



# **INDIAN INSTITUTE OF CHEMICAL ENGINEERS** **(NORTHERN REGIONAL CENTRE)**

July 13, 2019

## **ANNUAL REPORT 2018-19**

*(This report covers the Activities of the IICChE (NRC) during the period 1<sup>st</sup> July 2018 to 30<sup>th</sup> June 2019)*

The Executive Committee formed for the year 2018-2020 was:-

<b>Chairman</b>	Prof. Anil K. Saroha	<b>Vice Chairman</b>	Dr. Sachchida Nand
<b>Honorary Secretary</b>	Mr. Abhijit B. Pal	<b>Honorary Joint Secretary</b>	Mr. Rajiv Narang
<b>Honorary Treasurer</b>	Dr. Anil Verma		
<b>Members</b>	Prof. S.S. Sambhi	Prof. K. K. Pant	Dr. S.N. Chakravarty
	Prof. V. K. Srivastava	Mr. R.A. Sinha	Mr. Umesh Goel
	Mr. Subodh Sarin		
<b>Co-opted Members</b>	Mr. D.D. Maheshwari	Mr. Shyam Bang	

## **Activities of NRC**

This account covers the period from **1<sup>st</sup> July, 2018 to 30<sup>th</sup> June, 2019.**

In the year 2018-19, we have been able to organize number of activities on behalf of IICChE (Northern Regional Centre) and jointly with other organizations as mentioned below.

S. No.	Date	Venue	Title	
1	14-07-2018	Library, IChE (NRC), New Delhi	#4 <sup>th</sup> National Council Meeting of IChE	
2	14-07-2018	Auditorium, IChE (NRC), New Delhi	45 <sup>th</sup> Annual General Meeting of IChE (Northern Regional Centre)	
3	05-09-2018	Exam Hall, IChE (NRC), New Delhi	IChE Associate Membership Examinations, Sept 2018	
4	06-10-2018	Auditorium, IChE (NRC), New Delhi	IChE (NRC) Learning with the Leaders Lecture Series	
			<b>Topic</b>	<b>Speaker</b>
			Chemical Engineering Applications to Food Processing Industry	<i>Mr. P. L. Kaul, Managing Director, Mariental India Pvt. Ltd.</i>
			Cellulosic Ethanol - Opportunities and Challenges	<i>Mr. Jonny Goyal, Principal Research Analyst, IHS Chemicals-PEP, IHS Markit</i>

#### **Foundation Day of Indian Institute of Chemical Engineers (Northern Regional Centre), New Delhi -**

The foundation day program was held on 19<sup>th</sup> January, 2019. During this occasion two lectures were organized.

Dr. SSV Ramakumar, Director (R&D), Indian Oil Corporation Limited presented a paper on “Low Carbon Imperatives – Indian & IndianOil’s Initiatives”.

Dr. Sanjeev S. Katti, Director General, ONGC Energy Centre presented a paper on “Green and Clean Energy: Challenges and Opportunities”.

During the foundation day celebration, merit-cum-means scholarships were distributed to 20 students from AMU Aligarh, BCET Gurdaspur, DCRUST Murthal, IIT Delhi and IIT BHU.

## Seminars / Workshops

S. No.	Date	Venue	Title												
1	06.04.2019	Auditorium, IChE (NRC), New Delhi	<p><b>IChE-NRC seminar on “3D Printing-Industrial Application &amp; Demonstration, Corn Starch Compostable Bio-Plastic, Recycling of Plastics and Graphene-Uses and Application”</b></p> <p>Indian Institute of Chemical Engineers (Northern Regional Centre) organized a seminar on the latest cutting edge technologies, which can become the future disruptive technologies in Chemical Engineering. This includes topics like 3D Printing and its Industrial Application, alongwith demonstration, Graphene - the wonder material and topics like Bioplastic and recycle of plastics. The overall response to the seminar exceeded all expectations. The members of the audience expressed the desire that more such seminars should be held in future.</p>												
			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Topic</th> <th style="width: 40%;">Speaker</th> </tr> </thead> <tbody> <tr> <td>3D Printing – Industrial Application</td> <td><i>Prof. P. V. M. Rao Head, Department of Design, Indian Institute of Technology Delhi</i></td> </tr> <tr> <td>Corn Starch Compostable Bioplastic</td> <td><i>Dr. Anomitra Chakravarty Managing Director, KPS Consultants &amp; Impex Pvt. Ltd.</i></td> </tr> <tr> <td>Recycling of Plastics</td> <td><i>Mr. Mihir Banerji President, Indian Plastics Institute</i></td> </tr> <tr> <td>Graphene – Usage and Application</td> <td><i>Dr. S.N. Chakravarty Polym Consultants</i></td> </tr> <tr> <td>3D Printing and Demonstration</td> <td><i>Mr. Saroop Chand Adroitec Information Systems Pvt Ltd</i></td> </tr> </tbody> </table>	Topic	Speaker	3D Printing – Industrial Application	<i>Prof. P. V. M. Rao Head, Department of Design, Indian Institute of Technology Delhi</i>	Corn Starch Compostable Bioplastic	<i>Dr. Anomitra Chakravarty Managing Director, KPS Consultants &amp; Impex Pvt. Ltd.</i>	Recycling of Plastics	<i>Mr. Mihir Banerji President, Indian Plastics Institute</i>	Graphene – Usage and Application	<i>Dr. S.N. Chakravarty Polym Consultants</i>	3D Printing and Demonstration	<i>Mr. Saroop Chand Adroitec Information Systems Pvt Ltd</i>
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### Programme with Lovraj Kumar Memorial Trust (LKMT):

LKMT has conducted two annual events in association with IChE (NRC). This included an annual lecture and a seminar.

