

# INTERNATIONAL SYMPOSIUM ON COLLABORATIVE INFORMATICS (ISCI 2025)

## March 5-7, 2025, Kagoshima University, Kagoshima, Japan

### *PROGRAMME SCHEDULE*

**Venue: Faculty of Engineering, Korimoto Campus**

#### **March 5, 2025 (Wednesday) Inamori Auditorium**

10:00 – 11:00	Registration
11:00 – 11:30	Opening Ceremonies
11:30 – 11:50	Keynote lectures K1
11:50 – 12:10	Keynote lecture K2
12:10 – 12:30	Keynote lecture K3
12:30 – 12:50	Keynote Lecture K4
<b>12:50 – 14:00</b>	<b>Lunch Break</b>
14:00 – 14:20	Keynote Lecture K5
14:20 – 14:40	Keynote Lecture K6
14:40 – 15:00	Keynote Lecture K7
15:00 – 15:15	Tea Break
15:15 – 17:00	Campus Tour & Laboratory Visits
17:00 – 17:30	Free Time
17:30 – 19:00	Welcome Reception

#### **March 6, 2025 (Thursday) Inamori Auditorium & Lecture Halls**

10:00 – 10:20	Keynote lecture K8
10:20 – 10:40	Keynote lecture K9
10:40 – 11:00	Keynote lecture K10
11:00 – 11:20	Keynote lecture K11
11:20 – 11:40	Tea Break
11:40 – 13:00	Technical Sessions (T1, T4, T7)
<b>13:00 – 14:00</b>	<b>Lunch Break</b>
14:00 – 15:30	Technical Sessions (T2, T5, T8)
15:30 – 15:45	Tea Break
15:45 – 17:00	Technical Sessions (T3, T6)
17:00 – 17:30	Free Time
17:30 – 19:00	Symposium Dinner

#### **March 7, 2025 (Friday)**

9:00 – 15:00	Field visits
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*(Lunch & Dinner Venue - Co-op Cafeteria)*

## March 5, 2025 (Wednesday) Inamori Auditorium

10:00 – 11:00	<b>Registration</b>	
11:00 – 11:30	<b>Opening Ceremony</b>	<p>Opening remarks <i>Toshinobu Yamaguchi, Professor &amp; Dean, Graduate School of Science &amp; Engineering, KU</i></p> <p>Welcome remarks and overview of Kagosima University <i>Akio Ido, Professor, Executive Director and Vice-President for Research and Information Technology, KU</i></p> <p><i>Group Photo</i></p>
11:30 – 11:50	<b>Keynote Lecture (K1)</b>	Vision Driven Engineering <i>Shinichiro KATSU, Professor, Faculty of IT and Business, Cyber University, Japan</i>
11:50 – 12:10	<b>Keynote Lecture (K2)</b>	Study of implant materials and information for patient's quality of life and health; Medical Informatics <i>G C Mohan Kumar, Professor &amp; Former Dean (Faculty Welfare), NITK Surathkal, India</i>
12:10 - 12:30	<b>Keynote lecture (K3)</b>	Unmanned aerial vehicles for precision agriculture information gathering to advance crop monitoring and management <i>K. Colton Flynn, Research Soil Scientist, USDA-ARS Grassland Soil and Water Research Laboratory, USA</i>
12:30 – 12:50	<b>Keynote lecture (K4)</b>	Scientometric insights into manufacturing engineering research in India and Japan: a comparative study - <i>Mallikarjun Angadi, Librarian, NITK Surathkal, India</i>
12:50 – 14:00	Lunch	
14:00 - 14:20	<b>Keynote lecture (K5)</b>	Diagnosing Plastic Litter pollution: advances in remote sensing platforms and image analysis <i>Shinichiro KAKO, Professor, Graduate School of Science &amp; Engineering, Kagoshima University, Japan</i>
14:20 - 14:40	<b>Keynote lecture (K6)</b>	Offshore Wind Technology - Current Challenges and Future Opportunities <i>Sharath Srinivasamurthy, Assistant Professor, Saga University, Japan</i>
14:40 - 15:00	<b>Keynote lecture (K7)</b>	Application of agriculture informatics for efficient use of water and effect of rain water harvesting in improving agriculture output - <i>Rajendra Kalbavi Rao, Secretary General, Association of Consulting Civil Engineers (India) &amp; Executive Director, D K Nirmithi Kendra, Mangalore, India</i>

