



ISA Delhi Section

# PETROLEUM & POWER AUTOMATION MEET 2018

**“INTELLIGENT AUTOMATION - KEY TO ENERGY SECTOR”**

**20<sup>th</sup> & 21<sup>st</sup> April 2018**

**(FRIDAY & SATURDAY)**

**Venue: EROS Hotel, Nehru Place, New Delhi**

**An annual event by International Society for Automation (ISA) Delhi Section**

***ISA -Setting the Standard for Automation***

**Standards  
Certification  
Education & Training  
Publishing  
Conferences & Exhibits**





इंडियन फार्मर्स फर्टिलाइजर कोऑपरेटिव लिमिटेड  
INDIAN FARMERS FERTILISER COOPERATIVE LIMITED



## Message

I am glad to note that ISA Delhi Section is organizing their annual "Petroleum and Power Automation Meet – 2018" on 20<sup>th</sup> and 21<sup>st</sup> April 2018. This is an appreciable effort of ISA Delhi section in contributing towards the growth of Automation Industry and use of Automation for the benefit of Industry. I appreciate the effort put in by ISA Delhi section in bringing together the end users, consultants, manufacturers, suppliers, EPC contractors, and other stakeholders. Such events result in improving the understanding of Industry expectations, new technological developments and the challenges being faced by Automation Industry and the end users.

Present economic thrust with drive to move towards market driven economy especially in oil and gas sector and recent increasing trend of rising crude prices requires that our operations are made more economical, energy efficient, safe and reliable. Automation Industry can play a major role in achieving these objectives. It is a good opportunity for the Automation professionals to attend this meet and enhance the understanding through various technical papers being presented by experts and the displays from reputed manufacturers and technology suppliers.

I hope the present event will result in extensive exchange of information and sharing of knowledge for the benefit of Petroleum and power sector as well as Automation Industry.

I extend my best wishes for the success of this two day event of Petroleum and Power Automation Meet – 2018

Best regards,

**A. K. Singh**

Director (CD & ESP)

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## Message

### Message

India has emerged as a growth engine in the current world order and energy is the primary requirement to sustain it. In this regard coming together of petroleum and power professionals is need of the hour. Petroleum & Power Automation Meet 2018 organised by the ISA Delhi Section is a welcome step in this direction. It is very good initiative by ISA Delhi Section to bring out Technical Papers presentation and Technical Workshop with wide spectrum of topics on emerging trends and challenges of the Petroleum and Power industry.

Energy is the most important input for our national growth and development. The Energy resources in the country have been under severe pressure due to the imbalance created in the demand and supply. With majority of raw materials being imported it is an area of concern for the country with regards to sustainability in the future. In such a case use of digital technology and Automation will help in removing the bottleneck between demand and supply and open new avenues for sustainable growth in petroleum and power sector in India.

In order to fulfil our future requirement, we need to go for rapid capacity addition using all the possible energy options including coal, hydro, nuclear, and renewable resources. There is a growing concern about environment and therefore it becomes even more essential that energy efficiency from the existing fuel systems should be increased on one hand and pollution be reduced be other. In this regard automated systems have a central role in the energy sector for providing increased efficiency, reliability, safety, and stability of the assets of the Petroleum and Power plants. As we are now entering in to the world of AI, Cloud Engineering and IOT we need to give more emphasis on using these technologies to transform traditional energy sources and processes into more refined and productive avenues also issues like cyber security, data transfer and data base management are emerging into new era which needs special attention.

It is a good opportunity for the Control and Instrumentation professionals to attend this conference to enhance the technical expertise as ISA gives a common platform to all the stake holders for sharing the knowledge and expertise.

Best Regards,

**E S Ranganathan**  
Managing Director

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L.K. Vijh  
Executive Director In charge (Technical)



## Message

I am happy to note that International Society of Automation (ISA) - Delhi section is organizing "Petroleum and Power Automation Meet-2018" focused on the latest developments in Automation Technology in the Energy Segment, with the theme: "INTELLIGENT AUTOMATION-KEY TO ENERGY SECTOR" on 20th & 21st April 2018 with a vision and mission to take Instrumentation and Automation to global heights and acquire a numero-uno position in Petroleum and Power Segments in Indian Industry.

The Oil & Gas Sector an important energy provider to nation faces challenges from ever increasing demand for high productivity, improved operational efficiency, increased safety and security meeting regulatory requirements. Today's automation is fully equipped to face the challenges by adopting latest technological advancements without compromising operational safety.

