



# INDIAN INSTITUTE OF CHEMICAL ENGINEERS HYDERABAD REGIONAL CENTRE

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



## **ANNUAL REPORT: 2018 - 2019**

6<sup>th</sup> July 2019

Respected dignitaries, esteemed members, students and invited guests, a very good evening to all of you. On behalf of the Executive Committee of Indian Institute of Chemical Engineers - Hyderabad Regional Centre (IICHE-HRC), I take this opportunity in extending a warm and hearty welcome to you all and your family members to this **60<sup>th</sup> Annual General Meeting (AGM) of Hyderabad Regional Centre.**

It is my privilege to place the Annual Report 2018 - 2019 before you. I hope this report copy is with you. Last AGM-2018 was held on 06.07.2018 at the Hotel Blue Orchid, Habsiguda, Hyderabad. Nearly 150 members (including spouses and student award winners) attended the AGM. Executive Committee (EC) of the year 2018-19 has unanimously elected Smt. Sheela as the Chairperson. The following is the list of office bearers, Members, Co-opted Members of the Executive Committee of IICHE-HRC and Permanent Invitees for the year 2018 - 2019.

<b><u>OFFICE BEARERS</u></b>	<b><u>MEMBERS</u></b>	<b><u>PERMANENT INVITEES</u></b>
Smt. Sheela (NFC) Chairperson	Sri C P Ramulu (IICT Rtd) Prof. P. Shashikala (OUCT Rtd) Sri E. Venkatesham (NFC) Prof. R. Sreedhar Rao (CBIT) Sri Chokkahula Apparao (NFC) Prof. S. Srinu Naik (OUCT)	Sri G. V. Sethuraman, Past President - IICHE Sri A. Bhasker Reddy, Past President - IICHE Prof. S. Venkateshwar, Past President - IICHE Prof. V. V. Basava Rao, Vice President - IICHE Prof. R. Shyam Sunder, Council Member, IICHE Dr. Vijay Kale, Past Chairman, IICHE - HRC
Sri M. Ranga Rao (NFC Rtd) Vice Chairman HRC & Council Member, IICHE	<b><u>CO-OPTED MEMBERS</u></b> Sri K. Ravichand (Free Lancer) Sri D N Singh (NFC) Sri Arun Anand (NFC)	<b><u>STUDENT CHAPTER COORDINATORS</u></b> Sri S. Ilaiyah (OUCT) Prof. R. Sreedhar Rao (CBIT) Prof. T. Sunil Kumar (NITW) Prof. Dilip Kumar Bahera (JNTUACE) Prof. G. B. Radhika (BVRIT) Prof. S. Kishore Kumar (BVRIT) Prof. Srikanta Dinda (BITSP, HYD) Prof. M. Mukunda Vani (CVSR-AGI) Prof. Dipankar Das (JNTUH)
Sri M.G.V. Chalapathi Rao (IICT Rtd) Vice Chairman		
Dr. Sanjay Bhardwaj (ARCI) Hon. Secretary		
Sri S. Ilaiyah (OUCT) Hon. Jt. Secretary		
Sri M. Misra (NFC) Hon. Treasurer		

The elections for the Executive Committee for HRC were conducted by Sri A. Bhasker Reddy, Past President, IICHE National Council and the Executive Committee has been elected for the year 2019-21. I express my sincere thanks to him on behalf of HRC. For IICHE National Council, Prof. S. V. Satyanarayana has been elected as President, Prof. V. V. Basava Rao has been elected as Vice President and Sri M Ranga Rao as Hon. Joint Secretary for the year 2019.

## Activities of the year

With the co-operation and support of all EC members and permanent invitees during this period, Fourteen Executive Committee meetings have been held and the following activities were carried out in 2018-19.

