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# ISA-B KONNEKT

By the Automation Professionals. For the Automation Professionals

Newsletter



The International Society of Automation (ISA) is a non-profit professional association founded in 1945 to create a better world through automation. ISA advances technical competence by connecting the automation community to achieve operational excellence. The organization develops widely-used global standards; certifies industry professionals; provides education and training; publishes books and technical articles; hosts conferences and exhibits; and provides networking and career development programs for its members and customers around the world.

ISA Bangalore section (ISA-B) is one of the 9 active sections of District 14, which comprises of India, Japan, Singapore, Korea & Malaysia having a total membership of about 1200 members. With a total membership of over 200 members, ISA – Bangalore section has been consistently supporting and promoting Automation across Industry and Academia.

ISA Bangalore section works towards -

1. Keeping industry updated on latest technology.
2. Bridging the industry-institute gap – Mentoring 14 student sections enables faculty and students alike to maintain close interaction with industry and grow professionally.

## President's Message



**Mr. K Srinath**  
**President- ISAB**

Dear Members & Professionals,

Greetings and Happy New Year 2023!!

It is my pleasure to connect with you all again through this second quarter newsletter of my presidential term 2022-23. I would want to start by taking this chance to express my gratitude to the editor for putting this together and to the students who, despite having demanding academic schedules, are helping us create the newsletter.

Happy to see that a large number of members attended the Tech Talks on Cyber Security, Functional Safety, and Additive Manufacturing, and we value your on-going participation and educational benefits from the same.

It is encouraging to see active student sections, as several different student sections organised numerous events and programmes. In order to get students involved in ISA, we would like more student sections to host activities and programmes.

Additionally, thanks to some solid work, our ISA Bangalore section membership increased by 37 during this time. Our ISA Bangalore section currently has more than 280 members, making it the fourth-largest section worldwide. We hope that the current members will continue to value our efforts and renew their membership when it is time.

Our Executive Council and extended volunteering members continue to meet at least once per month (sometimes in person, more often remotely), if not more frequently. Several of the programmes we are attempting to launch in the upcoming months are as follows:

- I-ACT 2023, which will take place on March 31<sup>st</sup> 2023 and April 1<sup>st</sup> 2023 at BMS College of Engineering, Bangalore, Karnataka.
- A significant event on digital manufacturing is scheduled for June 2023 in Bangalore, and you will soon hear more information on the same.
- Regularly scheduled Tech Talks.

I look forward to carrying on our conversation with you and your family and on behalf of my Executive Council, we wish you and your family great safety, health, and happiness. We anticipate your participation and ongoing support because ISA is an excellent professional venue for connecting, contributing, and developing. Regarding any areas where our organisation and activities could be improved, we appreciate your feedback to [president@isabangalore.org](mailto:president@isabangalore.org).

## Editor's Message



**KUMUDA. S**  
**Newsletter editor and Publications,**  
**Senior Member, ISA Bangalore Section**  
**ISA Membership No: 000033659369**

Greetings!!

Dear Readers,

We now announce the publication of our second issue of the ISA-Bangalore sections newsletter, KONNECT, for the period 2022–2023. You can learn about the ISA-Bangalore section activities through this newsletter.

We were able to successfully complete several of our activities thanks to Mr. K. Srinath, our current ISA-B president, as well as the assistance and leadership of Senior ISA members, the EC-team, and the entire ISA-B section members.

The current issues cover a detailed report from various ISA-Bangalore students' sections, three articles on recent technology three tech talks, list of new ISA members, events conducted by ISAB, cross words and many more.

For our ISA-Bangalore publication, "ISA B KONNECT," we would like to encourage technical articles or case studies relevant to industrial automation, instrumentation, process control, etc., as well as the newest technology linked to automation sectors. Please do send in your brief profile and photo along with your article and all of our authors will be gratefully acknowledged.

We welcome your articles regularly. It is an opportunity to brush up your writing skills and share something you are inspired by or experienced in. Do also send your brief profile and photo with the article. We will acknowledge authors generously.

Many thanks to Mr. K. Srinath, Mr. Rajashekar Uchil, Mr. Sukumaran, and all EC members for their guidance and contributions to the content of this newsletter.

I would also like to thank all ISAB students section members for sharing their activities conducted in their respective colleges in association with ISAB.

I would also like to thank our young ISA-B student section members – Vidya Vijay Bhat (Membership ID – 0034009613) and Divya Singh (Membership ID - 0034010574) for their everlasting support and contribution for the successful release of this second issue.

Lastly, I hope all of you relish our second issue and feel free to let us know if there are any topics you would like to see covered in our future issues to come. Do send in your comments/suggestions to [isabkconnect@gmail.com](mailto:isabkconnect@gmail.com).



Vidya Vijay Bhat  
Membership ID: 0034009613



Divya Singh  
Membership ID: 0034010574

## ISAB Articles

### *1. Skill of Values for Today's Professionals*



**Nishanth Navaneetha Gopalakrishnan**  
(ISA Member No. 33155600)  
Senior Member - ISA Bangalore

**ABSTRACT:** The quest to improve and remain relevant as a professional is an inherent need that all individual has. However, knowing what skills are of value in different phases of one's career, even as technological developments and compound risks continue to disrupt the status-quo, is a challenge. However, in my opinion, there are a few broad and time-tested skills that are absolutely necessary for professional growth and success.

Some of the skills mentioned in the article -

**Business Skills** – Working on projects brings the realisation of how project outcomes are tightly linked to business success. Therefore, honing skills such as productivity improvement, navigating change, managing risk, value engineering, managing cash flows etc., which can have a positive impact on businesses, will always be valued and recognized. Business skills are akin to a toolkit – one will have to wisely choose the right tools that are relevant to a particular business problem, in the context of the organisation and the market it operates in.

**Data Literacy and IT Skills** - Today, businesses are discovering great value by strategically adding a layer of IT to established business models and processes. In this hypergrowth phase of IT we're witnessing, it is possible for non-IT professionals to pick valuable data analysis and visualisation skills, identify untapped opportunities and unlock value in their respective domains. From being 'good-to-have' skill a decade ago, data literacy is fast becoming a basic skill expected from employees.