This industry demands adoption of Plant Intelligence digital solutions like IOT, Industry 4.0 and big data analytics that help to connect and integrate the systems that work in isolation. It is necessary to connect the plant floor with the enterprise level that will give real time plant information and enhance productivity.

I believe that the engagement and involvement of various stake holders including technology providers and developers would certainly help in achieving the roadmap for implementing strategies for automation and digital solutions so essential for a world-class Petroleum and Natural Gas utility.

I wish the symposium for their success.

  
(L.K. Vijh),  
Executive Director In charge (Technical)  
Engineers India Limited.

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**सुरेश चोपड़ा**  
कार्यकारी निदेशक (परियोजना)

**Suresh Chopra**  
Executive Director (Projects)



## Message

Being associated with ISA Delhi Section since the past few years it is always worthwhile to look forward to the annual event of Petroleum & Power Automation Meet which is now being organized on 20<sup>th</sup> and 21<sup>st</sup> April 2018. This time once again ISA Delhi Section is targeting to highlight the challenges faced by plant operators and how to address the same through the digital technology which is now becoming a part and parcel of Instrumentation & Control. I am sure that as always the references to bridge performance gaps and drive operational excellence in the Energy Sector will be brought out by the Technical Papers presentations and Technical Workshops on evolving developments and encounters of the Petroleum and Power industry.

Energy is the most important input for our national growth and development. The Energy resources in the country have been under severe pressure due to the imbalance created in the demand and supply and now more importantly due to the latest emission norms associated with harnessing the same. Undoubtedly, it is the Automation Technology that always helps reducing this gap as well as become a major factor in meeting the sustainability prerequisites of the petroleum and power sector in India.

In order to fulfil our upcoming requirement, we need to go for rapid capacity addition using all the possible energy preferences. It is commendable to note that the use of automated system has entered many folds in the energy sector and increased availability, reliability, safety, and stability of the assets of the Petroleum and Power plants. As we are now entering in to the world of Cloud Engineering and IIoT we need to give more emphasis on issues like cyber security, data transfer and data base management.

It is a good opportunity for the Control and Instrumentation professionals to attend this conference to enhance the technical expertise as ISA gives a common platform to all the stake holders for sharing the knowledge and expertise.

I extend my Best Wishes for the success of the Event.

  
(Suresh Chopra)





A Maharatna Company

जी. वेणु

कार्यकारी निदेशक (अभियांत्रिकी)

G. VENU

Executive Director (Engg.)



एन टी पी सी लिमिटेड

भारत सरकार का उद्यम

NTPC Limited

A Govt. of India Enterprise

(Formerly National Thermal Power Corporation Ltd.)

केन्द्रीय कार्यालय / Corporate Centre

I am pleased to know that ISA Delhi Section is organizing "Petroleum & Power Automation Meet 2018" in Delhi on 20<sup>th</sup> and 21<sup>st</sup> April 2018. The efforts put by ISA Delhi Section in bringing all End Users, Consultants, EPC Companies, Manufacturers, Field Instruments and System Vendors, System Integrators and other relevant stakeholders pertaining to Instrumentation & Control are indeed commendable. I congratulate ISA Delhi Section for hosting this all India event which is of prime importance to the entire industry.

Today, with focus shifting on renewable energy & new areas such as e-Mobility, Power sector is full of optimism and positivity. India is looked upon as a world leader now in the power, renewable energy and infrastructure sectors. The India story is gaining unparalleled sense of confidence that was never there.

To meet requirement of India's Growth story, both Oil & Gas sectors and Power sector needs highly qualified experienced and trained professionals to drive the industry in safe and efficient manner meeting the present environment regulations. I hope this knowledge sharing event would add a lot of value to all the participants from these sectors and go a long way in building bridges between professionals from energy sector.

I extend my best wishes for the success of this "Petroleum & Power Automation Meet 2018".

Warm regards,

Yours sincerely,

  
(G. VENU)

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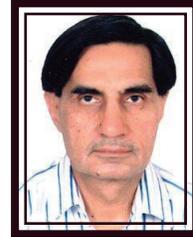
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## ISA DELHI SECTION

ASIA PACIFIC DISTRICT 14



# Message

I am immensely happy to learn that the Instrument Society of Automation Delhi Section (ISA-D) is organizing Petroleum and Power Automation meet-2018 (PPA Meet) with theme "Intelligent Automation-Key To Energy Sector" from 20th to 21st April 2018 and Souvenir is being brought to commemorate this occasion.

Since its inception in year 2000, the role of ISA-D had been to promote latest Technologies in Process Automation thru regularly conducting monthly "Technical Programs", PPA Meets and imparting Technical Training.