**March 6, 2025 (Thursday) Inamori Auditorium**

10:00 – 10:20	<b>Keynote Lecture (K8)</b>	Sustainable retrofitting of RC beams for enhancing shear performance using natural sisal-jute FRP hybrid composite system <i>H N Jagannatha Reddy, Professor, Bangalore Institute of Technology, India</i>
10:20 – 10:40	<b>Keynote Lecture (K9)</b>	Convective Transport Phenomena of Graphene/Water Nanofluid in Plate Heat Exchanger <i>Shuichi TORII, Professor, Kumamoto University, Japan</i>
10:40 – 11:00	<b>Keynote Lecture (K10)</b>	Utilizing generative AI in business : The potential of consulting AI <i>Katsunobu MATSUDA, CEO, BANSO Co., Ltd., Japan</i>
11:00 – 11:20	<b>Keynote Lecture (K11)</b>	Evolutionary Computation: Optimization Algorithms through Collaboration Instead of Gradients <i>Satoshi ONO, Professor, Graduate School of Science &amp; Engineering, Kagoshima University, Japan</i>
11:20 – 11:40	Break	
11:40 – 13:00	<b>Technical Session (T1)</b>	<p><b>Session Chair: Prof Unni Kartha G and Prof Nakul Ramanna Sanjeevaiah</b></p> <p>Design of passive tuned mass damper for structural vibration control in floating offshore wind turbines <i>Amiya Pandit and Sharath Srinivasamurthy</i></p> <p>Precast Concrete Joint Connection Using Anchors and Epoxy Mortar Combination <i>Dhruva Narayana Katpady, Yoshikazu Akira, Kazuya Sakamoto and Kanako Shima</i></p> <p>Sustainable Strengthening of RC Beams with CFRP Laminates using Near Surface Mounted (NSM) Technique <i>R Prabhakara, Pradeep C R, Nandeesh Sreenivasappa and H N Jagannatha Reddy</i></p> <p>Impact resistance studies of NSM retrofitted two-way slabs using drop test <i>Arjun R P Reddy, Nandeesh Sreenivasappa, H N Jagannath Reddy and R Prabhakara</i></p> <p>ABAQUS Analysis and Validation of Flexural Parameters of NSM strengthened RC Beams <i>Pradeep C. R, R. Prabhakara, H. N. Jagannatha Reddy and Nandeesh Sreenivasappa</i></p>
13:00 – 14:00	Lunch	

14:00 – 15:30	<b>Technical Session (T2)</b>	<p><b>Session Chair: Dr Dhruva Narayana Katpady and Prof R Prabhakara</b></p> <p>Markov chain model for structural health prediction of bridges <i>SREENIVASAPPA Nandeesh, JERIN SULTANA Jui, AKIRA Yoshikazu and YAMAGUCHI Toshinobu</i></p> <p>Manufactured aggregates for modern infrastructure: advancements, applications, and future directions - <i>Nakul Ramanna Sanjeevaiah, Chethan B and R Prabhakara</i></p> <p>Modelling of shear transfer mechanism in different types of concretes by linear regression analysis of results obtained using push off specimens <i>Harish Kumar N R, Nandeesh M, Sreenivasappa, R Prabhakara and H N Jagannath Reddy</i></p> <p>Detection of Concrete Cracks Using YOLOv8 and Estimation of Crack Width <i>Ryuo Kawabata, Kotaro Nagata, Yukari Nakamaru, Kentaro Yasui, Chihiro Morita and Noritaka Shigei</i></p> <p>Fatigue Behaviour of Reinforced and Un-Reinforced GGBS Based Concrete <i>Ravi Kumar C M, Ibrahim Khalil Ulla K and Eramma H</i></p> <p>An experimental study on the fatigue behaviour of un-reinforced GGBS based concrete <i>Ibrahim Khalil Ulla K, Ravi Kumar C M and Eramma H</i></p>
15:30 -15:45		Break
15:45 – 17:00	<b>Technical Session (T3)</b>	<p><b>Session Chair: Prof Ravikumar C M and Dr. Sneha Korpe</b></p> <p>Seismic risk assessment to estimate insurance premium for residential buildings in Guwahati, India <i>Indrani Gogoi and Bhargav D.B. Gogoi</i></p> <p>Assessment of Soil-Structure Interaction using Machine Learning, finite element model - A review <i>Deepa S, S.V.Venkatesh and I.R.Mithanthaya</i></p> <p>A Review of Vibration Isolation Efficiency Using Infilled Trenches: Numerical and Experimental Perspectives - <i>Sreya M V</i></p> <p>Seismic Data Extraction from Earthquake videos: An AI driven approach <i>Neeraja Nair,Unni Kartha G and Parvathy R</i></p> <p>Production of Echo Effect in Virtual Studio Environment using Analog Delay System <i>Mrinank Shekhar Gogoi</i></p>

