PARALLEL TRACK: ENERGY ENGINEERING

Session I: Advances in Energy Resources and Technologies

Co-Chairs: Dr. Alan Finkel, President, ATSE, Australia
Mr. Pradeep Chaturvedi, Vice-President, World Environment Foundation, India

2.30 – 2.55 PM
Prof Dr. Frank Behrendt, Berlin Institute of Technology, Germany

EK1.1 Topic: Energy Scenarios for the interconnected electrical transport and heating sectors.

2.55 – 3.20 PM
Dr J Narayana Das, FNAE, Naval Physical & Oceanographic Laboratory, Cochin, India

EK1.2 Topic: Fuel Cell Technology for Defence Applications - Opportunities & Challenges

3.20 – 3.45 PM
Dr S Arunachalam, Jaypee Wind Engineering Application Centre, Guna, India

EK1.3 Topic: Wind Energy for Buildings and Transportation sectors

3.45 – 4.15 PM
TEA

4.15 – 4.40 PM
Dr Vaughan Beck, Australian Academy of Technological Sciences and Engineering, Australia

EK1.4 Topic: Unconventional Gas-Future Development Issues; An International and Interdisciplinary Perspective

4.40 – 5.05 PM
Prof. Rakesh Agrawal, FNAE, Purdue University, USA

EK1.5 Topic: Engineering a Sustainable Energy Future

5.05 – 5.30 PM
Dr S Venkata Mohan, CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, India

EK1.6 Topic: Waste to Biohydrogen: Addressing Sustainability with Environmental Biorefinery

5.30 – 6.00 PM
Interactions
# POSTER PRESENTATIONS BY YOUNG ENGINEERS

## ENERGY ENGINEERING

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<td>Dr Wei - Shan Chen etal., Wageningen University, The Netherlands</td>
<td>Mixed Culture Chain Elongation: A Novel Biotechnology for biochemical production from biomass Residual Streams</td>
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<td>2</td>
<td>Ms Augusta Goedhart, Allego, The Netherlands</td>
<td>Charging Plaza: A Future Proof Charging Solution</td>
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<td>3</td>
<td>Dr Akshat Tanksale, Senior Lecturer, Monash University, Australia</td>
<td>Bioenergy and Biorefinery: Advances and Applications</td>
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<td>4</td>
<td>Ms G Anusha, Harsha Nagar and S.Sridhar, CSIR-IICT, India</td>
<td>Sulfonated Polyethersulfone/ Torlon Blend Membrane Incorporated with Multi-walled Carbon Nanotubes for Microbial Fuel Cells</td>
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<td>5</td>
<td>Harsha Nagar, G. Anusha, VV Basava Rao and S Sridhar, CSIR-IICT, Hyderabad, India</td>
<td>Development of Sulfonated Polyethersulfone/ Matrimid Acid-Base Blend Membranes for Polymer Electrolyte Membrane and Direct Methanol Fuel Cells</td>
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<td>6</td>
<td>Ms. Dr. Ir. Merle De Kreuk, Netherlands</td>
<td>Increasing Efficiency of Sludge Digestion Processes - Which Organic Fractions To Tackle First?</td>
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<td>7</td>
<td>Dr. RV Koteswararao, University of Hyderabad India</td>
<td>Adaption of a Green Technology (Friction Stir Welding) to Join Fusion Energy Materials</td>
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<td>8</td>
<td>Dr. VVS Srikanth, University of Hyderabad, India</td>
<td>Towards Fabrication of Affordable Large Area Dye Sensitized Solar Cells</td>
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# PARALLEL TRACK: MOBILITY ENGINEERING

## Session I: Advances in Mobility Engineering

**Co-Chairs:** Prof. Ulrich Werner Suter, Swiss Academy of Engineering Sciences (SATW), Switzerland  
Mr. Jitendra Tyagi, Director, Delhi Metro, India

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<tr>
<th>Time</th>
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<th>Topic</th>
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| 2.30 – 2.55 PM | Dr. L. Noldus, Netherlands Academy of Technology and Innovation, Netherlands | **MK1.1**  
Smart Mobility: driver state estimation and advanced driver-vehicle interfaces. |
| 2.55 – 3.20 PM | Dr. Istvan Kralik, Hungarian Academy of Engineering, Hungary | **MK1.2**  
Mobility in Hungarian Engineering Society. |
| 3.20 – 3.45 PM | Dr Jochen Landes, TII India Pvt Ltd | **MK1.3**  
Modular Hydraulic Trailer Technology |
3.45 – 4.15 PM  Dr. Sirish Batchu, Mahindra & Mahindra, India
MK1.4  Topic: Electronics for Greener Mobility
4.15 – 4.40 PM  TEA