It is of great significance that this august body is going to deliberate upon several important topics of today's needs. Professionals, who are expert in their fields will be making aware the audience on different types of latest Technologies available, thru Paper presentation and organizing Training Workshops

I am sure that ISA-D will keep on contributing more effectively in order to achieve the ultimate goal for which ISA-D was established.

I convey my best wishes for the success of PPA Meet.

( S K Dhawan )  
Hony. President  
ISA Delhi Section

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## ISA DELHI SECTION

ASIA PACIFIC DISTRICT 14



### Message

The year 2017 has been a very successful year for ISA Delhi Section where in many new members joined hands to participate and contribute for the more than half a dozen monthly Technical Meets that were held during the year, which has set the tone for the Mega Event of Petroleum and Power Automation Meet (PPAM) 2018. Based on the new inputs and fresh initiatives of upcoming Section leaders, the theme of this year's PPAM was laid out based on the role of Digitalization in Control & Instrumentation domain.

This year the platform of PPAM 2018 is an endeavor to drive the digital technology into Indian Oil & Gas and Power industry in order to create performance headship. With the event being supported by the pioneers of Automation industry from India and abroad, I feel that it will be able to add value for all stakeholders including the end users, suppliers and engineering companies.

Knowledge sharing and continuous engagement of technology leaders is the key to success for any domain including Process Automation. Like in the past many years ISA Delhi section has displayed its commitment to cabinet innovative technologies, I am sure that this year also the experts and peers of the industry will be able to discuss over the common issues. Also considering that the current technology trends of Internet explosion, Industrial Internet of Things, Cloud Computing, Digital Twins shall provide the technical as well as economical benefits of the same will be providing a right interface between the automation fraternity as well as the decision makers and stakeholders in this sector.

I look forward to an enriching two day session where all the participants, delegates, exhibitors and the experts are able to add value in the field of Automation.

( Manish Kumar )  
Hony. President  
ISA Delhi Section

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Email: [info@isadelhi.org](mailto:info@isadelhi.org) website- [www-isadelhi.org](http://www-isadelhi.org).



# *Message*



With Best Regards

A stylized, handwritten signature in black ink, consisting of a large, sweeping 'P' followed by a smaller 'a' and 'l'.

PRASENJIT PAL  
Chief Convenor  
PPA Meet 2018



**S. MAHESH KUMAR**  
**ENGINEERS INDIA LIMITED**  
**ISA PPAM 2018**



I am glad to be the Technical Co-coordinator of “Petroleum and Power Automation Meet-2018” focused on the latest developments in Automation Technology in the Energy Segment, with the theme: “INTELLIGENT AUTOMATION-KEY TO ENERGY SECTOR” on 20th & 21st April 2018 (Friday and Saturday) at Hotel Eros, Nehru Place, New Delhi.

Instrumentation & control systems have always kept pace with the technical and scientific evolutions - from pneumatically controlled system to fully automated state-of-the art Distributed control Systems and microprocessor based field instruments having analog and digital communication with SMART & Foundation Fieldbus technology which are in place for more than a decade. Wireless technology being picked up in the industry is really regarded as the paradigm shift in the world of automation and process industry. Along with Advanced Control Solutions for Process Industry Digitalization - The Harbinger of Fourth Industrial Revolution also plays a major role.

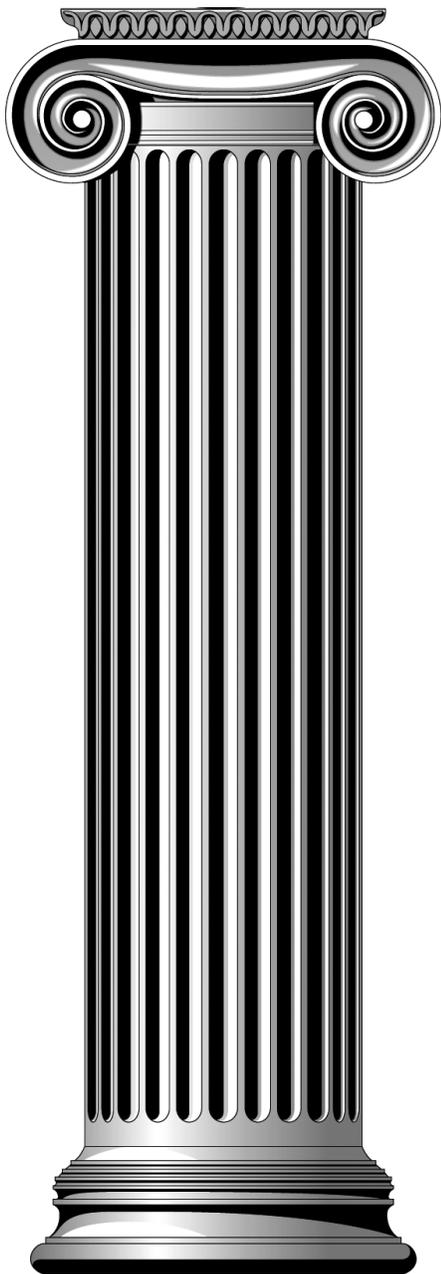
Technology being on the cutting edge with continuous development, I am sure this meet will provide more insight to improve awareness instrumentation and automation technology and generate lot of inspiration and confidence to review and evaluate the future roadmap of technologies in the plant control and monitoring applications with active participation and invaluable knowledge sharing between end-users, suppliers and consultants.

