INTERNATIONAL CONFERENCE ON MECHANICAL ENGINEERING AND ENERGY TECHNOLOGIES
URJA 2021
Organized By
Department of Mechanical Engineering

Under the Aegis of

YUKTHI 2021
International Conference on Emerging Trends in Engineering
24th to 26th September 2021

Keynote Speakers

24th September 11:00 AM
DNA of Engineering Innovation
Dr. Swami Nathan Subramanian
Director of Innovation & Business Development,
The Asia Institute - Michigan State University, United States

25th September 09:30 AM
Solid Oxide Fuel Cell & Negative Emission Technologies
Prof. Dr. P V Aravind
Professor & Chair of Energy Conversion,
University of Groningen, Netherlands

26th September 09:30 AM
Atomistic and Experimental Determination of the Structural and Thermophysical Properties of the Accident Tolerant Fuel Materials
Dr. Linu Malakkal
Computational Material Scientist Post Doctoral Research Associate,
Idaho National Laboratory, United States

JOIN THE CONFERENCE!
Inauguration
24th September 09:30 AM
For details,
Visit our website
www.yukthi2021.online

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TEQIP Phase - II

GOVERNMENT ENGINEERING COLLEGE KOZHIKODE
Westhill PO, Kozhikode, Kerala, India - 673005
Phone: 04952383220, Fax: 04952383220
www.geckkd.ac.in
# YUKTHI-2021
## International Conference on Mechanical Engineering and Energy Technologies
### Schedule of the Conference

**24-09-2021**

<table>
<thead>
<tr>
<th>Time</th>
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</tr>
</thead>
<tbody>
<tr>
<td>09:30-10:30 AM</td>
<td>Inauguration</td>
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<tr>
<td>11:00-11:45 AM</td>
<td>Keynote: DNA of Engineering Innovation, Dr. Swami Nathan Subramanian, The Asia Institute - Michigan State University, United States</td>
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<tr>
<td>11:45-12:30 PM</td>
<td>Keynote: Emerging Trends in Nano Devices, Dr. Roy P P, IIT Gauhati</td>
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<tr>
<td>01:00-02:30 PM</td>
<td>Keynote: Issues and Challenges in Technical Education, Dr. Pratap Sinh K. Desai</td>
</tr>
<tr>
<td>02:30-03:30 PM</td>
<td>Keynote: Aviation Biofuels - Routes and Challenges, Dr. Suchithra T. G. University of Nottingham, Malaysia</td>
</tr>
<tr>
<td>03:00-04:30 PM</td>
<td>Keynote: Environmental Forensics, Dr. George K Varghese, NIT Calicut</td>
</tr>
</tbody>
</table>

**25-09-2021**

**Forenoon: Thermal Stream**

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<td>Dr. Pradeep Kammath: Asst. Prof., MED, GEC Thrissur</td>
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<td>Dr. Jithesh P K: Asst. Prof., MED, GEC Kozhikode</td>
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<tr>
<td>10:30-10:45 AM</td>
<td>Use of Alternate Refrigerants in Vortex Tubes for improved performance – a simulation approach</td>
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<tr>
<td>10:45-11:00 AM</td>
<td>Thermo-hydraulic analysis of air to water heat exchanger with turbulence enhancement</td>
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<tr>
<td>11:00-11:15 AM</td>
<td>Analysis of heat exchanger with PCM for thermal storage in buildings</td>
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<tr>
<td>11:15-11:30 AM</td>
<td>Theoretical Analysis of Atmospheric Water Generator using Thermoelectric Cooler</td>
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<tr>
<td>11:30-11:45 AM</td>
<td>Experimental Investigation on Heat transfer Enhancement in Micro-channel Heat sinks</td>
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<tr>
<td>11:45-12:00 PM</td>
<td>Exergy Analysis in a Mini-channel with Nanofluid</td>
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<tr>
<td>12:00-12:15 PM</td>
<td>Heat Transfer Augmentation in Double Heat Exchanger: A Review on Passive Methods</td>
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**Afternoon: Energy Stream**

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<tr>
<td>02:00-02:15 PM</td>
<td>Using vortex generators to improve the range of Electric Sport Utility Vehicles and increase their market viability</td>
</tr>
<tr>
<td>02:15-02:30 PM</td>
<td>Optimization of a Hybrid Solar-MED-OTEC System for freshwater and hydrogen production.</td>
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<tr>
<td>02:30-02:45 PM</td>
<td>Review on Performance Evaluation of Solar Photovoltaic Based Hybrid Drying systems</td>
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<tr>
<td>02:45-03:00 PM</td>
<td>Battery Thermal Management Systems based on Phase Change Materials for Electric Vehicle - A Review</td>
</tr>
<tr>
<td>03:00-03:15 PM</td>
<td>Performance Analysis of modified nozzle –diffuser augmented horizontal axis hydro-kinetic turbine</td>
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<tr>
<td>03:15-03:30 PM</td>
<td>Numerical Investigation on the Absorption Characteristics of Helmholtz Resonator Based Absorber with Neck Opening on the Wall</td>
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<td>03:30-03:45 PM</td>
<td>Self Sanitizing Toilet Module</td>
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**Forenoon: Material Science & Manufacturing Stream**

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<td>Dr. Hanas, Asst. Professor, NIT Calicut</td>
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<td>Dr. Sajith Babu C: Professor, MED, GEC Kozhikode</td>
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<td>10:30-10:45 AM</td>
<td>Effect of Layer Height on Impact Strength of Additively Manufactured Short Carbon Fiber Reinforced Composite</td>
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<td>Evaluation of the tribological and rheological properties of various vegetable oils as the base oil for bio-lubricant: A Preliminary study</td>
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<td>Feasibility analysis of 3D printing of a boat using carbon fibre composite</td>
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<td>Investigation of Tensile Strength and Biodegradability of Jute Fiber Reinforced Composites</td>
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<td>Study on the Microstructure and Mechanical Properties of AIS10Mg Parts Produced by the Selective Laser Melting (SLM) Additive Manufacturing Technology</td>
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<td>Design and extraction of Arrowroot (Curcuma angustifolia) starch by screw extruder: Preparation, Assembly and End product development</td>
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<td>Applying Six Sigma DMAIC Approach on Plastic Rotomolding Process</td>
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