

**A Report
Of
1st International Conference on Automation in Industries**

Host:

**Om Engineering College, Junagadh
Space Society Of Mechanical Engineers, Ahmedabad**

Chief Guest:

Shri K V Govinda (Ex - Deputy Director, ISAC/ISRO Bangalore)

Guests of Honor:

Dr. Chandan Chatterjee (Director, CED)

Shri A.C.Mathur (President SSME, Division Head, SAC-ISRO)

Shri Milind Undale (Scientist, ISAC/ISRO Bangalore)

Dr N K Dhamsaniya (Registrar, Junagadh Agriculture University)

Dr. N K Gontiya (Dean, Junagadh Agriculture University)

Shri P R Kadiwar (Trustee, Om Engineering College, Junagadh)

Prof. C N Jasani (Director, Om Engineering College, Junagadh)

Organized & Managed By:

Prof. B. M. Garala (Chairman ICAI, Head, MED, Om Engineering College, Junagadh)

Shri C P Dewan (Co-Chairman ICAI, Group Director, SAC/ISRO Ahmedabad)

Prof A.G.Makati (Organizing Secretary ICAI, Asst. Prof MED, OEC, Junagadh)

Shri. Amit Agrawal (Joint Secretary ICAI, Scientist, SAC/ISRO Ahmedabad)

Date: 5th & 6th April, 2016

Time: 09:00am to 5:00pm

**Venue: Seminar Hall
Om Engineering College, Junagadh**

About 1st International Conference On Automation In Industries

With the pressing need for increased productivity and delivery of end products with consistent quality, industries are focusing more and more to computer-based automation. At the present time, most of industrial automation manufacturing is carried out by special purpose machines, designed to perform specific functions in a manufacturing process. The inflexibility and generally high cost of these machines often referred to as hard automation systems, have led to a broad-based interest in the use of robots capable of performing a variety of manufacturing functions in a more flexible working environment and at lower production costs.

Conference aim is to gather the researcher's, academicians, scientists and industrial personal from the field of industrial automation community and to create an approach towards global exchange of information on technological advances, new scientific innovations and the effectiveness of various regulatory programs towards industrial automation. This conference will share and deliberate on the latest research and innovative technologies and tool employed by researchers and technical expert from academics and industries of world.

So with great motive to provide global platform of automation to academicians, scientists and industrial personal Om Engineering College and Space Society of Mechanical Engineers organized 1st International Conference on Automation In Industries dated on 5th & 6th April 2016 sponsored by Institute of Engineers India, Gujarat Council on Science and technology, Khodiyar CAD centre Pvt. Ltd, CADD Centre, Tulsi Industries, Silver Engineering Co and FARO Technologies Pvt. Ltd.

About Om Engineering College

Om Engineering College, Junagadh has been founded with sole intent of providing innovative & contemporary education in Gujarat based on global platform ultimately leading to progress and fulfillment. Its aim is to make and achieve an engineering & technology excellence and to improve the quality of technical education for the technical society. Appreciating the need of present scenario, the role of an educator has become pivotal and attempted to match with raised standard to enable students to contribute for society.

It is providing career oriented education to the students to equip them with requisite, qualification & training. This will enable them to take up gainful employment or start their own enterprise and become self efficient. It has specially designed campus with spacious building providing an adequate infrastructural facility which is set in beautiful natural surroundings. It is landscaped with enlivened architecture, creating an atmosphere conducive to learning. The College offers the syllabus of

Gujarat Technological University to meet growing demand for qualified engineers in the various technical fields. It has trained, competent and highly dedicated faculty to impart theoretical as well as practical exposures to the students, regular involvement of experts outside faculty from reputed institutions and organizations help in improving quality and gives wider exposure to the students

About Space Society Of Mechanical Engineers

The Space Society of Mechanical Engineers (SSME) came into existence on April 6, 1988 at Space Applications Centre, ISRO, Ahmedabad. It is a registered society under Govt. of Gujarat. The basic aim of the Society is to promote the awareness about technological advancements in the field of Space Mechanical & allied engineering. The SSME organizes various technical lectures, demos and seminars on various advanced topics in SAC campus and at other institutions in collaboration with research organizations, academic institutes and leading industries for the up gradation of technical knowledge and value addition of its members, Engineering colleges faculty members & students, professional working in industries and R&D institutions.