Regards,

S. Mahesh Kumar  
Technical Co-Ordinator  
ISA-PPAM 2018



ISA Delhi Section



## The International Society of Automation (ISA)

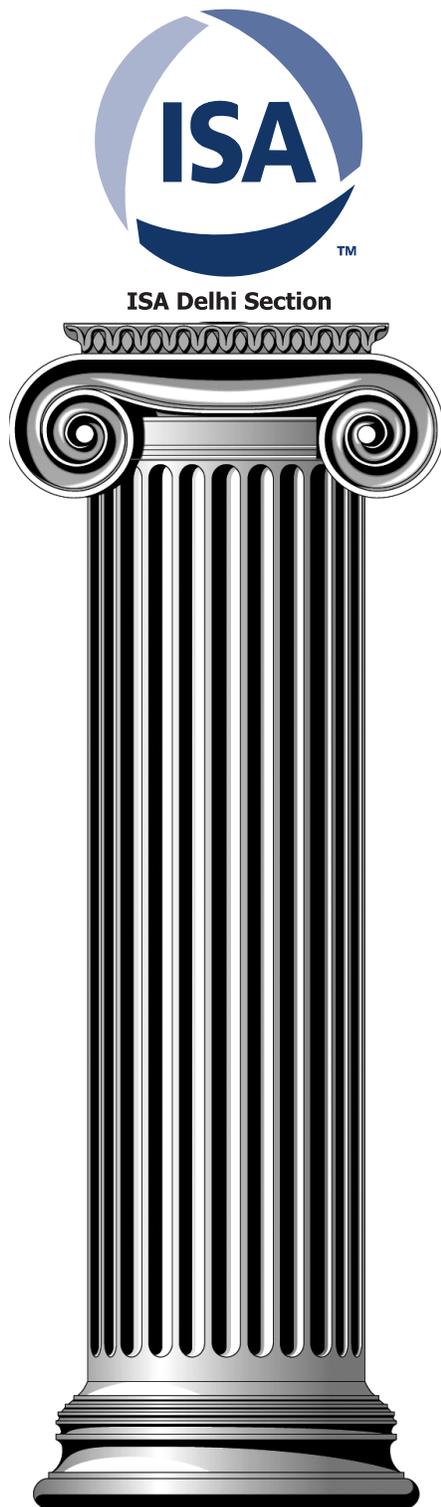
Founded in 1945, the International Society of Automation (ISA) is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals to meet, interact and share their knowledge. Based in Research Triangle Park, North Carolina, ISA is organized into 14 districts and hundreds of sections across the world. The South East Asia region is designated as District-14 and within this district, the Delhi Section is an active organization drawing members from the entire spectrum of automation industry across Power, Oil & Gas, Metallurgy, Chemicals & Fertilizers including the Engineering fraternity from Consultants, EPC Contractors, Automation Component Suppliers & Equipment Manufacturers, System Integrators and many other industries.

### ISA has been involved in promoting emerging technologies across the globe by a variety of ways such as:

- Developing and updating standards for existing & evolving technologies in automation related fields ;
- Publication of Text-books, hand-books, journals, proceedings etc. on a wide array of automation related subjects from primary field sensors to integrated automation and management systems for various kinds of plants & processes;
- Facilitating Interface & interaction with other agencies like IEC, IEEE, EPRI, ASME and others to develop and maintain automation related standards with regular updating, keeping pace with the march of technology in various fields;
- Organising Training, Seminars/Workshops, Webinars and Exhibitions
- Carrying out certification programs for technicians, engineers and senior professionals.
- Recognizing the talented and the dedicated professionals in the field of Automation through various honours and awards
- Enabling Interaction with Student members, formation of student section and annual scholarships, competitions etc. are many interesting student programs of the ISA.