This article gives us an insight into a range of skills that are important and highly valued in today's work environment.

Read the complete article here: [Link to the article - Skill of values for today's professionals](#)



# ISAB Articles

## 2. Emerging Technologies in Oil & Gas Domain and a Case of “Troubleshooting from the Sky”



**P.S.Krishna**  
Senior Member -ISAB Bangalore

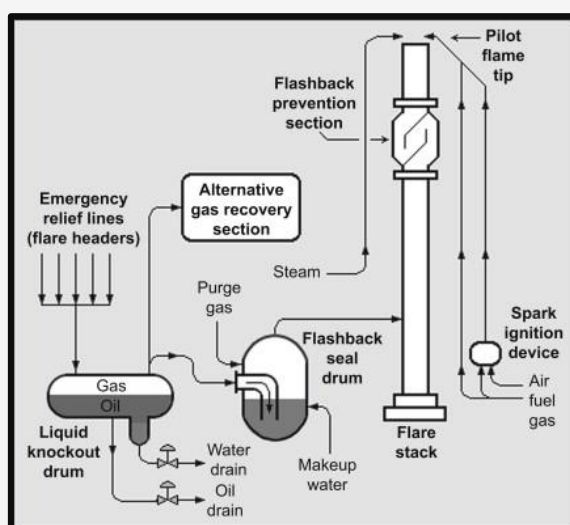
**ABSTRACT:** Emerging technology is described as new technology or it could also refer to developmental work in an existing technology - often referred to as “work in progress”.

The digital transformation of the oil and gas industry is well underway. Its use of technologies, including AI, machine learning, and IoT, improve efficiency and safety in the oil and gas business.

The flame at the top of an oil production site either onshore or offshore is a kind of flag or iconic image for the oil and gas industry.

A gas flare, alternatively known as a flare stack, is a gas combustion device used in industrial plants such as petroleum refineries, chemical plants, and natural gas processing plants, and at oil or gas production sites with oil wells, gas wells, offshore oil and gas rigs, and landfills.

This article focuses on Oil and Gas domain against the back drop of relevant emerging technologies applicable to this sector.



Read the complete article here: [Link to the article - Emerging Technologies in Oil and Gas Domain and a case of "Troubleshooting from the sky"](#)

# ISAB Articles




















## 3. Introduction to SMIIoT Division



**Mr. Rajshekhar Uchil**  
Senior Member and marketing chair of ISAB

**ABSTRACT:** The Smart Manufacturing and IIoT Division (also known as SMIIoT) is the newest and fastest growing division of ISA aimed at helping our members grow professionally and technically. The primary goals of SMIIoT are to provide clarity around these ever-evolving spaces, develop useful technical content, develop standardized approaches to solve critical problems, and provide a forum for networking and collaboration. ISA's understanding and focus of Smart Manufacturing, Industry 4.0 and Industrial Internet of Things (IIoT) will continually evolve to adapt to the high level of activity and interest throughout the worldwide community, constant developments of new technologies, new applications, and new concepts from most of the major hardware manufacturers, solution providers, businesses, research institutions, and even governmental agencies.

This article gives a brief about the ISA's SMIIoT division, IIoT and Smart manufacturing and the activities that take place at the SMIIoT division.

Leaders			
			
<a href="#">Brian Romano</a> Arthur G. Russell Company, Inc. Technical Lead	<a href="#">Ines Mechikane</a> Technical Lead	<a href="#">Jacob Chapman</a> Nozomi Networks Technical Lead	<a href="#">Mario Gonzales Ishikawa</a> PackIoT Technical Lead
			
<a href="#">Ryan Treece</a> Telit IoT Platforms Technical Lead	<a href="#">Shiv Kataria</a> Siemens Technology & Services Pvt. Ltd. Technical Lead	<a href="#">Jeff Winter</a> Grantek Systems Integration Director	<a href="#">David Schultz</a> GS Consulting Director-elect
			
<a href="#">Enri Marini</a> Eastman Kodak Board Member	<a href="#">John Whitten</a> Projects of Things Board Member	<a href="#">Karam Behrani</a> KVR CONSULTING Board Member	<a href="#">Sujata Tilak</a> Ascent Intellimation Pvt. Ltd. Board Member
			
<a href="#">Victor Venancio</a> Stefanini Group Board Member	<a href="#">Dattatray Sawant</a> Mukesh Patel School of Technology Management & Engineering Secretary	<a href="#">Lalit Banerjee</a> Siemens Pte Ltd Program Chair	<a href="#">Michael Nager</a> Festo Program Chair
			
<a href="#">Shridhar Kulkarni</a> Virtuosso Projects & Engineers Pvt. Ltd. Membership Chair	<a href="#">Yogeshwar V. Supramaniam</a> Section-Division Liaison	<a href="#">Ryan Kershaw</a> LNS Research Webmaster/Connect Chair	

Read the complete article here: [Link to the article - Introduction to SMIIoT Division](#)

# ISAB Events

## 1. *Manusmaran*

**Held on:** 3<sup>rd</sup> January 2023, BMSCE

Department of Electronics & Instrumentation Engineering, BMSCE launched “Manusmaran” on 3<sup>rd</sup> January 2023.

It is a Socio-Ethical Humanities & Creativity club under ISA-BMSCE. This club is sponsored by Scheme for Promoting Interests, Creativity and Ethics among Students (SPICES), AICTE.

The Inaugural function was held at Auditorium -2 Platinum Jubilee Academic block.

Mr. Renukaprasad Belgur, Business Mentor and advisor was the chief guest for this occasion. The club logo was also inaugurated in the august in presence of Dr. S. Muralidhara - Principal, Dr. Bheemsha, Vice Principal (Admin) and Dr. Suresh R. Reddy, Vice Principal (Aca).





