cell Cycle Modulation
21	OP-029	ARKOPRIYA BHATTACHARJI	Discovery and comparative analysis of BBB-permeable EZH2 inhibitors for glioblastoma: A computational approach
22	OP-020	N. BHANUPRAKASH	<i>Chukrasia tabularis</i> A. Juss.: A Multifaceted Medicinal Resource for Sustainable Innovations in Ecology and Biotechnology
23	OP-041	SHREEMOYEE BASU	Biogenic Silicon Dioxide Nanoparticles: From Sustainable Synthesis to Multifunctional Applications
24	PP-047	S. SUCHITHRA	"Microplastics in Soil: Dual Perspective on Toxicity to Earthworms (<i>Eisenia fetida</i>) and Eco-Remediation through Vetiver Grass– <i>Aspergillus tubingensis</i> [plant-microbe] Partnership
25	OP-035	AARZOO SHRIVASTAVA	Mycorrhizal-Inspired Distributed Pathogen Surveillance: A Bio-Hybrid AI Framework for Predictive Zoonotic Disease Detection in Climate-Stressed Ecosystems
26	OP-048	PASALA DURGA PRASAD	SODIUM NITRATE IMPACT ON AZOLLA IN POND ECOSYSTEMS.

PROCEDURE TO JOIN VIRTUAL CONFERENCE

Instructions for Conference Presenters

1. Registration & Joining

Date 2-3 October 2025

- First, register using the conference registration link i.e mandate to join the virtual conference.
https://us06web.zoom.us/webinar/register/WN_S_YXWYfJQSahxOP38qxdGQ
 - After registration, Zoom will send you a confirmation email to your registered email with your unique meeting link.
 - On the day of the conference, click this link to join as an attendee.
2. Before Your Talk
- Join early to avoid last-minute issues.
 - Keep your presentation file (PPT/PDF/prerecorded video) ready.
 - Check your microphone, camera, and internet.
3. During Your Talk
- About 5 minutes before your slot, the host will promote you to presenter (you will see extra controls).
 - Turn on your video and microphone.
 - Click Share Screen → select your presentation window/sreen → Share.
 - Give your talk within the allotted time.
4. After Your Talk
- When you finish, the host will switch you back to attendee mode.
 - Please stay in the meeting as an attendee to watch other talks.
 - When ever you want to discuss or ask question, you can raise your hand, host will enable you to talk.

Criteria for Best Poster and Oral Presentation:

Selection will be based on clarity of objectives, originality of research, scientific rigor, quality of data and analysis, relevance to conference themes, and practical impact. Presentation skills, audience engagement, visual design, and ability to answer questions effectively will also be key considerations in evaluation.

Best Oral presentation

Abstract ID	Name of Presenter	Title
OP-011	RAGINI DOLHEY	Comparative Analysis of Biofilm Formation in Bacillus subtilis J-35 and Bacillus subtilis 3610 Under Metal Stress
OP-014	NIDHI RAVINDRAN	Analysing the Land Use Land Change of Kozhikode district over the years: 2018, 2021, 2024
OP-010	NISHANTH B	Performance evaluation of Industrial Waste-Based Concrete Composites for the Removal of PPCPs and Dyes from Aqueous Systems

Best Poster presentation

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Criteria for The GREENS Award (Early Career):

The award recognizes outstanding early-career researchers demonstrating originality, innovation, and impact in sustainability. Selection is based on societal relevance, and potential for future contributions. Commitment to interdisciplinary collaboration and addressing global sustainability challenges will be key considerations for the award.

THE GREENS AWARD

Vishwajit Basavaraj Darekar, Assistant Professor, Department of Postgraduate Studies and Research in Zoology, Sharnbasva University, Kalaburagi