### The ISA Delhi Section - ISA(D)

ISA Delhi Section had been formed almost a decade back and has progressed well since then with a membership of more than 350 and growing. ISA Delhi Section had taken many initiatives in the past including organizing two exhibitions ISA (D) EXPO' 05 & '07, a large number of seminars and workshops on emerging technologies. Regular Monthly technical exchanges on diverse topics are organised for the benefit of all members of ISA(D), thereby increasing the knowledgebase & technical capabilities of members.



ISA Delhi Section has taken quite a few initiatives in the recent past to better address the need for knowledge sharing among industry specific groups of Automation Engineers. Notably, within the overall ambit of ISA(D), two industry specific interest groups have already been created, one for the Power Industry namely Power Automation Technology group( or POWAT) and one for the Oil & Gas Industry called Petroleum & Natural Gas Industries Automation Domain( PNID). ISA (D) is also encouraging the formation of a systems integrators forum, so as to share the vast scattered knowledge base resources of systems integrators community.

## **ISA Standards**

### **Practical Solutions from Industry Experts**

ISA Standards help automation professionals streamline processes and improve industry safety, efficiency, and profitability. Over 150 standards reflect the expertise from over 4,000 industry experts around the world. Since 1949, ISA has been recognized as the expert source for automation and control systems consensus industry standards.

### **Key Features, Advantages, and Benefits of Standards**

Realize a direct return on investment by

- Lowering installation and start-up costs
- Reducing need to maintain large inventories
- Enabling interchangeability of components
- Improving design with less “custom” effort
- Increasing safety

### **Use of standards in industry**

- Improves communication
- Provides practical application of expert knowledge
- Represents years of experience and avoids necessity of starting each project from ground up

### **Standards help you achieve operational excellence by**

- Improving performance
- Lowering maintenance costs
- Reducing downtime
- Enhancing operability
- Saving money

## ISA's Role in Developing Standards

More than 4,000 individuals cooperating with more than 140 committees, subcommittees, working groups and task forces are involved in ISA standards. They're developing standards in areas as diverse as ensuring the safety of electrical equipment used in hazardous locations to cost-savings for interfaces between industrial process control computers and subsystems.

### How a Standard Saves Money

ISA's batch control standard illustrates how using a standard cuts costs. Food, pharmaceutical and specialty chemical companies build factories with increasingly sophisticated computer-driven automation. The batch standard ISA developed-ANSI/ISA-88.00.01 - shaves as much as 30 percent off the cost of designing the system and software used in these plants. ANSI/ISA-88.00.01 sets out a blueprint that engineers can use to make portions of the code interchangeable, which is less expensive than designing each piece from the ground up.

The savings extend beyond the facility's design, though. By using the batch standard, companies save as much as 10 to 15 percent off the typical cost of meeting Food and Drug Administration criteria for the reliability of automation equipment.

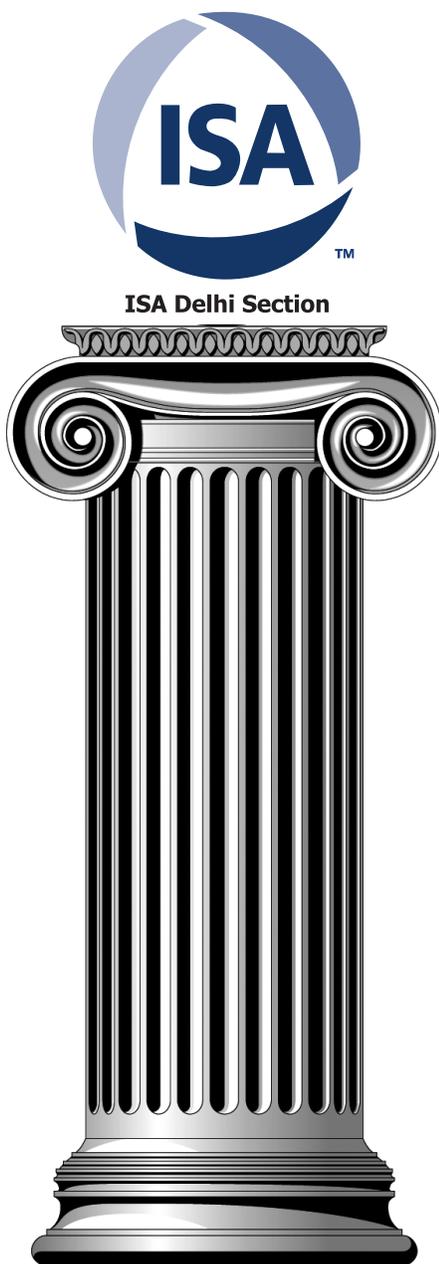
### How a Standard Saves Lives

Other ISA standards focus on safety. ISA has developed standards for the performance requirements of toxic gas detectors, standards to keep electrical equipment from igniting flammable material and standards to ensure safety at nuclear power plants.