# ISAB Tech Talks

## ISA-B Tech-Talk 1

### ICS/OT Pentesting

Topic	"Tech Talk on ICS/OT Pentesting"
Speaker	Mr. Saurabh Chandra
Date	16/07/2022
Time	4:00PM (IST)
Platform	Microsoft Teams


**International Society of Automation**  
Setting the Standard for Automation™

**BANGALORE SECTION**

**TECH TALK ON ICS/OT PENTESTING**

**TOPICS TO BE COVERED**

- WHAT IS PENTESTING ?
- SETTING UP YOUR OWN NETWORK VIRTUALLY
- BRUTE FORCING ON SCADA
- GAINING ACCESS
- ESCALATING PRIVILEGES
- PIVOTING
- MITRE ATT&CK FOR ICS
- REPORT WRITING

**JOIN US**


**OCTOBER 08, 2022**


**04:30 PM TO 06:00 PM**

**SAKTHI KUMAR MANOHAR**



- STAFF ICS/OT PRODUCT SECURITY ANALYST. (CCNA|CEH)
- RISK ASSESSMENT, VULNERABILITY ASSESSMENT, PRODUCT SECURITY, SYSTEM/NETWORK SECURITY, ICS/OT PENTESTING, ISA/IEC 62443, NIST CSF, NERC CIP, PATCH MANAGEMENT, BUSINESS CONTINUITY PLANNING FOR O&G, POWER AND MARINE SECTORS.
- INTERNATIONAL ENGINEERING P&T AWARDS: 'LEAD WITH TRANSPARENCY' ISSUED BY GE POWER CONVERSION IN MAY 2021

# ISAB Tech Talks

## ISA-B Tech-Talk 2 Functional Safety and OT Cyber Risk

<b>Topic</b>	<b>“Functional Safety and OT Cyber Risk”</b>
<b>Speaker</b>	Mr. Palaniappan R Kannan
<b>Date</b>	29/10/2022
<b>Time</b>	10:00 AM (IST)
<b>Platform</b>	Microsoft Teams


**International Society of Automation**  
*Setting the Standard for Automation™*

**BANGALORE SECTION**

**FUNCTIONAL SAFETY AND OT CYBER RISK**



**TOPICS TO BE COVERED**

- THIS PRESENTATION IS ABOUT SAFETY AND CYBER SECURITY DESIGN BASED ON UNDERLYING RISK METRIC.
- THE PURPOSE IS TO AVOID BOTH OVERENGINEERING AND UNDERENGINEERING
- THE PRESENTATION FOCUSES ON DETERMINING THE RISK LEVELS AND METHODS TO MEET THEM
- THE REFERENCE STANDARDS ARE ISA 84/IEC 61511 & ISA 99/IEC 62443
- THE CONTENT IS HOWEVER DEVELOPED UTILIZING THE COLLECTED KNOWLEDGE AND EXPERTISE

**JOIN US**

 **OCTOBER 29, 2022**
 **10:00 AM IST**

**PALANIAPPAN R KANNAN**



- VOTING MEMBER ISA 84
- SERVED AS SIF FOCAL POINT FOR ADNOC GAS, ABU DHABI & PDO, OMAN
- SIL WORKSHOP CHAIR - AROUND 5000 FUNCTIONS
- LEAD AND PRESENTED IN FUNCTIONAL SAFETY AND OT SECURITY CONFERENCES

# ISAB Tech Talks

## ISA-B Tech-Talk 3

### Additive Manufacturing Overview and Realization in Product Development and Manufacturing

Topic	"Additive Manufacturing Overview and Realization in Product Development and Manufacturing"
Speaker	Mr. Anil Kumar H E
Date	12/11/2022
Time	10:30 PM (IST)
Platform	Microsoft Teams

ISA Bangalore Tech Talk

  
 International Society of Automation  
 Bangalore Section

### Topic: Additive Manufacturing Overview and Realization in Product Development & Manufacturing

on 12th November 2022, 4:30 PM IST



**Mr. Anil Kumar H E**  
 Technical Specialist  
 Bosch Global Software Technologies Pvt Ltd

Welcome to the Tech Talk on "Additive Manufacturing Overview and Realization in Product Development & Manufacturing," where Mr. Anil Kumar will share his experiences on:

- Additive Manufacturing Technology & Overview
- Additive Manufacturing Market Overview focusing on Product Design and Manufacturing
- Key Case Studies in Additive Manufacturing
- Challenges and Mitigations in Additive Manufacturing for Mass Production
- Focus & Adaptation of Additive Manufacturing

Mr. Anil Kumar H E is the Technical specialist in Additive Manufacturing and 3D Printing. He is Responsible for providing end-to-end solutions by implementing different Additive Manufacturing technologies using both metals & polymer materials for all Bosch plants. He has 12+ years of experience in Design, Manufacturing, Consultant, Operations, Business strategy, Costing, Value generation & Projects Management.



# ISAB Students' Section Activities

## 1. *ISA-B Manipal Institute of Technology - Student Section*

### ORIENTATION 2022-23

**Name of the event:** ISA Manipal orientation for newly joined students

**Data of the event:** 12th November 2022

**Venue:** M.V Seminar Hall, MIT Manipal

**Hosted by:** ISA Manipal

#### SCHEDULE OF THE EVENT

1. 6:00 to 6:15 – Welcoming the freshly joined students for the event
2. 6:15 to 6:20 – Speech by Prabhakar sir, Faculty Advisor of ISA Manipal
3. 6:20 to 6:40 – Explanation of benefits of being an ISA member
4. 6:40 to 7:20 – Explanation about various subsystems under ISA Manipal
5. 7:20 to 8:00 – Ice-breaking session for the newly joined students

#### DESCRIPTION OF THE EVENT

The ISA Manipal student section organised the orientation meeting for the batch of 2026 on 12<sup>th</sup> November 2022.



In this orientation meeting, the board members of ISA Manipal, along with the faculty advisor of ISA Manipal, explained the new members about the benefits of joining ISA, such as:

1. Chance to be a part of various divisions in ISA.
2. Exclusive access to a one-of-a-kind in-house knowledge database wiki, top-level technical library research transactions.
3. Exclusive access to specialized focus groups/divisions in specific fields, including but not limited to robotics and automation, cybersecurity, etc.
4. A chance to upgrade to Professional Membership at a Student Membership rate for one year post-graduation.
5. ISA Manipal comes directly under ISA ACARD.