### Seminar / Lectures Organized

- Indian Institute of Chemical Engineers - Hyderabad Regional Centre (IICHe-HRC) in association with Osmania University College of Technology (OUCT) organized a lecture titled "Gas liquid reactions – a new approach for regime identification and development of criteria" on 8<sup>th</sup> October 2018 by Prof. D.P. Rao, former Head, Chemical Engineering Department, IIT Delhi. Lecture was attended by academicians, scientists, IICHe members, students and industry representatives.
- IICHe – HRC organized a Seminar on "Role of Chemical Engineers in Nation Building" at Nuclear Fuel



Complex (NFC) Hyderabad on 21<sup>st</sup> February 2019. Dr. Dinesh Srivastava, Chairman and Chief Executive of NFC was chief guest. He spoke on the increasing role of chemical engineers in developing techno-commercially feasible innovations for the societal utility. Guests of honour were Prof. P.R. Vasudeva Rao, Vice Chancellor, Homi Bhabha National Institute, Mumbai; Prof. S.V. Satyanarayana, President, IICHe and Prof. P. De, Past President, IICHe. They shared their thoughts on

topics ranging from nuclear materials processing to relevance of chemical engineering in the present context. Mrs. Sheela, Chairperson, IICHe – HRC emphasized on the need of mentoring for budding chemical engineers to realize their potential. Mr. Vinod Khilnane, Director, Heavy Water Board (HWB) discussed the novel contributions of HWB for nuclear and medical applications. Mr. Deepak Ahuja, National Production Head, Geocycle India talked about the role of chemical engineers in achieving landfill free India. Dr. Sanjay Bhardwaj, IICHe-HRC Secretary summed-up the proceedings of the Seminar. Vote of thanks was presented by Mr. S. Ilaiyah, IICHe-HRC Joint Secretary. Seminar was attended by nearly 150 IICHe-HRC members including faculty and students from engineering colleges associated with the IICHe - HRC. Lectures were followed by the visit to NFC industry.

- Seminar on "**Innovations in Chemical Sector**" was organized by IICHe-HRC at NFC Hyderabad on 10<sup>th</sup> May 2019 at NFC Hyderabad to celebrate the IICHe Foundation Day. Mr. C. Phani Babu, Deputy Chief Executive, NFC-Kota was the chief guest. Prof. Govardhana Rao Vadlamudi, former professor of IIT Bombay and former Vice Chancellor of Vignan University was the guest of honour. He also delivered the lecture on "Chemical Industry- Growth Potential for next decade and career opportunities for



chemical engineers". Speakers and their lecture topics were as follows: Prof. Chandra Shekhar Sharma from IIT Hyderabad on "translational research : taking innovations from lab to market", Mr. Afzal Hasan, CEO of Hasan and Singh Intellectuals@Law on "from the perspective of IP, as a research organization and as an inventor, what to do and what not to do" , Sri P.V. Vidyadhara Rao, CEO, ESD Control Systems, Hyderabad on "static electricity hazards in process industries"; Dr. Sanjay Bhardwaj , Scientist-F, ARCI on "Technology Commercialization".

## Invited Lectures Organized

- Invited lecture titled "Mixed Oxides and Nanocomposites as Recyclable Catalysts for Synthesis and Water Treatment" was delivered by Dr. Sreekantha B. Jonnalagadda, Senior Professor of Chemistry, University of KwaZulu – Natal, South Africa on 18<sup>th</sup> January 2019 at International Advanced Research Centre (ARCI), Balapur, Hyderabad. He mentioned that Ozone driven oxidative degradation of non-biodegradable and refractory compounds gained significant popularity in water treatment, due its potentially green starting materials and less toxic by-products. The details of protocols for ozone initiated advanced oxidation processes for degradation of organics and multicomponent reactions for value added conversions were discussed.



- IICHe-HRC organized 12<sup>th</sup> M.P. Chary Memorial Lecture on 18<sup>th</sup> June 2019 at Hyderabad. Lecture has been instituted in the memory of Sri M.P. Chary, who excelled as an entrepreneur. He was associated with the creation of Dr. Reddy's Laboratories Limited, Elbit Medical Diagnostics Limited, Magene Life Sciences Pvt



