



45TH NATIONAL SYSTEMS CONFERENCE
Global Sustainability through Lacto-Vegetarian Agroecology Systems



Organized jointly with

4TH INTERNATIONAL DAYALBAGH SCIENCE OF CONSCIOUSNESS CONFERENCE
Bridging the Gap

26 September – 30 September 2022

Revised Program Schedule

DAY – 1 (Monday, 26 September 2022)

Venue: DEI Multimedia Lab

Time (IST)	Session Title and Chair(s)	Session Details
12:40 PM – 12:45 PM	Opening Session	Introduction to the conference and opening remarks

DAY – 2 (Tuesday, 27 September 2022)

Venue: DEI Multimedia Lab

Time (IST)	Session Title and Chair(s)	Session Details
07:00 AM – 08:00 AM	Oral Presentations Session 1 Consciousness based and Literary Systems Chairs: Dr. Nirat Ray Dr. N Apurva Ratan Murty	<ol style="list-style-type: none">1. Dystopian fascism to spiritual utopianism: a systemic study of the contrasting worlds of Golding's lord of the flies and the garden of the merciful by Gur Pyari Jandial.2. Empirical measurement of aesthetic experience of music by Abhishek Gupta and CM Markan.3. Analyzing functional brain networks of ultra-transcendental meditation using graph theoretic approach by Geeta Prem Chandoo Damisetti and CM Markan.4. An ERP investigation of impact of brief mindfulness intervention on attentional systems by Manvi Jain, Dushyant Soni and CM Markan.5. Quantum Zeno effect in bistable perception by Mansi Tarani and CM Markan.6. Computational correlation analysis of synaptotagmin gene 1 in human with different life forms by Hunny Waswani and Rajiv Ranjan.



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Time (IST)	Session Title and Chair(s)	Session Details
01:00 PM – 02:00 PM	Oral Presentations Session 2 Energy Systems Chairs: Dr. Sonal Sahai Dr. Aatmesh Shrivastava	<ol style="list-style-type: none">1. An experimentation of magnetic field assisted smart nano fluids on electric vehicle (ev) for increasing the efficiency of battery by Amit Yadav, Sandeep Kumar and Neelam Srivastava.2. Role of thermal annealing in fabrication of bismuth ferrite thin films for photoelectrochemical water splitting by Bhanupriya, Kumari Ruchi, Runjhun Dutta, Anuradha Verma, Anupam Srivastava, Manju Srivastava and Rohit Shrivastav.3. Is green building a better option for future? a sustainability assessment by Shubhi Sharma and Aparna Satsangi.4. Comparative study: green pretreatment of rice straw for biofuel production by Saurabh Kumar, Gunjan, Jyoti Kushwaha, Yogita Jain and Radhika Singh.5. Review of factors affecting cooling performance of battery thermal management system by Devansh Saraswat, Devanshu Lawania and Rajesh Kumar.6. Bismuth ferrite (bifeo₃): a promising material for renewable hydrogen generation by photoelectrochemical splitting of water by Arpan Agarwal, Anuradha Verma, Anupam Srivastav, Manju Srivastava and Rohit Shrivastav.



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Time (IST)	Session Title and Chair(s)	Session Details
02:15 PM – 03:15 PM	Oral Presentations Session 3 Agroecology Systems Chairs: Prof. GP Satsangi Dr. Bhupinder Singh	<ol style="list-style-type: none">1. Simulation of water and nutrient distribution in raised bed onion under different soil types, emitter discharge rates and irrigation intervals by Anjitha Krishna PR, Maheshwara Babu B, Anilkumar T Dandekar, Rajkumar RH, Ramesh G and Balanagoudar SR.2. Homo sapiens to Homo Environmentalis through lacto-vegetarianism by Saran Lakhani.3. Interpretive structural model of challenges in processing the potato by small and medium enterprises by Jaspreet Kaur.4. A study of food preferences and sustainable habits among lacto-vegetarians, vegetarians, and non-vegetarians by Sona Dixit, Rajat Mittal and Simran Dixit.5. Manufacture of whey-based mint buttermilk made from different sources and their comparative study by Nandini Singh, Ajay Kushwah and Mogla Achal Maharaj Kishore.6. Design and analysis of solar based water pumping system for agricultural purpose using MATLAB/Simulink by Piyush Kudiwal, Lokesh Sharma and Subho Upadhyay.



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DAY – 3 (Wednesday, 28 September 2022)

Venue: DEI Multimedia Lab

Time (IST)	Session Title and Chair(s)	Session Details
07:00 AM – 08:00 AM	Oral Presentations Session 4 Environment Systems Chairs: Prof. Rohit Srivastava Dr. Raj Kamal Bhatnagar	<ol style="list-style-type: none">1. Distribution based bias correction of cmip5 gcms outputs for climate impact modeling by Madhuri Dubey, Ashok Mishra and Rajendra Singh.2. Investigating features of air showers at Agra using DEASA experiment by Sonali Bhatnagar and Kajal Garg.3. Effect of improved air quality in lockdown period on solar photovoltaic generation by Akanksha Singh, Ankit Premi and Gaurav Pratap Rana.4. Water quality assessment of water released from air conditioner by Archita Dixit, Santendra Kumar Soni and Jeetendra Singh.5. Comparative analysis of air quality over the Indo Gangetic plain (IGP) in the era of covid-19: normal to the new normal by Isha Goyal, Muskan Agarwal, Simran Bamola and Anita Lakhani.6. Insights into the lacto-vegetarian Indian diets-a case study on nutritional status of children in western Europe by Raghuram Gudipati, Simran Roy Mehta, Sangeeta Bhushan, Ratnanjali Gupta, Jyoti Nayak and Surendra Singh.