After a brief introduction to the benefits, the subsystem heads explained about their subsystem in detail to the participants, and then the President of the club explained about all the activities done.

By the club, such as Weekly Club Meetings, Subsystem Meetings, FIEPER, Tech Tuesday and Tech Thursday, social media, Membership Drives etc



After the President's words, the winners of the Indian automation games 2022 shared their experiences with the students; then, at last, the Ice-breaking session started in which all new students of the club were introduced to each other. Finally, the Board concluded the meeting Q/A session.



# INTERNATIONAL CONFERENCE ON ROBOTICS, CONTROL, AUTOMATION, AND ARTIFICIAL INTELLIGENCE

**(RCAAI 2022)**

**24-26 November 2022 | Virtual Mode**

Organized by

**Department of Mechatronics, Manipal Institute of Technology, Manipal Academy of Higher Education (MAHE), Manipal, India**

in collaboration with

**Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal, India**

The International Conference on Robotics, Control, Automation, and Artificial Intelligence (RCAAI-2022) was jointly organized by the Department of Mechatronics, Manipal Institute of Technology, Manipal in collaboration with the Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal. It was held between 24th to 26th November 2022 in virtual mode.

The delegates were from countries such as the United Arab Emirates, the United States, Sweden, Canada, Botswana, and many others. A total of 303 manuscripts were received and reviewed and 84 articles were accepted based on reviews in line with the requirements of the Springer Nature rigorous quality assurance process. The papers were presented in 16 technical parallel sessions based on 6 technical tracks. A total of 264 researchers, the industrial fraternity, and academia participated to deliberate exchange problems and ideas on the latest trends in Robotics, Control, Automation, and AI.

The conference was inaugurated on 24th November 2022 at Sir M Visvesvaraya Seminar Hall of MIT Campus and the chief guest for the inaugural function was Dr. G Satheesh Reddy, Scientific Adviser to Raksha Mantri at the Ministry of Defence, Govt of India. The patron of the conference Cdr Dr. Anil Rana, Director, MIT, Manipal presided over the inaugural session and motivated the participants through his inspirational talk. Prof. S. M. Kulkarni, Dean (R&C), NITK Surathkal, Dr. D. V. Kamath Professor and Head, Dept of Mechatronics, MIT Manipal and Dr. Ravikiran Kadoli, Professor & Head, Mechanical Engineering, NITK, Surathkal, emphasized the need for such conferences to upgrade the knowledge of Mechatronics in emerging areas.





A Pre-Conference talk and tutorial were conducted. Prof. John Masse, Founder of APPEDGE, Member of ISA France has given the talk on ‘Improve and Keep the Control of Processes with an Innovative Controller #RelaxC’. And as part of the pre-conference tutorial, BTech and MTech students were given hands-on training on the use of Robo Analyzer software for the demonstration of Robot Kinematics by Dr. Rajeevlochana G. Chittawadigi, Contributors of Robo Analyzer and RIDIM software.

<b>November 23, 2022 (Wednesday)   14:00 to 15:00 IST</b>			<b>November 24, 2022 (Thursday)   9:30 to 11:00 IST</b>		
	<b>Prof. John Masse</b> , Founder of APPEDGE, Member of ISA France	Topic: Improve and Keep the Control of Processes with an Innovative Controller #RelaxC		<b>Dr. G. Satheesh Reddy</b> , Ministry of Defence, Government of India	Inauguration of RCAA-2022 and Keynote Talk by Dr. G. Satheesh Reddy, Ministry of Defence, Government of India
<b>November 23, 2022 (Wednesday)   15:00 to 17:00 IST</b>			<b>November 24, 2022 (Thursday)   16:30 to 17:30 IST</b>		
	<b>Dr. Rajeevlochana G. Chittawadigi</b> , Contributors of Robo Analyzer and RIDIM software	Topic: Robo Analyzer: HTM Module and demonstration of Robot Kinematics using Robo Analyzer.		<b>Prof. Clement Gosselin</b> , Laval University, Quebec City, Canada	Topic: On the Design of Low-Impedance Hybrid Parallel Robots for Intuitive Physical Human-Robot Interaction
<b>November 25, 2022 (Friday)   11:00 to 12:00 IST</b>			<b>November 26, 2022 (Saturday)   10:00 to 11:00 IST</b>		
	<b>Prof. Fumitoshi Matsuno</b> , Kyoto University, Kyoto, Japan	Topic: Bio-inspired robotics and its application to rescue and recovery		<b>Prof. Subir Kumar Saha</b> , Indian Institute of Technology, Delhi, India	Topic: Robotics2Rural---Innovative Teaching and Research Approaches
<b>November 25, 2022 (Friday)   14:30 to 15:30 IST</b>			<b>November 26, 2022 (Saturday)   14:30 to 15:30 IST</b>		
	<b>Dr. Dhruv Chandel</b> , MathWorks, Inc., New Delhi, India	Topic: Robotics, AI & Automation: A Confluence of Technology Mega-Trends		<b>Prof. P. S. Gandhi</b> , Indian Institute of Technology, Bombay, India	Topic: Ultra-compliant Mechanisms: Dynamics and Control for Applications in Robotics and Automation

On 24th November 2022 (Day-1), A plenary talk and technical parallel session were conducted. Prof. Clement Gosselin from Laval University, Canada gave the talk on ‘On the Design of Low-Impedance Hybrid Parallel Robots for Intuitive Physical Human-Robot Interaction’. A total of 42 research works were presented in 8 technical parallel sessions.



On 25th November 2022 (Day-2), two plenary talks and technical parallel sessions were conducted. Prof. Fumitoshi Matsuno from Kyoto University, Kyoto, Japan has delivered a talk on 'Bio-inspired robotics and its application to rescue and recovery'. Also, Dr. Dhruv Chandel from MathWorks, Inc, New Delhi, India has given the talk on 'Robotics, AI & Automation: A Confluence of Technology Mega-Trends'. A total of 42 research works were presented in 8 technical parallel sessions.