Ltd and Globarena Technologies Pvt Ltd. Lecture was delivered by Dr. Vilas Tathavadkar, Senior Vice President, Aditya Birla Science & Technology Co. Ltd. He spoke on emerging topic of Industry 4.0, with examples from primary metal industry in particular, conventional manufacturing industry in general. He shared his thoughts on challenges associated with

implementation of these new technologies and the need of appropriate business models. Challenges remain with the such as process complexity, costs, availability of process data and domain knowledge at industry/micro level. At macro level, trends like e-mobility, climate change, circular economy are important. Dr. Madhusudana Rao, Chief Executive Officer, Atal Incubation Centre, CCMB graced the occasion as the Chief Guest. In his address, he provided the insights relevant for commercialization of knowledge-base and intellectual property. Mr. Sri Charan Lakkraju, Founder CEO, Stumagz was the guest of honour. Smt. Sheela, Chairperson, IICHe - HRC welcomed the gathering and Dr. Sanjay Bhardwaj, Hon. Secretary, IICHe – HRC presented the vote of thanks. Sri E. Venkatesham, Executive Committee member, IICHe - HRC conducted the proceedings. Sri Anantha Chary - CMD -Globarena Technologies Pvt. Ltd. was present on the occasion. Over 110 representatives from R & D, academia and industry attended the programme. EC members contributed towards successful organizing the programme.



## Student Chapter Activities

### A: Inter- institutional Student Chapter Competitions



Inter- institutional student chapter competitions were held on 16<sup>th</sup> February 2019 at University College of Technology, Osmania University (UCT, OU). Technical quiz, elocution and essay writing competitions were organized. Following student chapters participated: Anurag Group of Institutions, B.V. Raju Institute of Technology, Birla Institute of Technology Pilani- Hyderabad, Chaitanya Bharati Institute of Technology, Jawaharlal Nehru

Institute of Technology (JNTU) Anantapur, JNTU Hyderabad, National Institute of Technology (NIT) Warangal and UCT, OU. On this occasion, Dr. M. Ramakrishna, former Chief Scientist, Indian Institute of Chemical Technology delivered a talk on "Chemical Engineering Vision-2030".

### B: College-wise Events

#### *Jawahar Lal Nehru Technological University (JNTU) Hyderabad:*



The Annual event named "GENOS 2K19", a National level Technical Symposium was conducted during 15-16 March, 2019 in collaboration with IICHe –HRC.

Technical Seminar entitled "Recent Advances on Mass Spectroscopy" was delivered by Dr. Jagadeeshwar Reddy, Senior Scientist, IICT, Hyderabad on 25<sup>th</sup> February, 2019.

Lecture on "Nuclear Magnetic Resonance Spectroscopy" was delivered by Prof. Y. Jayaprakash Rao, Department of Chemistry, Osmania University on 25<sup>th</sup> February, 2019.

A Workshop on "Introduction to Hybrid Vehicles" was conducted with the resource person, Dr. Raja Banerjee, Professor, Department of Mechanical & Aerospace Engineering, IIT Hyderabad on 16 March, 2019

#### *JNTU Anantapur*



FUSION-2k19, National Level Technical Student Symposium was organized by Department of Chemical Engineering on 29<sup>th</sup> March 2019, JNTUA College of Engineering, Anantapur.

Three Day Workshop on Experimental Approaches & Instrumental Aspects in Analytical Chemistry", organized under TEQIP-III, 6-8<sup>th</sup> February 2019.

BTech 4<sup>th</sup> year students visited SW Steels Limited, Bellary, Karnataka on 6<sup>th</sup> July 2018.

#### *Osmania University College of Technology (OUCT)*



Annual national level techno-cultural fest, Technosmania 2k19, a 3-day symposium, was organized during 28<sup>th</sup>- 30<sup>th</sup> March 2019. 5 major





departments (Chemical, Food Technology, Textile Technology, Biotechnology and Pharmacy) of OUCT organized the event in association with IChE – HRC.

Five-day short term course on “Chemical Vapor Deposition” was conducted Prof. V. V. Basava Rao as coordinator during 14<sup>th</sup> - 21<sup>th</sup> September, 2018 under MHRD, Government of India program titled ‘Global Initiative of Academic Networks (GIAN).

Prof. V.V. Mahajani, ICT Bombay delivered a lecture on “Reduction of Green House Gases from Thermal Power Plants” on 23<sup>rd</sup> February 2019. Programme was organized in association with ICT Alumni Association.

### **Anurag Group of Institutions (AGI)**



#### **National Technical Fest “RASAYANIKA 2K18”**

Department of Chemical Engineering, Anurag Group of Institutions organized Two-Day National Technical Fest “RASAYANIKA 2K18” on 19<sup>th</sup> & 20<sup>th</sup> December 2018 with the theme “Emerging Technologies for Service of Humanity: Innovations & Opportunities”.

