

A Report on
“2nd International Conference on Emerging trends in Manufacturing, Engines and Modelling”
(ICEMEM -2019)

23rd-24th December, 2019

SVKM's NMIMS, Mukesh Patel School of Technology Management and Engineering, Shirpur Campus proudly hosted the second “International Conference on Emerging trends in Manufacturing, Engines and Modelling” from 23rd -24th December, 2019. It was jointly organized by the Department of Mechanical Engineering, MPSTME Shirpur Campus and Mumbai. One of the features of the conference is the fact that all the registered papers is going to be published in one of the three Scopus-indexed journals namely Materials Today Proceedings- Elsevier, IOP Conference Proceedings: Materials Science and Engineering and Journal of Advanced Research in Fluid Mechanics and Thermal Sciences after blind peer review. The advisory committee had 19 advisory members from various parts of the world. While 50 reviewers were shortlisted for external review of manuscripts.

Day 1:

Inaugural function:

The inaugural function of the conference was enlightened by the august presence of **Mr. Ashutosh Pandey** - MD and CEO, Mahindra First Choice Wheels as the Chief Guest, **Dr. K.B. Patil** - Director of SVKM's NMIMS, Dhule Campus as the Guest of Honour, **Dr. R S Gaud** - Director MPTP Shirpur Campus, **Dr. Nikhlesh Kumar Sharma** - Director (Engineering) & Chairman ICEMEM 2019, **Dr. K. K. Gupta** Co-Chairman ICEMEM 2019, **Dr. Gowri Sankara Rao** - Dean(SAST) , **Dr Narayan Chandak** - Associate Dean, **Dr Basant Kumar Mohanty** Associate Dean (Research), **Dr Ashwini Deshpande** - Associate Dean (SPTM), **Shri Rahul Dande** - Chief Accountant and Administration, **Dr Rakesh Choudhari** - Head (Mechanical), **Shri Rajeev Dalal** - Deputy Registrar, All HOD's, Faculty members and more than 100 participants.

The inaugural function commenced with the customary felicitation of the guests followed by the Saraswati Vandana. Dr. Nikhlesh Kumar Sharma, Director (Engineering Programs), MPSTME presented the welcome note to the guests, invited speakers, delegates and the participants. Dr. K.K. Gupta - Co-Chairman of the Conference briefed about the theme of the conference and presented the salient features of the event and expectations from them. Dr. R.S Gaud, Director, MPTP, Shirpur Campus introduced the audience about the legacy of SVKM's NMIMS and the laurels brought by the campus at various levels. His speech was followed by

the address of **Dr. K.B. Patil**. He had been the Vice-Chancellor of North Maharashtra University, Jalgaon. The audience were fortunate to gain his insights on engineering education and employability in general which represented his vast experience in the field of education and academic administration. The last but the most awaited address was delivered by **Mr. Ashutosh Pandey** who had graciously accepted the invitation of the organizing committee to be the Chief Guest of the inaugural function. A civil engineering graduate with an MBA from FMS, Delhi, Mr. Pandey pointed out the need for developing multiple skills. He highlighted the current trends in the job market and discussed about the capabilities sought after by the employers. An important take-away from his address is the fact that technology environment is constantly getting disrupted and therefore everyone has to be on their toes to withstand the corresponding challenges. The address was truly captivating and thought provoking. The ceremony culminated with the vote of thanks proposed by Prof. M. Ramachandran, Convenor- ICEMEM 2019 followed by the tea break. The event was compered by Prof. Praveen Kumar Loharkar.

Key Note Sessions (Day 1):

The keynote sessions on the first day were divided into two segments. The first segment was after the tea break, which began with the kenote speech by **Dr. G. Saravana Kumar**, Professor at Department of Engineering Design, IIT Madras. A Ph. D. in Mechanical Engineering from IIT Kanpur, Dr. G. Saravana Kumar delivered a talk on Design for Additive Manufacturing and provided a lot of insights into his current research with case studies involving biomedical applications, construction of homes through additive manufacturing technology etc. The talk was knowledge filled and well received by the audience. The second invited talk in this segment was delivered by **Dr. Santosh K. Sahu**, Professor, Department of Mechanical Engineering, Indian Institute of Technology, Indore. He has received his Master's (2004) and PhD (2009) degrees from Indian Institute of Technology Bombay and Indian Institute of Technology Kharagpur India, respectively. His talk included a presentation on a research work dealing with heat transfer enhancement and pool boiling heat transfer. Quite a few queries were raised after the expert talk which was amicably resolved by the expert. The talk was followed by the lunch. The post lunch segment started with the keynote session by the international speaker, **Ts Dr. Sharizwal Ahmad Sobri**, Researcher, Faculty of Bioengineering & Technology, Universiti Malyasia Kelantan, Malaysia. Dr. Sharizal does research in Manufacturing Systems Engineering Technology, Wood Science & Engineering, Advanced Machining - Lasers, Sequential Machining, Sustainable Manufacturing and Manufacturing/Technology Management. His research talk was on the delamination factor formula developed by him which is an important consideration in Laser drilling of micro holes. The last but not the least

talk of the day was delivered by **Dr. Pradeep Dixit** from IIT Bombay. Dr. Dixit is an Assistant Professor in the Department of Mechanical Engineering at IIT Bombay. He has been Postdoctoral fellow at Georgia-Tech University from 2008-09 and a Senior researcher, VTT Technical Research, Center of Finland 2009-2015. A Ph.D from reputed Nanyang Technological University, Singapore, Dr. Dixit addressed the audience on his research on machining micro-channels especially using electrochemical discharge machining. He discussed the various fundamentals of the process and subsequently pointed out the factors that affect the process including the surface finish. The talk culminated with active question answer session and then the audience dispersed for the tea break.