Conference Tracks

Aeronautical Engineering
Automobile Engineering
Computer Engineering
Electrical Engineering
Electronics Engineering
Instrument & Control engineering
Mechanical Engineering
Mechatronics Engineering
Production Engineering
Robotics Engineering

There were 182 authors who submitted 94 papers out of which 70 were invited for presentation and these papers were selected for publication. Total 70 Research papers were presented during the conference, out of which 2 papers were from foreign delegates.

Large number of researchers and participants attended the conference to interact with eminent speakers from various reputed organizations.

Highlights of 5th April 2016

Registration

The day started with the formal registration of the participants. All delegates registered themselves and collected registration kits to attend the conference. Prof. Pankaj Gajera and Mr. D M Fataniya Faculty of Mechanical Department helped them in completing the entire registration process. Participants were delighted by the hospitality received at Om Engineering College, Junagadh



Inaugural Function

Om Engineering College has set up a golden milestone combining two practical fields like science and Engineering and arranged a 1st international conference on Automation in Industries first time in a Saurashtra region with collaboration with Space Society of Mechanical Engineers with the immense help of MECHANICAL DEPARTMENT of Om Engineering College on 5th and 6th April 2016 at seminar hall.

The seminar was inaugurated by welcoming the Chief Guest as well as invited guest of honors on Dias by Prof I M Khan And Shri Amit Agrawal Give brief Introduction of all Dignitaries to all attendees . Om Engineering College offered a warm welcome to all dignitaries and participants.

Dignitaries On Dias



Dignitaries who adorned the event with their valuable presence and views were (from right to left) Prof. B M garala (Chairman of ICAI and Head, Department of mechanical Engineering, OEC), Prof. C N Jasani (Director, Om Engineering College, Junagadh), Shri C P Dewan (Group Director, Scientist (SAC/ISRO), Dr Chandan Chatterjee (Director, CED), Dr N K Dhamsaniya (Registrar,

Junagadh Agriculture University) Shri K V Govinda (Bramha prakash Scientist and Ex – Deputy Director ISAC Bangalore) Shri A C Mathur (President SSME, Group Head SAC/ISRO), Shri Milind Undale (Scientist ISAC/ISRO Bangalore), Shri Prashant Kadiwar (Trustee, Om Engineering College Junagadh)

Other invited Guest and speakers like Shri Nimesh Patel (Scientist SAC/ISRO), Shri Pradip Ajudiya (Regional Manager Sales, SIMENS Pvt. Ltd) Shri Susul Arya (Regional Manager Sales, FARO Technologies Pvt Ltd.) Dr. Poolan Vivekananda Shanmuganathan (Prof. VIT University, Vellore), Dr. M Varaprasada Rao (Dean Godavari Institute Of Technology, Visakhapatnam) Shri. Vijay Zala (Head R&D Jyoti Automation Pvt.Ltd) Mr Anand Savaliya (General manager Silver Engineering Co.) were rendering his expertise knowledge to all attendees during 2 days of conference.

Welcoming dignitaries at Om Engineering College

According to Indian tradition we consider our guest as equivalent as God and Om Engineering College had tradition to welcome all the guest by book the symbol of knowledge

Prof A G Makati, Prof H H Gajera, Shri Amit Agrawal, Prof M M Baraiya, Prof H K Gajera, Prof H V Paghdar, Prof H V Domadiya, Shri R M Shah, Shri H B Ramani and Shri V M Shah welcomed the esteem guests





Unveiling of conference proceeding

Conference proceeding has been unveiling by all dais members in which 70 selected research articles by ISRO Editorial board were published having an ISBN NO – 978-93-85016-99-8. All selected papers are represent the theme of conference “Automation” In Different field of engineering areas.



