5th Industry-Academia Conclave
Indian Institute of Technology Indore
Program Schedule: September 06, 2017

08:30 hrs - 09:55 hrs: Registration and breakfast for delegates, Room 201, Pod 1B

10:00 hrs - 11:50 hrs: Inaugural Session

10:00 hrs - 10:05 hrs: Introduction to IAC 2017: Dr. Vimal Bhatia, Convener, Industry Relations Team, IIT Indore

10:05 hrs - 10:15 hrs: Welcome address by Professor Pradeep Mathur, Director, IIT Indore

10:15 hrs - 11:00 hrs: Keynote address by Mr. Gurjit Singh, IFS, Chief Guest, Former Indian Ambassador to Germany.
Title: Industry - Academia Relationship and Challenges

11:00 hrs - 11:15 hrs: Invited talk by Dr. Debojit Chakrabarty, Global Fragrance Innovation Technology and Applications, S.H. Kelkar and Company Ltd.
Title: Industry Academia Partnerships: Beyond Lip Service

11:15 hrs - 11:30 hrs: Invited talk by Dr. Kumar B. Salui, ANSYS, India.
Title: Simulation - Recent Trend

11:30 hrs - 11:45 hrs: Invited talk by Mr. Sandeep Saxena, TCS, Mumbai, India.
Title: Co-create and collaborate for a digital future.

11:45 hrs - 11:50 hrs: Vote of thanks: Dr. Mukesh Kumar

11:50 hrs - 13:30 hrs: Visit to state-of-the-art facilities of IIT Indore: Dr. C. Venkatesh

13:30 hrs - 14:30 hrs: Lunch, Ground floor of School Building

13:30 hrs - 18:00 hrs: Poster Session, Start-up & Research Pavilions, Demonstrations in School Building: Dr. I.A. Palani, Dr. P.K. Upadhyay and Dr. G. Banda
Details attached

14:30 hrs - 17:30 hrs: Bridging the Gap Session: Ideas, Expertise and Collaboration, Mr. Avadhoot Sinkar, Room 308-309, School Building

14:30 hrs - 14:40 hrs: Dr. Apoorva Puranik, Mahatma Gandhi Memorial Medical College, Indore
Title (Tentative): Developing and designing tools for assessment and rehabilitation of persons disabled in speech and communication due to brain stroke and brain injury

14:40 hrs - 14:50 hrs: Mr. Sourov S. Bose, Acuminous Software Pvt. Ltd., Gurugram
Title: The past, present and future roadmap (Artificial Intelligence and IoT)

14:50 hrs - 15:00 hrs: Dr. Aruna Tiwari, IIT Indore
Title: Design of a quantum inspired fuzzy based neural network and its hardware realization

15:00 hrs - 15:10 hrs: Dr. Kapil Ahuja, IIT Indore
Title: Deep learning on GPUs

15:10 hrs - 15:20 hrs: Dr. Bodhisatwa Mazumdar, IIT Indore
Title: Glitch modeling of FPGA device primitives for side-channel
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Mr. Avadhoot Sinkar, Room 308-309, School Building (Continued)

15:20 hrs - 15:30 hrs: Mr. Sandeep Saxena, TCS, Mumbai
Title: Research and innovations at the intersection

15:30 hrs - 15:40 hrs: Dr. Vimal Bhatia, IIT Indore
Title: Solution for future communication and signal processing problems

15:40 hrs - 15:50 hrs: Dr. Nandkishore Yadav, IIT Indore
Title: Device/Circuit co-design issues in memory

15:50 hrs - 16:00 hrs: Mr. Dharmesh Bhutani, Ind-Sphinx Precision Ltd., Himachal Pradesh

16:00 hrs - 16:10 hrs: Dr. I.A. Palani, IIT Indore
Title: Laser based Micro-nano manufacturing and surface processing

16:10 hrs - 16:20 hrs: Dr. Dr. Subba Reddy Daggumati, IIT Indore
Title: Fatigue damage analysis of GFRP & CFRP laminates under variable amplitude loads