On 26<sup>th</sup> November 2022 (Day-3), Prof. Subir Kumar Saha, Indian Institute of Technology, Delhi, India has given a talk on 'Robotics2Rural----Innovative Teaching and Research Approaches'. Prof. P. S. Gandhi, Indian Institute of Technology, Bombay, India has given the talk on 'Ultra-compliant Mechanisms: Dynamics and Control for Applications in Robotics and Automation'.



In the closing session of RCAAI-2022, Prof. Bidyadhar Subudhi, Professor, School of Electrical Sciences, Dean (R&D) Department of Electrical Engineering, Indian Institute of Technology Goa was the chief guest. The patron of the conference Dr. Somashekara Bhat, Joint Director, MIT, Manipal, India motivated the participants through his inspirational talk. Prof. S. M. Kulkarni, Dean (R&C), NITK Surathkal addressed the gathering. Prof. D. V. Kamath, Professor and Head, Dept of Mechatronics, MIT Manipal, announced the best paper presentation award from each track. Dr. Ankur Jaiswal and Dr. Arun Kumar Shettigar, the organizing secretaries of the conference thanked the delegates on behalf of the Organising Team.

Organizing Committee,  
RCAAI - 2022.  
Department of Mechatronics.  
Manipal Institute of Technology, Manipal

# ISAB Students' Section Activities

## 2. ISA-B RVCE Student Section

### “DIGITAL TRANSFORMATION IN PROCESS AUTOMATION” – Seminar

**Held on:** 08th June, 2022

ISA-RVCE Student Section organised an event at RVCE (MCA Seminar Hall), where Mr. Arun Kumar, Head of Automation Engineering from Siemens Advanta India gave a seminar on “**Digital Transformation in Process Automation**”.

The event started off with a welcome speech by Mr. Saurav Agarwal, the current Vice-President of ISA- RVCE Student Section, followed by an address by our beloved Principal, Dr- K N Subramanya, who spoke about the importance of Instrumentation Engineering and the right use of technology in this Digital Age.



Dr. C H Renumadhavi, HOD of EIE, RVCE, shed light on the changes that can be seen during the transition from the technology of yester years to our current, digital age.

The main points discussed in the seminar by the speaker were:

1. Siemens contribution to the world of Industrial Automation
2. A quiz was conducted by the speaker about global challenges faced by the world today like decarbonization and greenhouse effects
3. Description of sustainable development goals and digitization of brown-field application

The event was concluded by a vote of thanks from the current President, Mr. Ganesh C L.



A feedback form and activity sheet were circulated among the participants of this inaugural seminar and all the responses that were obtained regarding the seminar were analysed.

**Activity responses:** 101

**Feedbacks:** 101

**Participants:** 100+

Most of the participants were excited for ISA-RVCE to conduct more workshops and webinars such as this.

Overall, for our first event, everyone was very enthusiastic and actively participated in the smooth conduction of the event.

All professors were very proud of the ISA team of RVCE-EIE, and expected us to continue the same in the future.

The department and the ISA team are thankful to the Principal, RVCE, and RSST for remunerating the speaker amply and providing encouragement to the department ISA Automation team.

## ISA Induction Program

**Held on:** 10th June, 2022



The next on the agenda was to get more recruitments, for which a recruitment drive was conducted amongst the 1st and 2nd years.

An ISA induction programme was organized for this purpose. The speaker for the induction programme was Saurav Agarwal, Vice-President 2022-23. He talked about the opportunities, values and perks of joining ISA-RVCE student section and had a small quiz-type interaction with the students.

Later, **59 responses** were received and many more are expected.



## Talents Day

- By ISA RVCE

**Held on:** 22nd July 2022

ISA-RVCE Student Section organized an event at RVCE (IEM Seminar Hall). “All of us may not have equal talent but all of us have equal opportunities to develop our talent” this is a quote said by our Nation’s Gem Dr. A.P.J Abdul Kalam. A talent show is a creative competition in which each member gets the opportunity to display his or her unique skills. The basic term of participation in the contest is the wish to share unique skills and talents with acquaintances. This event not only helped in bringing out inherent talents hidden in people but also was an occasion that allowed everyone to enjoy the rare chance of spending a day away from academics and provided an opportunity for students from all years to interact with everyone in the department.



The event started with a welcome speech by Ms. Ananya D, the current Membership Chair of the ISA-RVCE Student Section, followed by the lighting of the lamp by our beloved teachers, Dr Renumadhavi, HOD Department of Electronics and Instrumentation Engineering, Dr. K V Padmaja and Prof. Venkatesh S. After the joyous ceremony of lighting, the most awaited show began. The invocation song was sung by Ms. Srishti and Ms. Neha our Content Chair and our Delegate Chair respectively. This was followed by an introduction to what is ISA by Ms. Ananya D, which provided an opportunity for the juniors to know about the society. Information about the resources and benefits offered by ISA was made known.



Then Dr. Renumadhavi, HOD Department of Electronics and Instrumentation Engineering addressed the gathering and motivated us to find and explore our talents at this young age itself so that we can do things that we love.

The event was hosted by the MCs for the day Ms. Arunabha and Ms. Harshita (2<sup>nd</sup> -year students), who beautifully controlled the flow of events with their natural anchoring skills.



The next act was inspiring, interesting, rhythmic, and touching poetry by Mr. George, a 2<sup>nd</sup> -year student followed by an instrumental song by Mr. Dipayam (2<sup>nd</sup> year) and Mr. Shuvojyoti, (3<sup>rd</sup> year) who played the ukulele and gave a sensual performance. As the rapid rhythm of the ukulele subsided with the singers leaving the stage for the next events, “Open mic” was announced by the MC’ provided an opportunity to any student/s who wanted to take the spotlight and sing a song or spill out some mimicry, beatbox or share any of their talents with us.



Then Mr. Kunal and Mr. Akarsh (2<sup>nd</sup> -year students) sang a duet that was just awesome. The stage was occupied by 2<sup>nd</sup> -year students who entertained the crowd with their extraordinary performance.



The next talent we got to see was an orchestra by our 1<sup>st</sup>-year students with the pianist Mr. Nihal (a 3<sup>rd</sup>-year student) amongst the action.