Inaugural address by Shri. K V Govinda (Bramha- Prakash Scientist / Ex - Deputy Director ISAC/ISRO Bangalore)



Inaugurating Speech by Shri. K V Govinda Bramha Prakash Scientist and Ex Dy. Director ISAC/ISRO Bangalore sir has inaugurated the session with his speech to acknowledge the attendees with the history of ISRO. HE has elaborated the various activities and missions which already achieved and on which missions are going to be completed in upcoming days.

Shri K V Govinda sir also Shared his Knowledge of Automation which is used in ISRO with all participants and said that “Automation is a natural phenomenon. This is what we have to learn from Nature” and conclude that Automation is required to get higher precision and to provide grate comfort to human life and motivate all the participants to create interest and open up new avenues in the thinking direction on automation.



Key Note Speech by Shri A C Mathur (President SSME, Group Head SAC/ISRO Ahmedabad) and Shri C P Dewan (Co-Chairman ICAI, Group Director SAC/ISRO Ahmedabad)



Shri C P Diwan (Chairman of ICAI and Group Director ISAC/ISRO) delivered his speech on automation in industries and Shri A C Mathur (President SSME, Group Head SAC/ISRO

Ahmedabad) started his presentation with the topic “INTRODUCTION OF SSME and its working”. In his topic he covered the foundation and development of SSME, and its member and various posts offered to them. He also informed about the different departments like mechanical, physics, electronics, civil, metallurgy, structural etc. He also gave information about the rules of membership of SSME. He also highlighted the He discussed about constitution, salient features and research activities of SSME which publish Journal and news bulletins, seminars, lectures and expert talks. The journals of Mechanical Engineering published by SSME are read widespread and are prepared by some of the branches of IIT.As the SSME organizes seminars, workshops, Demos and also publishes journals and popular lectures.

Guest Address speech by Dr. Chandan Chatterjee (Director, CED)



Dr. Chandan Chatterjee, Director–Centre for Entrepreneurship Development, Government of Gujarat, Gandhinagar, said “Now business has global perspective. Today what is there will change tomorrow. Sustainability and Automation is the major part of the process. So we are talking about innovation in automation. We have the largest market & the largest number of working class people.

Only missing part is technology. Until we empower ourselves with technology with automation, we cannot progress. This is required in knowledge based economy.”

Guest Address speech by Dr N K Dhamsaniya (Registrar, Junagadh Agriculture University)



Dr N K Dhamsaniya (Registrar, Junagadh Agriculture University) shared his view on automation and conclude that “ automation is essential part in each and every engineering field now in a days to makes process easier and effective so all technical person of all the field must be familiar with use of Automation in their particular field or try to upgrade their work domain with higher degree of automation.

Guest Address speech by Dr. N K Gontiya (Dean, Junagadh Agriculture University)

Dr. N K Gontiya (Dean, Junagadh Agriculture University) shared his view on “ How Automation is use in Agriculture” he also share a one case study on which research is going on at Junagadh Agriculture University in which sensors are used to monitor the moisture contain in air and if moisture is decrease in atmosphere then showers are automatically started to maintain the moisture

by which they increase the life of crop. He also shared the idea of automation which can be used for agriculture purpose which lead India towards E Farming.



After the guest speech of all the dignitaries Shri Amit Agrawal (joint Secretary of ICAI, and senior Scientist of SAC / ISRO) gave vote of thanks. He expressed thanks to all the eminent speakers and participants and dignitaries who accepted invitation and graced inaugural session and become a part of part of 1st international conference of Automation In Industries jointly organized by Om Engineering College and Space society of Mechanical Engineers.

Inaugural of Exhibition

During 1st international conference of Automation In Industries Exhibition of automation Products was also inaugurated by Shri K V Govinda sir (Chief Guest and Ex - Deputy Director, ISAC/ISRO Bangalore) in which sponsors like Khodiyar and Faro technologies Exhibits their products of Automation to all attendees like students, academicians and industrialists. In this Exhibition ISRO has

presented their space models. Engineering as well as science Students of various colleges & schools have visited this Exhibition and gave their valuable feedbacks.