4.40 – 5.05 PM  Dr. Huapu Lu, Chinese Academy of Engineering, China
MK1.5  Topic: Current Situation and Future Prospect of China’s Transportation Development

5:05 - 5:20 PM  Dr. Pravesh Biyani, IIT Delhi, India
MY1.1  Topic: Big Data Informatics for Mobility
5:20 – 6:00 PM  Interactions

POSTER PRESENTATIONS BY YOUNG ENGINEERS MOBILITY ENGINEERING

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<td>1</td>
<td>Dr. N Velaga, IIT Bombay, India</td>
<td>Remote Sensing applications for Mobility Engineering</td>
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<td>2</td>
<td>Dr. Zsuzanna Bede, Hungarian Academy of Engineering, Hungary</td>
<td>Optimising Traffic Control for a minimisation of fuel consumptions or imission values</td>
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PARALLEL TRACK : HEALTHCARE ENGINEERING

Session I: Advances in Healthcare Engineering

Co-Chairs: Prof. Bruno Revellin Falcoz, NATF, France
Dr. Goutam Ghosh, Vice-President, Panacea Biotec, New Delhi, India

2.30 – 2:55 PM  Prof T. Ichiki, University of Tokyo, Japan
HK1.1  Topic: Nano diagnostic device for early cancer detection.

2.55 – 3.20 PM  Dr. Qimin Zhan, Chinese Academy of Engineering, China
HK1.2  Topic: Toward Cancer Precision Medicine

3.20 – 3.45 PM  Dr Ashutosh Sabharwal, Rice University, Houston, Texas
HK1.3  Topic: Scalable Medical Devices: Personal and Social

3.45 – 4.15 PM  TEA

4.15 – 4.40 PM  Dr. PK Roy, National Brain Research Centre, Gurgaon, India
HK1.4  Topic: Therapeutic Platform for Brain Injury across National-level Neuroimaging Grids
4.40 – 4:55 PM

Mr. Vijayarajan, Medical Innovation Accelerator, Bangalore, India

HY1.1 Topic: Advances in Healthcare Engineering

4:55 - 5:10 PM

Dr. Amrutur Bharadwaj, Indian Institute of Science, Bangalore, India

HY1.2 Topic: Remote Neonatal Monitoring and Intervention for Hypothermia

5:10 - 5:25 PM

Dr. Rohit Srivastava, Indian Institute of Technology Bombay, India

HY1.3 Topic: Point of care technologies for diagnostics and therapeutics.

5:25 – 6:10 PM

Interactions

POSTER PRESENTATIONS BY YOUNG ENGINEERS

HEALTHCARE ENGINEERING

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<td>1</td>
<td>Dr. Lakshmi Nair, USA</td>
<td>Spacial Presentation Of Growth Factors Using Enzymaticaly Crosslinked Injectable Gels And Following The Regenerative Process at The Cellular Level using Transgenic Animal Models</td>
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<td>2</td>
<td>Mr. Pavan Dadlani, Netherlands</td>
<td>Supporting the diagnosis of childhood pneumonia in low-resource settings.</td>
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<td>3</td>
<td>Dr. Subhas C Misra, IIT Kanpur, India</td>
<td>Adoption of Personalized Medicine: Towards Identifying Critical Changes</td>
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<td>4</td>
<td>Dr. Sumana, IICT, Hyderabad, India</td>
<td>Dynamic Modeling of Healthcare Systems</td>
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<td>5</td>
<td>Ms. Shilpa Dang, IIT Delhi, India</td>
<td>Assessing Assumptions of Multivariate Linear Regression Framework implemented for Directionality Analysis of fMRI</td>
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<td>6</td>
<td>Dr Jonathan Pillai, THSTI, Faridabad, India</td>
<td>BioScoop™ Biopsy Device</td>
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<td>7</td>
<td>Mr Rajiv Ramaswamy, NBRC, Manesar, India</td>
<td>Biophysics-based Markers surpassing Biochemical markers in Screening of Ageing-related Neurodegeneration and Cognitive impairment</td>
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<td>8</td>
<td>Dr B Madhan, CLRI, Chennai, India</td>
<td>Silicified Collagenous Scaffolds: Smart Materials for Soft Tissue Engineering Applications</td>
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6:30-7:15 PM

Pre-Dinner Talk

Chair: Dr. Sanak Mishra, Vice-President, INAE

Prof Hideaki Koizumi, Engineering Academy of Japan

Topic: Ethics-Based-Engineering: Importance of the Academy’s Initiative towards Human Security and Well-Being