16:20 hrs - 16:30 hrs: Dr. Ajay Agarwal, CSIR-CEERI, Pilani
Title: Micro Nano-technologies for sensors

16:30 hrs - 16:40 hrs: Dr. Shaibal Mukherjee, IIT Indore
Title: Advanced devices for environment monitoring, energy and space applications

16:40 hrs - 16:50 hrs: Dr. Kumar B. Salui, ANSYS, India
Title: Industry-Academia Collaboration in Simulation

16:50 hrs - 17:00 hrs: Ms. Kavita Gupta, IIT Indore
Title: Synthesis of FDCA as an environmental benign raw material for the manufacturing of biomass based plastic materials

17:00 hrs - 17:10 hrs: Dr. Nishikant Ghadge, Navin Fluorine Int. Ltd., Dewas

17:10 hrs - 17:20 hrs: Mr. Sunil Nair, PerkinElmer, Thane
Title: PerkinElmer and its solutions

17:20 hrs - 17:30 hrs: Mr. K. Ganapathy Subramaniam, Janatics India Pvt. Ltd., Coimbatore
Title (Tentative): Centre of Excellence in Pneumatics and Automation

17:30 hrs - 17:50 hrs: High Tea, Ground floor of School Building

17:50 hrs - 18:40 hrs: Panel Discussion in Room 308-309, School Building, Dr. Abhirup Datta
Details of Poster Session, Start-up & Research Pavilions, Demonstrations in School Building

**Start-up presentations/demonstrations:**
JAWAT CO: Law based Start-up, Mr. A. Agarwal
Eco-paper Products, High Load Bearing Bag, Mr. D. Barasker and Mr. A. Duriwala
3D Printing Technology, Mr. D. Bora
Chota Hospital Pvt. Ltd., Mr. A. Arora

**Product/Prototype demonstrations from IIT Indore:**
Smart Cervical Collar, Ms. M. Phulwalkar, Mr. A. Govil, Mr. Karthick. S
Smart Aquatic bot, Mr. A. Shewetkar, Mr. V. Jain, Mr. S. Mittal
Intelligent Composite Flapper, Mr. S.M. Prabu, Mr. V. Choyal, Mr. E. Ahmed, Mr. S. Jain Mr. A. Kumar
Development of PLC control based Pneumatic Stewart platform, Mr. T. Nath, Karthick S
Heat Engine Design, Mr. T. Nath, Mr. Akash K., Mr. A. Laharia
SMA based Transformer Oil Sensor, Mr. Akash K., Mr. P. Gaur, Mr. Chandan K, Dr. R. Disawal
Design and Fabrication of Auxetic foam for Defence Applications, Mr. M.V.C. Reddy, Mr. R. Sunil, Ms. M. Phulwalkar, Mr. S. Bhirodkar
SMA Actuated Solar Tracker, Mr. I. Meshram, Mr. R. Rathore, Mr. A. Shukla
A Flexible Manufacturing System with 3D Printing Machines, Mr. A. Yadav, Mr. K. Rajput
Social Network of Machines, Mr. K. Agrawal, M. Carpenter, Mr. H. Gupta, Mr. J. Jain
Demonstration of IEEE 802.22 on NI USRP, Mr. A. Bishnu
Visible Light Communication, Mr. S.K. Das
Home Automation, Mr. S.K. Das

**Poster presentations:**
Clustering and Sampling for Plant Genome Data, Mr. A. Shastri, Dr. K. Ahuja
Parallel FPGA Routing using Subgradient Algorithm and Steiner Trees, Mr. R. Agrawal, Dr. K. Ahuja
Non-invertible Cancelable Fingerprint Template Generation based on ridge features, Mr. R. Dwivedi, Dr. S. Dey
Quality Adaptive Enhancement for Fingerprint images, Mr. R. P. Sharma, Dr. S. Dey
Packet Payload Analysis for Attack Detection and Network Traffic Classification, Mr. M. Swarnkar, Dr. N. Hubballi
Slow Rate Denial of Service Attacks against HTTP/2, Mr. N. Tripathi, Dr. N. Hubballi
Image Quality Assessment and Enhancement, Mr. Piyush Joshi, Dr. Surya Prakash
Human Recognition using 3D EAR, Mr. I. Iyappan, Dr. S. Prakash
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Poster presentations:
Integrating Physical Level Design and High Level Synthesis for Simultaneous Multi-cycle Transient and Multiple Transient Fault Resiliency of Application Specific Data-path Processors, Mr. D. Kachave, Mr. D. Roy, Dr. A. Sengupta