**March 6, 2025 (Thursday) Lecture Halls Room 111**

11:40 – 13:00	<b>Technical Session (T4)</b>	<p><b>Session Chair: Dr Indrani Gogoi and Dr. Bo Causer</b></p> <p>Geochemical and Petrographic Characterization of Apatite: Implications for REE Enrichment and Resource Utilization – <i>Hirunika Manavi, Hafiz U. Rehman and Lalindra Ranaweera</i></p> <p>Prospects of gold mineralization in the Yuki gold mine, Oita prefecture: geo-information from petrological and geochemical aspects – <i>Hafiz U. REHMAN, Rena YAMADA and Hiroyuki ARIKAWA</i></p> <p>Accidents prediction model for selected two-lane rural highway as a surrogate measure of road safety <i>Raviraj H. Mulangi, Gangadhar Mahesh and Raghavendra S Sanganaikar</i></p> <p>Study on parking demand and its characteristics using structural equation modelling <i>Sumayya Naznin P H, Anila Cyril and Abhirami V</i></p> <p>Advancing Sustainable Railway Track Design Integrating Modern Technologies for Environmental Impact Reduction – <i>Premlatha K Naidu and Jagdish H Godihal</i></p> <p>A Comparative Study on Wave Overtopping Discharge for A Perforated and Non-Perforated Semicircular Breakwater - <i>Vishwanatha Mane, Manu, Subba Rao and A. Vittal Hegde</i></p>
13:00 – 14:00	<b>Lunch Break</b>	
14:00 – 15:30	<b>Technical Session (T5)</b>	<p><b>Session Chair: Prof Parvathy R and Dr. Takashi Kawakami</b></p> <p>Decision Support Information System for Academic Excellence: A New Frontier for Engineering Community in the Virtual Information world <i>Suresh Jange, Mallikarjun Angadi, Dundappa Amoji and Mallikarjun Vaddenkeri</i></p> <p>A Hybrid Model of Transformers and CNNs for Studying Long-Range Word Relationships in NLP Tasks <i>Faria Samreen</i></p> <p>Navigating the Future of Tourism: AI-Driven ChatGPT Trip Planner Acceptance with a Hybrid SEM-ANN and Necessary Condition Analysis – <i>Abhishek Talawar, Sheena S, Sreejith Alathur and Suresh P.V.</i></p>

		<p>MuZAC : Multilingual Zero-Shot Automated Video Captioning using Audio-Visual Modalities for Under-Resourced Languages - <i>Girija Jagannath, Sree Pragna Machupalli</i></p> <p>Harnessing Genetic Algorithms for Enhanced Reasoning: A Nature-Inspired Approach to Decision Making <i>Ashok A Itagi and Jagdish H Godihal</i></p> <p>Sustainable Smart Cities: What Lies Ahead - <i>Kavita J Godihal and Jagdish H Godihal</i></p>
15:30 - 15:45		Break
15:45 – 17:00	<b>Technical Session (T6)</b>	<p><b>Session Chair: Prof Shuichi Torii and Ms Hirunika Manavi</b></p> <p>Comparing the Accuracy of Models for Predicting the Wind Speed Focussed Approach for a Rooftop Mounted Micro Wind Turbine <i>Sathyabhama A, Ramakrishna N. Hegde and Ratan U. Gaonkar</i></p> <p>Comparative study of Corrosion inhibition efficiency of Naringin on Aluminium and AA 6063 alloy in 0.5 M HCl solution: Insights from Experimental and Quantum chemical studies <i>Divya Kumari and Reena kumari P D</i></p> <p>Influence of ground control points in aerial survey and ORI mapping <i>Shwetha A, Bibang Gwra Basumatary, Karthik M H and Nakul Ramanna Sanjeevaiah</i></p> <p>Application of response surface methodology for evaluating performance of tannery solid waste in biogas production – <i>Sneha Korpe, Susumu Nii, Shirish H Sonawane and P Venkateswara Rao</i></p>