Glimpse Of Exhibition @ ICAI









Technical Session 1 (5th April, 12:30 PM To 2:30 PM)

First technical presentation session started on 5th April on 12:30 PM with Expert lecture of Shri Milind Undale (scientist ISAC/ISRO Bangalore). He was a man who designed longest unfurlable antenna of India which is used on Spacecraft which was launched during Marsh Mission in a past year. He deliver his speech on “Mechanism use to design unfurlable Antenna” and share their idea to design 20ft long unfurlable antenna which might be firstly invented by India for space in entire World.





After the expert session of Shri Milind Undale sir Presentation session was started and during First technical Presentation Session 11 research paper were presented by Various Participant which is chaired by Shri Milind Undale as a session chair. Assistant Professor P S Roy and J D Bhakhar From Mechanical Department coordinated the technical session rounds very well.





After first session research paper named Color Tracking Based Virtual Mouse Pointer presented by Mr. Gaurav Uniyal was selected and awarded as best paper of session by session chair Mr. Milind Undale.

Technical Session 2 (5th April, 2:30 PM to 4:00 PM)

Second technical presentation session started on 5th April on 2:30 PM with Expert lecture of Shri Nimesh Patel (scientist SAC/ISRO Ahmedabad). He was recently Awarded By youngest scientist of India by Hon. Pranav Mukhrjee (Honorable President Of India) and he delivered his lecture on “Automation in Space born optical systems” in which he explain how the distance and current location and any kind of movement of different stars and planets will measure with help of sensors by using Automation.

After lecture of Shri. Nimesh Patel sir second Presentation were started and in second session 11 research paper were presented by different researchers. Session was chaired by Shri K V Govinda sir as a session chair and select paper “A Mechatronics Design of a Wireless Electropneumatic system using Android and MATLAB GUI” presented by Mr. Priyam Parikh as Best Paper of the session.



Technical Session 3 (5th April, 4:00 PM to 5:30 PM)

Third technical presentation session started on 5th April on 4:00 PM with Expert lecture of Shri Pradip Ajudiya (Regional Manager Sales, SIMENS Pvt. Ltd) and Shri Susul Arya (Regional Manager Sales, FARo Technologies Pvt Ltd.). Both representative of companies delivered their talk on use of Automation in their particular industries. After the talk of Experts Third presentation session were started which is chaired by Shri Sushil Arya in which 15 research paper were presented.



After the third session first day of international conference on automation in industries was end with high tea and light snacks. All participant grab a chance to talk with experts during high tea time.

Highlights of 6th April 2016

Second day of the conference was started in continuation with the first day, technical sessions were also organized on Second consecutive day of the conference.

Technical Session 4 (6th April, 9:00 AM to 11:00 AM)

First technical session of second day was started by 9 : 00 AM Morning after Break fast. Session was started with expert talk of Dr. M Varaprasada Rao (Dean Godavari Institute Of Technology, Visakhapatnam) and Ex Executive of Hindustan Aeronautics and Hindustan Zinc Ltd. He deliver their talk on “Automation In Aircraft Industries” in which he covered all higher degree of Automatic processes by which aircraft was manufactured and his skill in talking about different angles of the subject was very much appreciated by the participants and attendees.



After expert session of Dr. M Varaprasada Rao 16 paper presented in 4th session of presentation which was chaired by Dr. M Varaprasada Rao as a session chair and select research paper titled “Fault Analysis And Protection Of Three Phase Induction Motor By Using Two Transformer Instead Of Three Transformer” presented by Mr. Aliraza Merchant as a best paper of session.