And some ISA standards can help an entire industry combine cost savings and safety. The most popular ISA standard is ANSI/ISA-5.1, Instrumentation Symbols and Identification. Developed in 1949 and most recently revised in 2009, these symbols are used in blueprints for everything from power plants to factories. If every contractor on a project knows the standard symbols, there are fewer communication problems that could lead to costly delays or safety problems.

### Using Standards to Help Your Business Expand Globally

Your company has a product that's taken the United States by storm; now you want to expand globally. But there is a hitch or, as the engineers might tell you, a "technical barrier to trade." Your company's product, or the process by which it's made, doesn't meet international standards. Many ISA standards are also international standards, and our committees strive to stay current with evolving global standards. ISA administers three committees for the International Electro technical Commission (IEC), which is one of the two most widely recognized international standards groups, along with International Organization for Standardization (ISO).



## How Your Company Can Take Advantage of ISA's Standards

- Buy ISA standards and train your employees to follow it.
- Help set a standard. ISA's committees are eager for help. Both voting and non-voting memberships are available. Voting members must have their employers' approval, in part because attending at least one meeting a year is expected. But we're cutting down on the time demands of committee membership by encouraging members to do a great deal of their work via e-mail. Non-voting members supply input but are not required to attend meetings. Apply online to volunteer.

## Students

Students can come to automation from a variety of backgrounds and academic programs. It is sometimes difficult for you to find programs that concentrate on automation as a career or specialty. This potential variety can create challenges for students like you that are not seen in many areas of studies.

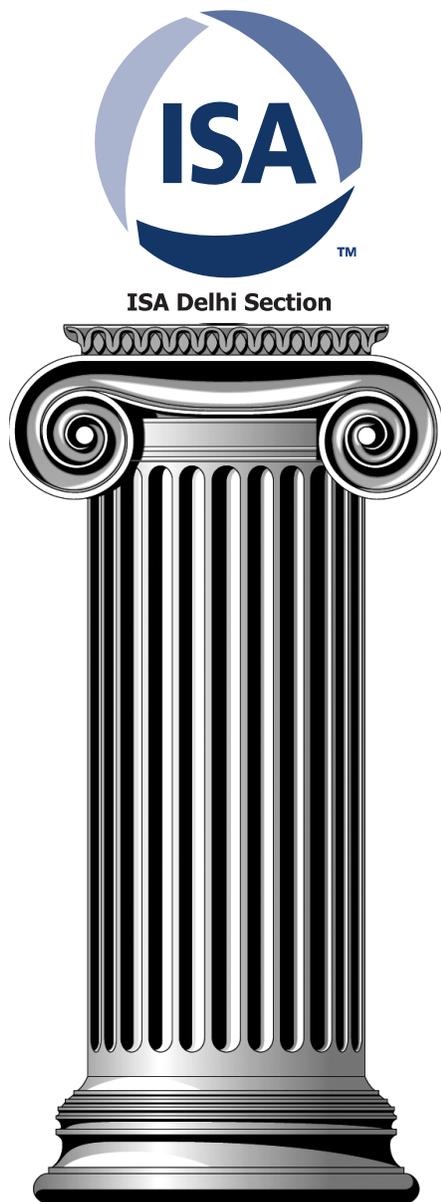
The essence of automation is that it is a multidisciplinary art, not a single discipline. You are required to know a lot about many things to function as an automation professional. Automation studies are rarely centred in one department. Automation students and faculty on a campus could come from any number of engineering areas. That means that published findings could appear in a number of journals and presented at a myriad of scientific conventions. This diversification makes it extremely difficult for students to stay current on the newest findings. It also means that you need to have a very open outlook on what will make you a good automation professional.

The ISA web site helps students more easily stay current on research without attending numerous expensive conventions or wading through non-automation related literature for the useful gems. Also, students can find the conferences they should attend to both gain information and networking possibilities, which can lead to job possibilities.