**March 6, 2025 (Thursday) Lecture Halls Room 121**

11:40 – 13:00	<b>Technical Session (T7)</b>	<p><b>Session Chair: Mr Rajendra Kalbavi Rao and Mr Prashant Kurdekar</b></p> <p>Performance of recycled fine aggregate based concretes <i>Harshkumar V. Annigeri, Subhash C. Yaragal, Salim Ali, Afnan Khan, Ashish Kumar, Vishal Pratap Maurya and Aithala Panambur Harish</i></p> <p>Processing of agriculture waste: rice husk ash and sugarcane bagasse ash, as value added materials in concrete - a review: <i>Harshkumar V. Annigeri, Subhash C. Yaragal, and Bharath Jayaram</i></p> <p>Performance of recycled aggregate based pervious concretes <i>Javeed Akthar, Karthik M, Akash M. H, Subhash C. Yaragal, Harshkumar V. Annigeri and Shetty Jagadeep</i></p> <p>An experimental study on the performance of eco-friendly pervious concretes <i>Pavan Rathod, Vinodkumar, Ullas M Kuppinakeri, Subhash C. Yaragal, Harshkumar V. Annigeri and Krishna Rao Shivananda</i></p> <p>Numerical study on laminated elastomeric isolation bearings subjected to cyclic loading <i>Kanika Sharma, M H Prashanth, Pruthvi Raj S and Prashanth M V</i></p> <p>Effect of soil flexibility on strengthening schemes for OGS building frames <i>Deepa Sunil Mahalkari, Hemant Sonawadekar, Neha S N and Shetty Sanjith</i></p>
13:00 – 14:00	Lunch Break	
14:00 – 15:30	<b>Technical Session (T8)</b>	<p><b>Session Chair: Dr Deepa S and Prof Hafiz U. REHMAN</b></p> <p>Studies on treatment of phenolic wastewater from petrochemical industry using electrocoagulation technique - <i>Prashant Kurdekar and Lokeshappa B</i></p> <p>A sustainable approach to use construction and demolition waste (CDW) as fine aggregate in neo concretes <i>Manu P Hegde, Nandeesh Sreenivasappa, Pradeep C R and R Prabhakara</i></p> <p>Investigating the flexural performance of RCC beams strengthened with sustainable eco-friendly Sheep Wool FRP (SWFRP) using U-wrapping technique <i>Archana D. P., H. N. Jagannatha Reddy, R. Prabhakara, Hemalatha. K, H. P. Thanuja and Chethan Chandru</i></p>

		<p>Effective modelling of masonry infills for better performance of structure using pushover analysis <i>Lakshmikantha B A, Shobha L and R Prabhakara</i></p> <p>Consideration on the application of Physics-Informed Neural Networks to Unsaturated Seepage Analysis <i>Ryusei Fukunaga, Shinichi Ito and Kazunari Sako</i></p> <p>A study on bird call recognition of a rare species inhabiting Amami-Oshima island <i>Yusuke Uemura, Shinya Fukumoto, Masayuki Kashima, Mutsumi Watanabe, Shin Ugawa and Naoko Eimura</i></p>
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**Note:**

- 1) **The presentation time is 20 minutes for keynote lectures including discussion.**
- 2) **The presentation time is 12 minutes for technical papers (10 minutes of presentation + 2 minutes of discussion).**
- 3) **Laptop/computer will be made available in the presentation room for those who are bringing the presentation in a USB drive. The presenters are requested to upload their ppt before the start of their session.**