Service Oriented System, Mr. G.P. Tiwari, Dr. A. Srivastava

A Fast Outlier Detection Method in Non-stationary Environment, Mr. C. Gautam, Dr. A. Tiwari

Change Mining of Evolving Systems, Mr. A. Chaturvedi, Dr. A. Tiwari

Automatic Saline Level and Impurity Indicator Using Fringe Projection Profilometry and Fourier Fringe Analysis, Mr. P. Thakur

Potential Roles of Bacteria and Viruses in Disease Pathogenesis and Water Quality Monitoring, Mr. S. Singh, Ms. S. Jakhmola, Ms. C. Sonkar, Ms. D. Tiwari, Mr. O. Indari, Dr. H.C. Jha

Negative Bias Temperature Instability Effects on Computing Hardware, Mr. S.H. Panugothu, Mr. S. Neema, Dr. A. Sengupta

Tower Climbing Hexapod with SMA Actuated Suction Grippers, Mr. A. Sinkar, Mr. C. Mehta, Mr. A. Pandey, Mr. Karthick S

Molecular Recognitions of Drugs by Receptor Proteins via Multiscale Simulation Methods, Ms. N.A. Jonniya, Ms. R. Roy, Mr. MD Fulbabu Sk, Dr. P. Kar

Integration of Biodiesel Production with Wastewater Treatment using Cyanobacterial Species, Dr. K. Bala

Indian Regional Navigation Satellites System (IRNSS) Signal Receiver Error Identification, Mr. A. Althaf

Acquisition and Tracking of Ground Targets with Agile Satellites using Control Moment Gyros, Mr. A. Mony

Nano Photonic Devices for On-chip Optical Guidance and Control, Mr. L. Singh, Ms. S. Tidke

Navigation and Guidance of Airborne Precision Munitions to Intercept Ground targets with Infrared Sensors, Ms. Sreeja, S.

Attitude Dynamics and Control of Oceansat-2 with Offset Spinning Radar and Attitude Determination with GPS, Ms. B. Panda

A Social Network for Machines - Realizing INDUSTRY 4.0, Mr. S. Kumar, Mr. M. Carpenter, Mr. B. Purohit, Mr. V. Pandahare, Dr. B.K. Lad

Machine Tool Prognostics and Smart Manufacturing, Mr. A.K. Jain, Dr. B.K. Lad

Transport Phenomena in Porous Media and its Biomedical Applications, Mr. A. Kulkarni

Flow and Heat Transfer from Porous Bluff Bodies using LBM, Mr. Vijay Babu T R

Optical Diagnostics in Internal Combustion Engines, Mr. A. Kulkarni

Investigation of Rewetting during Round Water Jet Impingement on Bottom Hot Surface, Mr. A. Sharma

Shape Memory Alloy Based Micro-actuators for Micro-devices and Robotic systems, Mr. Akash K, Mr. T. Nath, Mr. Karthick S., Dr. I.A. Palani
Details of Poster Session, Start-up & Research Pavilions, Demonstrations in School Building

**Poster presentations:**
- Boiling Heat Transfer Characteristics of Smooth and Enhanced Surfaces, Mr. V. Nirgude
- Thermal Management of Electric Vehicle Battery Modules with Phase Change Materials, Mr. R. Kothari
- Micro-Plasma Transferred Arc Deposition Process for ALM Applications of Metallic Materials, Mr. M.S. Sawant, Mr. S.H. Nikam, Mr. P. Kumar
- Laser Based Micro and Nano Processing for Functional Device Development, Mr. A. Shukla, Ms. N. Patra, Dr. I.A. Palani, Dr. V. Singh, Dr. M. Anabarasu