The ISA web site contains the Automation Body of Knowledge, from the very basics of sensors and controls to the most detailed industrial networking, enterprise integration, cyber security and safety information. When you have digested that Body of Knowledge, you will be ready to be a Certified Automation Professional, and you can find the tutorials and test materials here to help you.

The ISA Mentor Program for Young Professionals and Students

ISA's Mentor Program enables young professional ISA Members and Student Members to access the wisdom and expertise of seasoned ISA Members, while it offers veteran ISA professionals the chance to share their wisdom and make a difference in someone's career. A



mentor can give a young professional guidance in his or her career or help a student determine if automation and control is the right path to follow.

ISA's Mentor Program is an online program, so there are no meetings to attend and there is no travel. ISA Members from all over the world can participate, and the relationship can develop and progress at the convenience of the mentor and protégé.

ISA Members are encouraged to register and participate in the program as mentors. Find out more about becoming a mentor.

ISA's younger Members and Student Members are urged to use this valuable Member benefit. Find out more about getting an ISA Mentor and how to select a mentor.



## 2017-2018 ISA Section Leaders

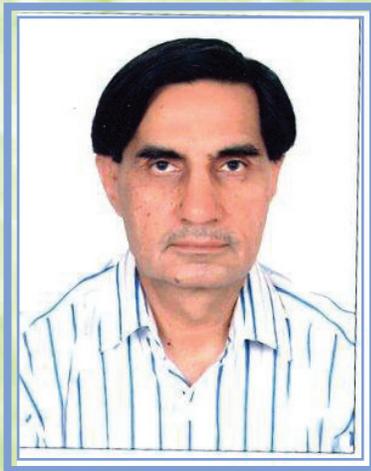
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**District #: 14**

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# Team ISA Delhi



**Sh. S K Dhawan**  
**Hon. President**



**Sh. M K Srivastava**  
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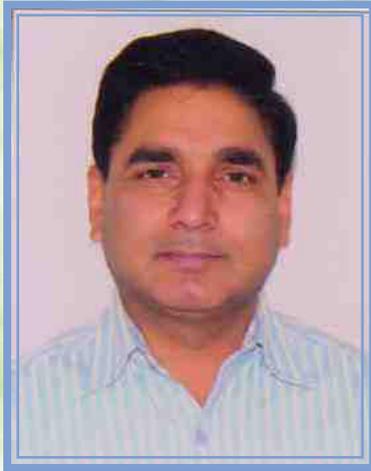


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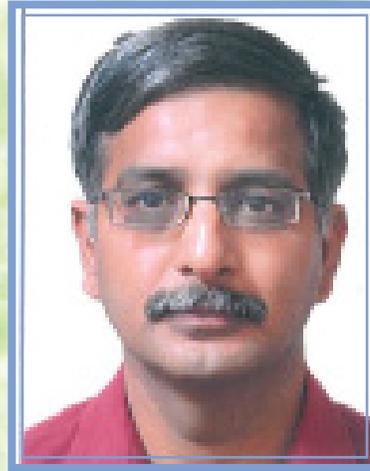


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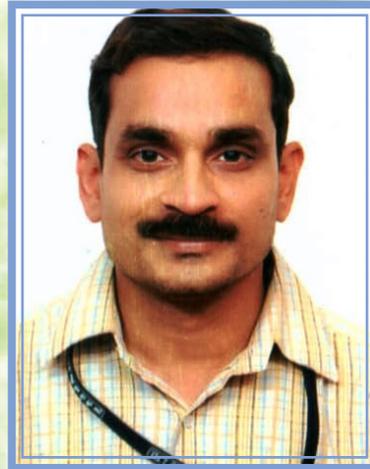


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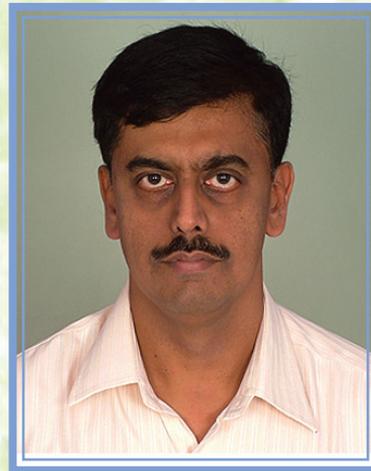
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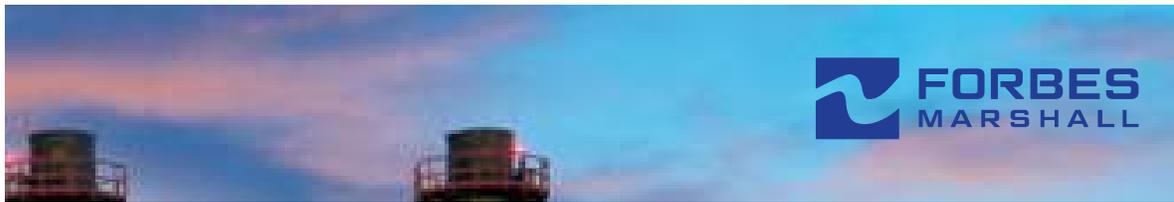