One unique talent that was presented was the ability to say “Shayari” which was brought to us by two of our 2<sup>nd</sup>-year students Mr. Arpit and Mr. Raghav. These poetic episodes constructed by these two artists were magical.



The music club of RVCE “ALAAP” was invited to make this event more memorable. The highly trained singer gave a magical performance of the highest caliber.



Up next were 1<sup>st</sup>-year students who set the stage on fire with their classy dance moves and upbeat music.

After this, as there was a notice to wear ethnic on this day everyone from students to faculties went on the stage to walk the ramp. 2022 pass-out seniors were invited to enjoy this last event of college together.

Anush Ram president of the ISA RVCE student chapter 2021 and Sinchana Sharon Publication chair of the ISA RVCE students’ chapter 2022 won the Mr. and Ms. EIE title respectively. There were a lot of fun games hosted for 2022’ batch as a fun activity.

Mr. Adharsh (a 2<sup>nd</sup>-year student) highlighted his beatboxing capabilities to the utmost completely mesmerizing the audience. The last performance of the day was a group dance by our 3<sup>rd</sup>-year students



The hall had various art pieces displayed at the entrance, those were all the paintings/sketches made by Mr. Darshan Raj A S a 2022-batch pass-out. He made a presentation about his passion i.e., painting. He kindly walked everyone through his mesmerizing art gallery talking about his inspiration behind that art piece as well as the artistic details about them which is hard for people to perceive.

Looking at those pieces of creativity was major motivation for the students present in the hall. Anooch Ram, President of the ISA RVCE 2021-2022 students chapter gave out a vote of thanks with which the event ended. Lunch was organized for students outside the hall.



## Experiences of an Automation Engineer - Seminar

**Held on:** 25th November, 2022

ISA-RVCE Student Section organised an event at RVCE (MCA Seminar Hall), where Mr. Arun Subramanian, from ISA gave a seminar on “Experiences of an Automation Engineer”.

The event started off with a welcome speech and an introduction to the speaker by Ms. Ananya D, the current membership chair of ISA-RVCE Student Section.



Mr Arun Subramanian started with a brief introduction about himself, his education and career position. He started by advising students to be open minded when they start gathering knowledge as career is very different from college. He discussed about the 3 industrial revolutions and the main aspects of all them. He emphasized about the three vital resources in a process automation industry which are cost, time, and money. By reasoning why “safety way is the best way forward” he later discussed about OEMs and gave examples of OEMs such as IPG photonics, manufacture lasers. He then talked about how most process is about material removing and IISC’s use of indigenous Laser beam additive manufacturing technologies. He later talked about his experience as automation engineering in Sunlight Technologies where he worked on thermal reliability testing of satellites for ISRO.

The mother of all standards is IEC61508, whereas IEC61511 Adaptive w.r.t process industry. Later he talked about CHEMA German OEM, safety systems and products and told that Safety is what is there on paper. Safety is free from unacceptable risks. All companies have projects regardless of which stream.

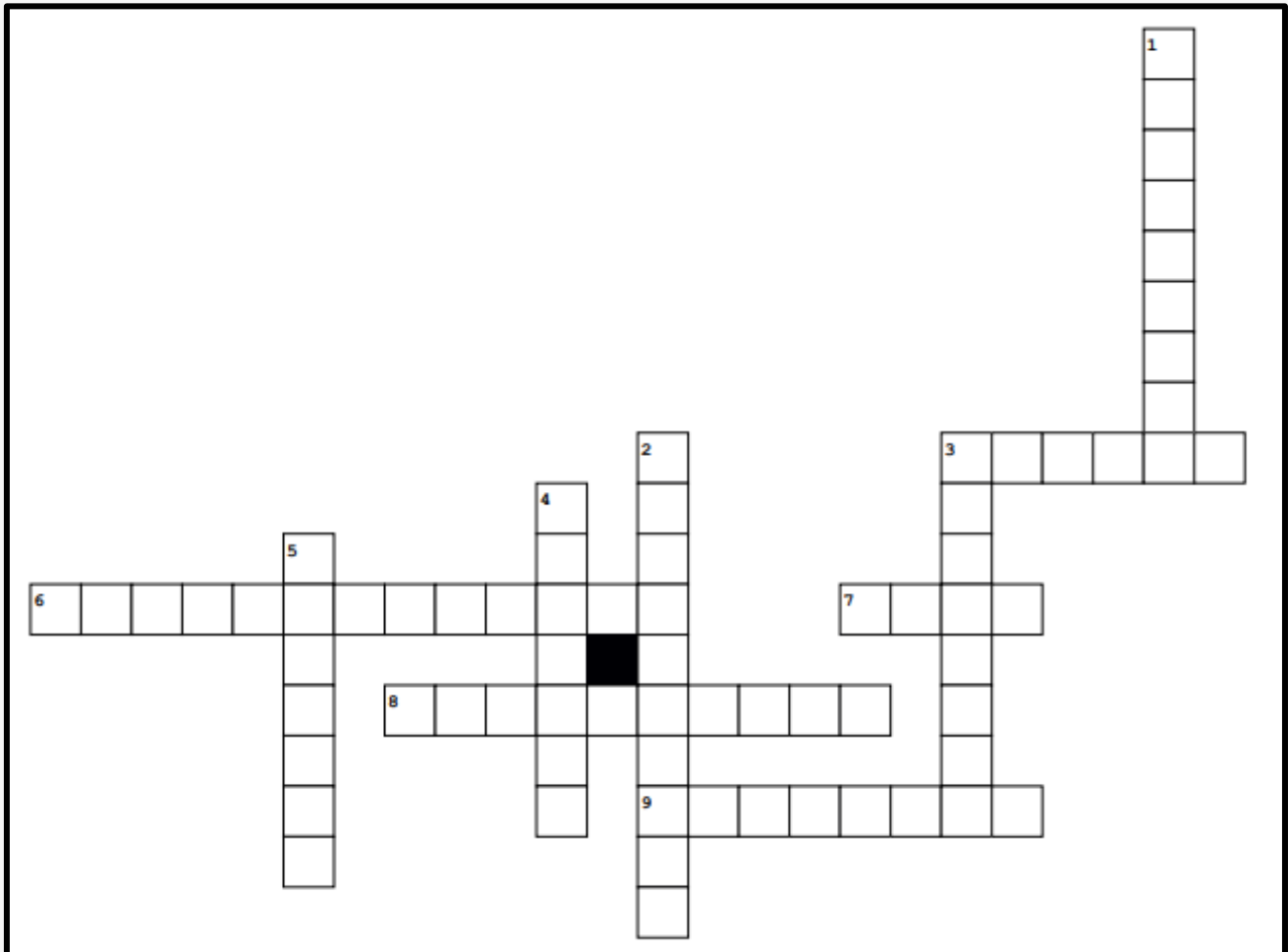
The three key takeaways from the seminar were to find the right skillset, obtain more experience in such fields and to Experiment with new streams. The Speaker said that one needs to follow where money goes while choosing the career domain as in which industry end uses the said money the most.