Technical Session 5 (6th April, 11:15 AM to 1:15 PM)

Second technical session of second day was started by 11 : 15 AM Morning after tea break. Session was started with expert talk of Dr. Poolan Vivekananda Shanmuganathan (Prof. VIT University, Vellore). Dr. Poolan Vivekananda Shanmuganathan delivered his talk on “Automation as prosthetics” in which he share his view that his disability of human will be covered with use of Automation. He was also discussed the use of automation in Day to Day life and share many examples like automatic DHOSA machine and many more to the participant to show how automation will help to perform day to day task effectively.



After the expert session of Dr. Poolan Vivekananda Shanmuganathan presentation 10 different research paper were presented which is judged by Dr. Poolan Vivekananda Shanmuganathan as a session chair.

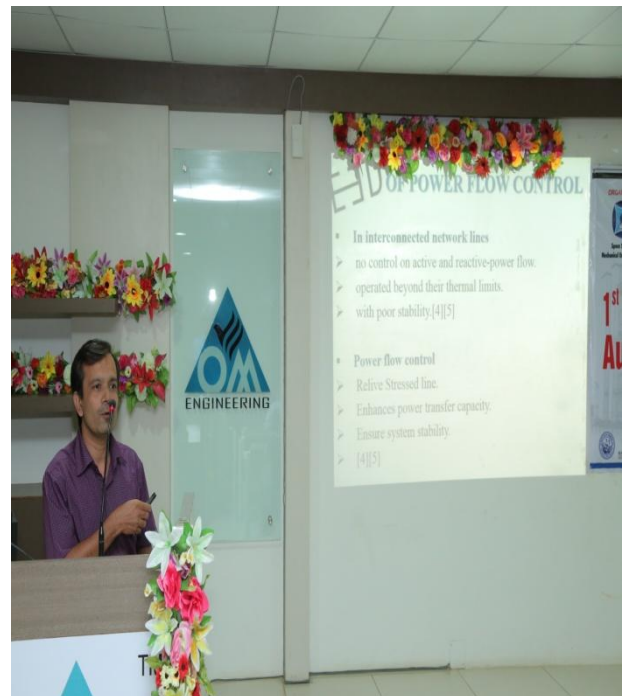


Technical Session 6 (6th April, 02:00 PM to 3:30 PM)

Last technical session of second day's conference was started by 02:00 PM in afternoon by heavy lunch. Session was started with expert talk of Mr. Vijay Zala (Head R & D, Jyoti Automation Pvt. Ltd, Rajkot). He delivered his lecture on "Automation in today's Machine tool" and rendered his expertise knowledge of automation which is used in Jyoti Automation Pvt. Ltd to all the attendees.



After his lecture he was chair last session of the presentation as a session chair in which 7 paper was presend by researchers from which paper entitled “Investigations on Shrinkage Characteristics of Foam Type Thermal Insulations” presented by Bhavesh Babar was select as a best paper of the session.



Vote of thanks

Participants shared their experiences during valedictory session. Dignitaries distributed certificate and memento to all participants. Member of advisory committee and organization committee also appreciated with memento during valedictory function and finally The conference ended with vote of thanks given by Prof B M Garala (chairman of ICAI) during his speech he thank all participants for participate in confereance. He also thanked all the sponsors, Institute of Engineers (IEI), FARO technologies Pvt Ltd, Tulsi Industries, Silver engineering company Pvt Ltd., GUJCOST and Khodiyar CAD Centre to sponsor finance to make this event possible and contribute to engineering fraternity. He also thank to all the experts and speakers who accepts the invitation and share his valuable knowledge to attendees. Lastly he also thank to all organizing committee members and volunteers for his hard work to make this event successful.

Group photographs during valedictory session



Upshots

It's matter of privilege and golden milestone that Om Engineering College was achieve and organize third national level event with SSME /ISRO in form of 1st International Conference On Automation in Industries in which 182 authors who submitted 94 papers out of which 70 were invited for presentation and these papers were selected for publication. Total 70 Research papers were presented during the conference, out of which 2 papers were from foreign delegates. Attendees were remained present in whole conference for two days. At the end, curious question of upcoming 2nd International Conference by attendees shows an attempt to achievement has lead to a tag of successful confereance.