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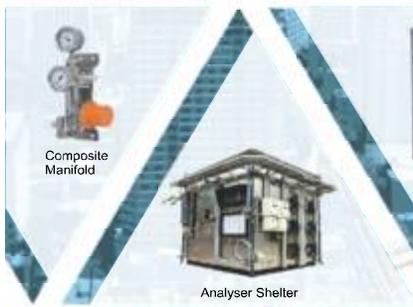


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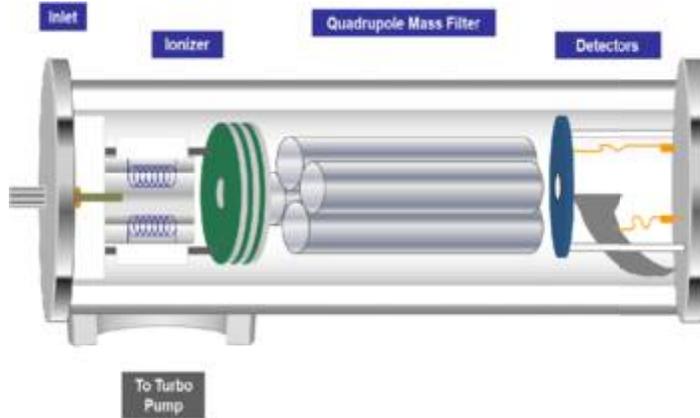
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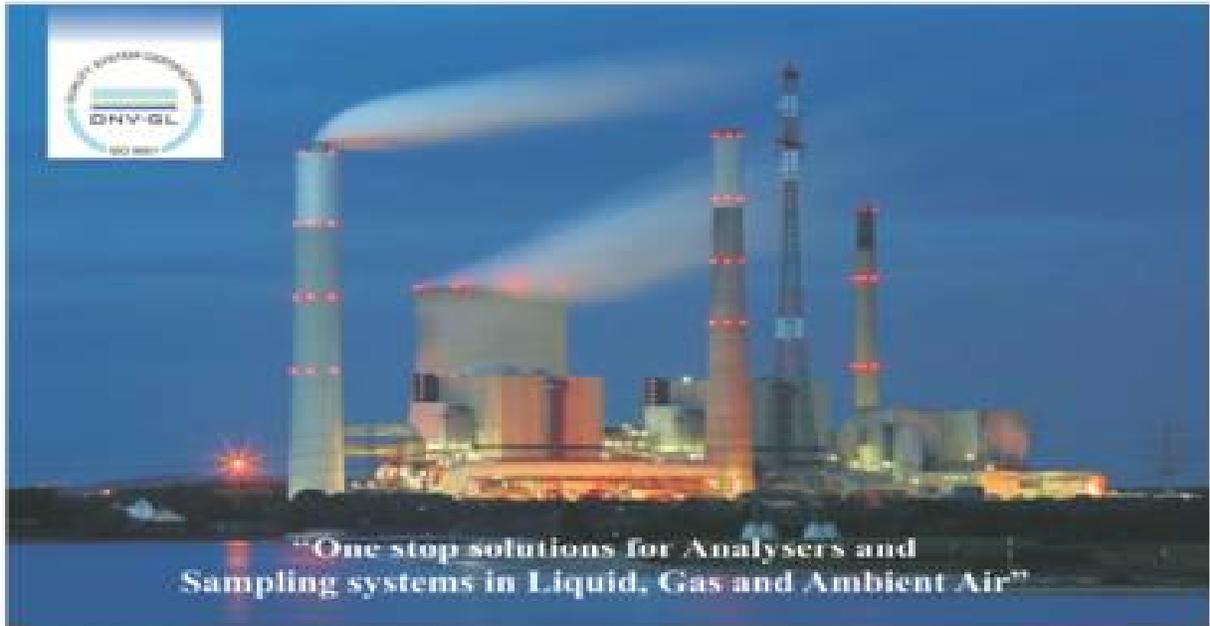
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