The speaker finished the seminar by concluding that everything is a process and one should have the same approach while dealing in any domain.



# Crossword



**Across**

**Down**

**3.** The power consumption of static CMOS gates varies with the \_\_\_\_\_ of power supply voltage.

**6.** Popcorn noise is generated by abrupt variations in input bias current especially due to imperfect surface conditions of \_\_\_\_\_.

**7.** What is PSRR value of an ideal op-amp?

**8.** An antifuse element initial provides \_\_\_\_\_ between two conductors in absence of the application of sufficient programming voltage.

**9.** In absence of any applied AC input signal, what would be the gain of an ideal integrator?

**1.** In a peak detector circuit, which component holds the peak value till a higher peak value is detected?

**2.** In ADCs, it is possible to reduce the quantization error by \_\_\_\_\_ the number of bits.

**3.** Maze routing is used to determine the \_\_\_\_\_ path for a single wire between a set of points, if any path exists.

**4.** Basically, an observability of an internal circuit node is a degree to which one can observe that node at the \_\_\_\_\_ of an integrated circuit.

**5.** In an inverting Schmitt Trigger circuit, the hysteresis \_\_\_\_\_ is also known as 'hysteresis width'.

# ISAB New Membership List

New Members of ISA Bangalore Section (1 October 2022 - 31 January 2023)			
Sl. No.	Name	Membership Type	Member Since (Month/Year)
1	Manoj Deshpande	Senior Member	October 2022
2	Pavan Eranna	Senior Member	
3	Jitendra Chavan	Senior Member	
4	Puneet Tambi	Senior Member	
5	Sourav Kunal	Member	
6	Praphul Chandra K R	Senior Member	
7	Tejas Pandya	Member	
8	Raghunandan K S	Senior Member	
9	Pavan Kumar Sunku	Senior Member	
10	M Santhosh Kumar Raju	Senior Member	
11	Vadivel Kadalmuthu	Senior Member	
12	Santhosh M M	Senior Member	
13	Sudheendra S	Senior Member	November 2022
14	Venkatesan Arumugam	Senior Member	
15	Abhishek Goel	Senior Member	
16	Karthik B	Senior Member	
17	Ramappa Junjarwad	Senior Member	
18	Shrinivas Magi	Senior Member	
19	Milind Khadri	Senior Member	
20	Suresh Jayaraj	Senior Member	
21	Amit Singh	Senior Member	
22	Raghavendra Setty	Senior Member	
23	Muralidhara Chattenahalli Lokesha	Senior Member	
24	Praveen V	Senior Member	

25	Sudharshan M R	Senior Member	
26	Gopi Krishna Katragadda	Senior Member	
27	Santhosh S	Senior Member	
28	Jitendra Mouli Pattipati	Senior Member	
29	Raja Pandian R	Senior Member	
30	Ganeshwar Pradhan	Senior Member	<b>December 2022</b>
31	R Srikrishna Rao	Member	
32	Thariyil Balasubramanian	Senior Member	
33	Dheepan T	Member	
34	Priya Srivastava	Senior Member	<b>January 2023</b>
35	Sachin Sharma	Senior Member	
36	Gopal Mishra	Senior Member	
37	Karthik Natarajan	Senior Member	