Plenary Sessions (Day 1):

Around 103 manuscripts were received. Out of which, 86 papers were chosen for presentation after peer review process. These were divided into six plenary sessions.

The plenary sessions I, II and III were conducted post the tea break in the three different seminar halls namely Seminar Hall- I, II and III respectively where participants presented their research work. The sessions were chaired by Dr, Tanmay Mukhopadhyay, IIT Kanpur, Dr. Vinod Pare, SGSITS Indore, Dr. Waghmare, IIT Bombay.

Day 2:

Plenary Sessions (Day 2):

The second day began early with the remaining plenary sessions IV, V and VI. These were chaired by Dr. Sharizwal Ahmad Sobri, Universiti Malaysia Kelantan, Dr. Manoj Chouksey and Dr. Sudhir Tiwari from SGSITS Indore.

Key Note Sessions (Day 2):

The sessions were followed by the morning Tea break.

Post tea session began with the first keynote address for the Day-Two by **Prof. Sivakumar Manickam**. Professor Sivakumar Manickam is a Chemical Engineer, specializing in process engineering of nanomaterials especially nano-pharmaceuticals. Presently he is working with University of Nottingham, Malaysia campus and his research group concentrates on the process development of cavitation based reactors towards technologically important nanomaterials. Through his research talk, he was able to captivate the audience by demonstrating the use of cavitation, an undesired mechanical engineering phenomenon, in micro-processing of materials. The talk was quite interesting and insightful. It was followed by a tea break.

Second expert talk of the Day-Two was delivered by **Dr. S. Kanagraj**, from IIT Guwahati. Dr. Kanagraj received his Ph.D degree from Indian Institute of Technology Kharagpur in 2004. He

did his post-doctorate at University of Aveiro, Portugal. His research is primarily focussed on biomedical devices, biomaterials, assistive technology devices, prosthesis and orthosis, and materials characterization. The next talk in this series was presented by **Dr. I.A. Palani**, Associate Professor and Head, Department of Mechanical Engineering from IIT Indore. His areas of interest include smart materials and structures, laser assisted micro-manufacturing, Mechatronics systems design and soft robotics, etc. Through his talk, Dr. Palani demonstrated the working of MEMS devices and their applications. The last address before the lunch was delivered by **Dr. Gaurav Mani Khanal**. Dr. Khanal is a researcher from an Italian University. He currently works at the Department of Electronics Engineering, University of Rome Tor Vergata. His talk was based on his current project titled, 'Hardware design of memristor-based Spiking Neural Networks'. The topic of the talk was slightly different from the core theme but was still able to capture the interest of the audience. It was followed by the much deserved lunch break.

Post lunch segment was divided into two halls. In one hall, **Dr. Tanmoy Mukhopadhyay** who is currently working as an Assistant Professor at the Aerospace Engineering Department of IIT Kanpur presented his address on numerical modelling. Dr. Tanmoy Mukhopadhyay was a postdoctoral researcher at the Engineering Science Department of the University of Oxford, UK. He completed his PhD from the College of Engineering of Swansea University, UK. His talk was quite impressive and was mainly focussed on modelling theme of the conference.

Simultaneously, Skype presentations were delivered by **Dr. Nilkantha Paudel** from Gran Sasso Science Institute, Italy. He is expert in field of data structures and software design. The topic of his talk was based on Internet Of Things and its utility in various applications including mechanical engineering design. The subsequent Skype presentation was delivered by **Dr. Yogendra Mishra**. - Professor in Nanomaterials, Mads Clausen Institute, NanoSYD, University of Southern Denmark, Denmark. He has been the Group Leader @ Functional Nanomaterials, Institute for Materials Science, Kiel University, Germany from 2009-2011, Alexander von Humboldt Fellow @ Functional Nanomaterials, Institute for Materials Science, Kiel University, Germany from 2003-2008. His topic of the talk was on the nanotechnology and relevant applications. The session was followed by high tea.

All the expert talks were quite engaging and knowledge filled. The participants were actively involved and appreciative of the quality of the expert sessions delivered.

Valedictory Function:

The final event of the day i.e., valedictory function was held after the tea break.

Dr. R.S. Gaud, Director, SVKM's NMIMS MPTP Shirpur Campus, Dr. Nikhlesh Kumar Sharma, Director (Engineering Programs), MPSTME, Shirpur Campus, Prof. Sivakumar Manickam, University of Nottingham, Malaysia, Dr. Sharizal Ahmed, Universiti Malaysia, Dr. Kanagraj, IIT Guwahati and Dr. Tanmoy Mukhopadhyay, IIT Kanpur were called on to the dais to do the honours. The conference review was presented by Prof. Vishal Fegade which was followed by certificate distribution to the participants and best paper awardees. The vote of thanks was offered by Dr. Rakesh Chaudhari, Head of the Department, Mechanical Engineering Shirpur Campus.