#### **Invited Lectures**

Mr. G.K. Anand, Advisor, IL & FS Environmental Services Pvt. Limited, Hyderabad on “Accident Prevention in Chemical Process Plant” on 25<sup>th</sup> August 2018

Dr. T. Sunil Kumar, Associate Professor, Dept. of Chemical Engg., NIT, Warangal on “Modelling and Simulation of Heat Exchangers” on 26<sup>th</sup> November 2018

Dr. J. V.N. Reddy, Associate President- corporate- EHS, Aurobindo Pharma Ltd. on “Environmental Challenges in Pharmaceutical Engineering” on 19<sup>th</sup> -20<sup>th</sup> December 2018

Dr. Balaji Krishnamurthy, Associate Professor, Dept. of Chemical Engg., BITS Pilani, Hyderabad delivered a lecture titled “Mathematical Modelling for dissolution kinetics of Lithium ion battery” on 12<sup>th</sup> March 2019.

Mr. G. Vijaya Kumar, Process Engineer and Senior Consultant, Invensys delivered a lecture titled “Industrial applications of Chemical Engineering” on 19<sup>th</sup> March, 2019.

#### **Industrial Visits**

Students of Chemical Engineering Department, Anurag Group of Institutions visited Lohiya Industries, Hyderabad on 28<sup>th</sup> July, 2018, Clair Engineers Pvt. Ltd. Hyderabad on 9<sup>th</sup> January 2019, Nuclear Fuel Complex, Hyderabad on 21<sup>st</sup> February, 2019 and National Remote Sensing Centre, Shadnagar on 1<sup>st</sup> March 2019.

#### **C: Miscellaneous IChE-HRC Support to Students**

- Over 15 students were assisted for internship training, 1 student for 1-year project

#### **D: Felicitations during AGM 2018**

- Prof. D. Jaya Prakash, Former Principal, Osmania University College of Technology (OUCT) and Sri Kiran Kumar Rampally, Managing Partner, Photon Life Sciences LLP were felicitated for their outstanding contributions for realizing the aims and objectives of the IChE.

## E: National Awards / Recognitions from IChE

- Dr. Sanjay Bhardwaj, ARCI, Hyderabad received IChE - ICI India Ltd. Award for excellence in process or product development.
- Dr. S. Sridhar, IICT, Hyderabad received IChE - NOCIL Award for excellence in design or development of process plant and equipment.



Above Awards were presented by Prof. G.D. Yadav, Vice Chancellor, Institute of Chemical Technology, Mumbai and by Prof. S.K. Das, Director, IIT Ropar on 27<sup>th</sup> December 2019 during the 71<sup>st</sup> Annual Session-cum-Indian Chemical Engineering Congress (CHEMCON) 2018 held at NIT Jalandhar.

**IChE-HRC** got the support of IICT, OUCT, CBIT, AGI, ARCI and various industrial organizations such as NFC, Enfab Industries, Clair Engineers Pvt. Ltd., Prathista Industries Limited and also from the different educational institutions in conducting various programs successfully. We take this opportunity to thank M/s. T. Raghavendra & Associates for auditing the Annual Accounts for the financial year ending on 31<sup>st</sup> March 2019 and also to Sri C. P. Ramulu for his valuable guidance in keeping the Annual Accounts of the IChE – HRC in proper form. I wish to thank our chairperson Smt. Sheela and all our Executive Committee Members for their support. I am thankful to Sri M. Ranga Rao and Sri K. Ravichand for conducting student competitions and student chapter activities with the association of the student chapter coordinators. Our complete Executive Body would like to put on record, the services of Prof. S. Venkateshwar, Sri A. Bhasker Reddy, Sri G. V. Sethuraman and Dr. K. Sainath - Managing Director-Clair Engineers Pvt Ltd. for their valuable guidance in executing all the programs successfully. With this, I submit this report, together with the audited statement of Accounts, for the approval of esteemed members of the IChE -HRC.

Thank you one and all !

Sd/-

**(Dr. Sanjay Bhardwaj)**

Hon. Regional Secretary, IChE-HRC

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