## Quotes of the Quarter

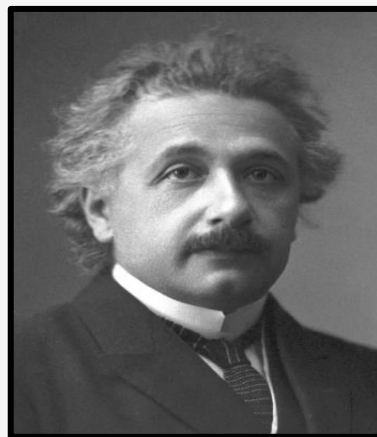


**“Do not judge me by my successes, judge me by how many times I  
fell down and got back up again”**

**- Nelson Mandela**

Source: <https://rb.gy/jbgduq>

Image Courtesy: <https://rb.gy/m2tfw2>



**“We can't solve problems by using the same kind of thinking we  
used when we created them.”**

**- Albert Einstein**

Source: <https://rb.gy/chfcxh>

Image Courtesy: <https://rb.gy/npmpvc>

## Quotes of the Quarter

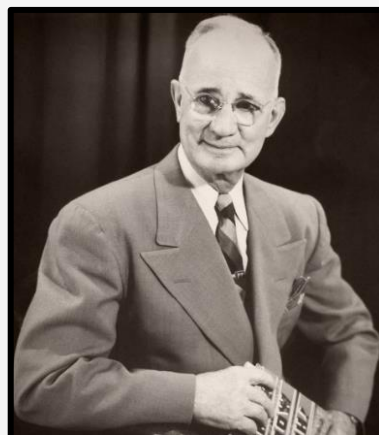


**“It’s not who you are that holds you back, it’s who you think you’re are not.”**

**- Denis Waitley**

Source: <https://rb.gy/mpigzd>

Image Courtesy: <https://rb.gy/su5viq>



**“The starting point of all achievement is desire.”**

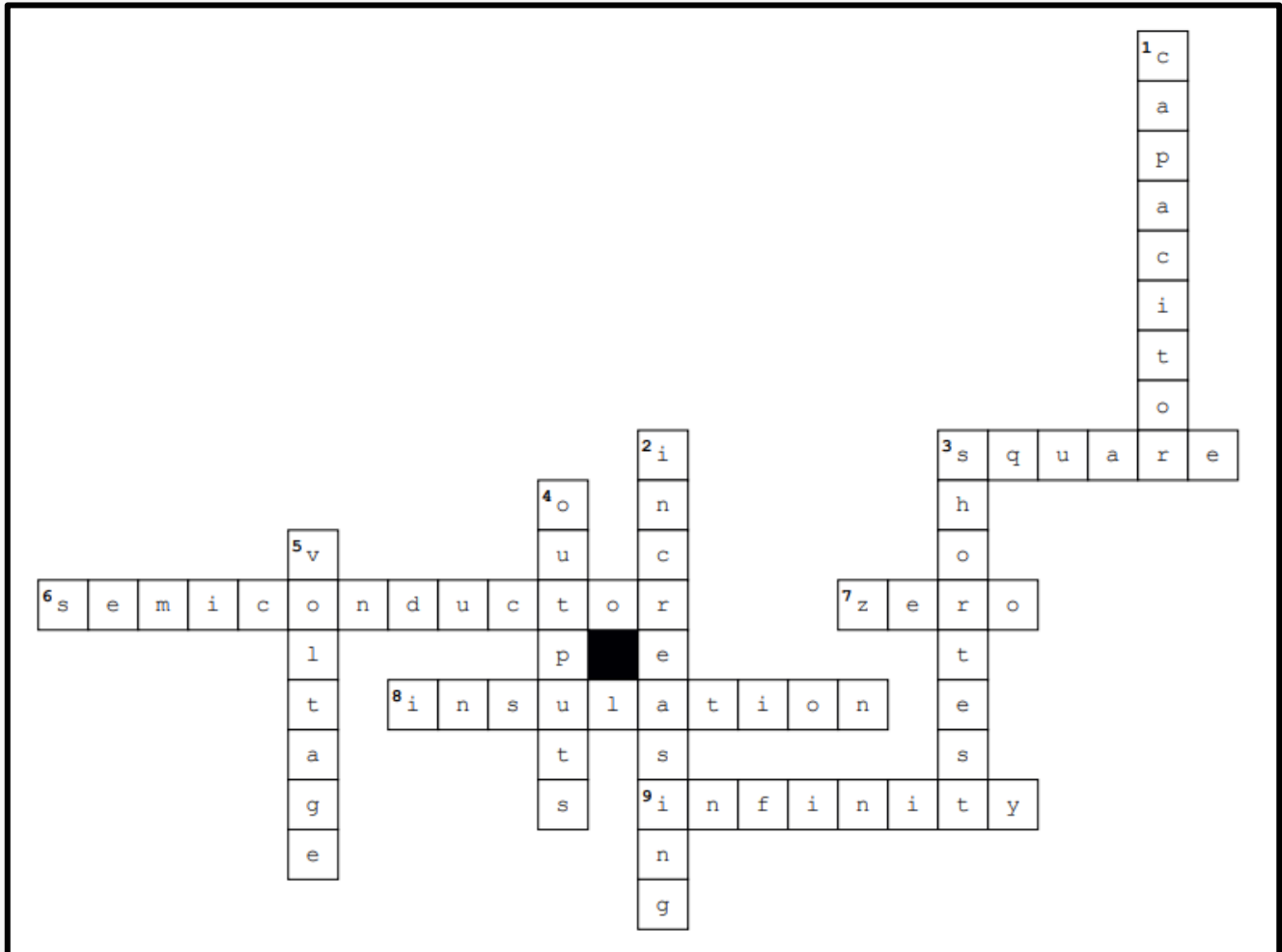
**- Napoleon Hill**

Source: <https://rb.gy/nnyxrs>

Image Courtesy: <https://rb.gy/sbs662>



# Answers for the Crossword



## Across

- 3. Square
- 6. Semiconductor
- 7. Zero
- 8. Insulation
- 9. Infinity

## Down

- 1. Capacitor
- 2. Increasing
- 3. Shortest
- 4. Outputs
- 5. Voltage

# ISA Membership Benefits



## ISA Membership Benefits

ISA Bangalore

### Programs

Discover how members connect and share through technical forums, leadership opportunities and more.



ISA Connect  
Technical Forum



Geographic  
Sections



Technical  
Divisions



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### Education

ISA members receive the latest in education and industry trends through training programs, certification courses, and industry events.



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or virtual



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and courses

### Membership Dues

#### Professional\*

- 1-year: **70** USD
- 2-year: **125** USD
- 3-year: **175** USD

#### Student Member

- 15 USD Annually
- **Upgrade to professional member free for one year after graduation!**

\*Reduced Fees as applicable for INDIA, else 1 yr 140 USD

For more Information visit:

[www.isabangalore.org](http://www.isabangalore.org)

To join visit:

[www.isa.org/join](http://www.isa.org/join)

Join our free group: [www.linkedin.com/groups/4705254/](https://www.linkedin.com/groups/4705254/)

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## ISA Links

**Be Connected with ISA-Bangalore section on our various social media platforms below**

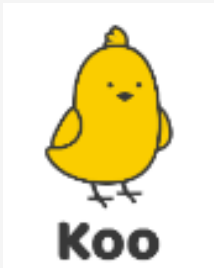
1. ISA Connect Bangalore - [ISA Connect](#)



2. ISA Bangalore Section LinkedIn - [\(3\) ISA Bangalore Section | Groups | LinkedIn](#)



3. Koo [Koo: Connect with Millions of People, Celebrities and Topics on Koo! \(kooapp.com\)](#)



## ISA Honors and Awards

The ISA honors and awards programme gives the Society the chance to formally recognize and acknowledge the outstanding accomplishments and contributions of its members, partners, and other automation specialists.

Click here for more info on ISA honors and awards:

<https://www.isa.org/membership/recognition>

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