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Time (IST)	Session Title and Chair(s)	Session Details
08:15 AM – 09:15 AM	Oral Presentations Session 5 Healthcare Systems Chairs: Dr. Rajiv Ranjan Dr. Anjoo Bhatnagar	<ol style="list-style-type: none"> 1. Pain-free low-power and deep pacing of human heart with light by Gur Pyari, Himanshu Bansal and Sukhdev Roy 2. Novel method for low-power high-fidelity and sustained control of neural spiking with light by Himanshu Bansal, Gur Pyari and Sukhdev Roy. 3. Prosthetics advice, design & fabrication using digital manufacturing systems for improved healthcare systems by Guru Ratan Satsangee, Bobby Tyagi, Dheeraj Kumar Angajala, Ankit Sahai and Rahul Swarup Sharma. 4. Task-specific regularization loss towards model calibration for reliable lung cancer detection by Mehar Prateek Kalra, Mansi Singhal and Rohan Raju Dhanakshiriur. 5. A cross-sectional analysis of the factors affecting consumers' decision to buy wearable activity trackers: a case study of the university students in Punjab by Narinder Kumar, Dhiresh Kulshrestha, Abhishek Anand and Rishu Kumar. 6. An analysis and deployment of deep neural networks for medical applications by Soniya, Aarat Prasad Chopra, Lotika Singh and Sandeep Paul.

DAY – 3 Continued (Wednesday, 28 September 2022)
Venue: DEI Seminar Hall Complex

Time (IST)	Session Title and Chair(s)	Session Details
12:30 PM – 02:00 PM	Poster Presentations Session Chairs: Dr. SK Soni Prof. Sona Ahuja Prof. Pravin Saxena	41 Posters shortlisted for presentation (with DSC 2022)



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Venue: DEI Multimedia Lab

Time (IST)	Session Title and Chair(s)	Session Details
02:15 PM – 03:15 PM	Oral Presentations Session 6 Information and Communication Systems Chairs: Prof. Kamal Srivastava Prof. GS Sailesh Babu	<ol style="list-style-type: none">1. Optimization of gravity-fed water distribution network design using genetic algorithm and particle swarm optimization by Pradyuman Verma and DK Chaturvedi2. Femtosecond all-optical logic gates with mote² nanocomposite thin films by Anam Saifi and Sukhdev Roy.3. The role of learning agility, enculturation, and motivation in entrepreneurial intentions – a systems modeling perspective by Ruchika Vatsa and Purnima Bhatnagar.4. Explainable artificial neural network using evolutionary fuzzy association rule mining by Abhishek Toofani, Sandeep Paul and Lotika Singh.5. Technology-based virtual intervention to improve social well-being: a case study of the members of the Radhasoami Satsang community in the Europe region by Ami Parashar and Satyam Sharan.6. Productivity and plant capacity improvement of the automobile industry using different soft computing technologies by Mayank Kumar Agrawal, Ravi Shankar, Ashok Yadav and Rishabh Singhal.
08:20 PM – 09:00 PM	Presentation of Awards	Best Paper and Best Poster Award (<i>with DSC 2022</i>) SSI Awards



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DAY – 4 (Thursday, 29 September 2022)		
Venue: DEI Multimedia Lab / Dayalbagh Agroecology-cum-Precision Farming Fields		
Time (IST)	Session Title and Chair(s)	Session Details
04:30 AM – 05:15 AM	Plenary Session 1 (Virtuous Virtual Mode) Chair: Prof. Sukhdev Roy	Seeking transformation: a praxis for using and institutionalizing systems thinking in practice (STiP) in policy settings Prof. Ray Ison President International Federation for Systems Research
08:00 AM – 08:45 AM	Plenary Session 2 (Virtuous Virtual Mode) Chair: Dr. Dayal Pyari Srivastava	Sustainability in Launch Vehicle Program Dr. S Unnikrishnan Nair Director Vikram Sarabhai Space Centre
09:00 AM – 09:45 AM	Plenary Session 3 (Virtuous Virtual Mode) Chair: Dr. Bani Dayal Dhir	Are we ready to feed nine billion? Prof. Ashwani Pareek Executive Director National Agri-Food Biotechnology Institute

DAY – 4 Continued (Thursday, 29 September 2022)		
Venue: DEI Multimedia Lab / Dayalbagh Agroecology-cum-Precision Farming Fields		
Time (IST)	Session Title and Chair(s)	Session Details
04:45 PM – 05:45 PM	Panel Discussion (with DSC 2022)	Prof. VB Gupta (Moderator) Dayalbagh Educational Institute Prof. Prem Kumar Kalra Dayalbagh Educational Institute Prof. Geoff Simm The University of Edinburgh Prof. Ray Ison The Open University Prof. Ashwani Pareek National Agri-Food Biotechnology Institute Prof. Kalyanmoy Deb Michigan State University
6:30 PM – 07:45 PM	Farewell and Cultural Programme (with DSC 2022)	Cultural programme presented by students of DEI.

DAY – 5 (Friday, 30 September 2022)		
Venue: DEI Multimedia Lab		
Time (IST)	Session Title and Chair(s)	Session Details
01:00 PM – 02:00 PM	SSI AGM	Annual General Meeting of Systems Society of India.