#### ANNUAL LECTURE -

The annual lecture of Lovraj Kumar Memorial Trust was conducted on 22<sup>nd</sup> November, 2018 at India International Center. It was delivered by Shri Prabhat Kumar, former Governor of Jharkhand, Government of India on “Public Service – Ethics in the Time of Discontent”.

#### SEMINAR –

The Lovraj Kumar Memorial Trust seminar on “**Opportunities in Alternative Usage of Coal**” was organized on 8<sup>th</sup> February, 2019 at India International Centre, New Delhi.

The focus of the seminar on:

- Identify and implement technologies to improve the efficiency of power generation (high efficiency, low emission options),
- Value addition of coal via gasification (non-catalytic as well as catalytic), with primary emphasis on the production of Synthetic Natural Gas (SNG) , petroleum products and feedstock for production of other chemicals from coal to provide a clean fuel and a range of chemicals that can be conveniently piped to major as well as small consumers,
- Carbon capture and sequestration and utilization (CCSU), Application of technology to achieve the desired objectives,
- Development of indigenous capability through a concerted R&D & design/engineering efforts.

Following were the topics and presenters for the seminar:

<b>PRESENTER</b>	<b>TOPIC</b>
Mr. Thomas Mathew Reliance Industries	Possibilities on Alternatives on Usage of coal
Mr. Rajesh Jha Adani Synenergy Ltd	Coal Gasification – An opportunity to meet Chemical & Petrochemical demand of India
Mr. A.N. Tiwari Jindal Steel & Power Ltd	Coal Gasification
Dr. Alok Tripathy CSIR-IMMT	Non Coking Coal to Metallurgical Coke
Dr. Sanjeev S. Katti & Dr. Nimmi Singh ONGC Energy Centre	Bio CBM
Mr. P.N. Hajra Ex-ONGC	CBM
Mr. Devendra Prasad Coal India Ltd	Coal to Fertilizers

### **CHEMCON - 2019**

**Northern Regional Centre shall be organizing the 72<sup>nd</sup> Annual Session of Indian Institute of Chemical Engineers “CHEMCON-2019” in collaboration with Indian Institute of Technology, Delhi from 16<sup>th</sup> – 19<sup>th</sup> December, 2019 at IIT Delhi. The first and second announcement brochures have already been circulated to our members.**

### **Student Chapters**

During recent year, IChE has taken a decision that the Regional Centres will be the mentor and guide of the student's chapters. Based on that, IChE-NRC takes keen interest in the student's chapters. Following are the details of the student's chapters in NRC:

Sl. No	Student Chapter	Coordinator	Activity Report
1.	DCRUST, Murthal	Dr. Manju Rani	N/A
2.	Delhi Technological University	Dr. Manish Jain	Received
3.	Shiv Nadar University	Dr. Yamini Sistla	N/A
4.	USCT - GGSIPU	Dr. Dinesh Kumar	Received
5.	AMU Aligarh	Dr. Sadaf Zaidi	N/A
6.	Galgotias University	Ms. Maham Malik	N/A

### Student Chapter Activity Report

Delhi Technological University			
S. No.	Date & Venue	Event/Programme	Details
1	17/09/2018 at DTU	<b>ORIENTATION AND INTERACTIVE SESSION</b>	<ul style="list-style-type: none"> <li>Indian Institute of Chemical Engineers, DTU Chapter held an orientation for B.Tech. first and second year students pursuing Polymer Science and Chemical Technology, Biotechnology and Environmental Engineering to introduce them to the initiative and inform them about further course of action and future plans of the chapter.</li> <li>The event was graced by IChE DTU Chapter's Faculty Advisor, Dr. Manish Jain.</li> </ul>
2	29/10/2018 at DTU	<b>ONLINE ARTICLE WRITING COMPETITION</b>	<ul style="list-style-type: none"> <li>Indian Institute of Chemical Engineers, DTU Chapter organized an article writing competition to give the budding chemical engineers a chance to ink their thoughts on paper to win cash prizes up to INR 500.</li> <li>The topic for the same was "Innovative Ways To Control Air Pollution" Participants had to submit their article with a word limit of 500 words in a team of maximum 3 students.</li> <li>12 entries were received and participants securing top 2 positions</li> </ul>

			were rewarded INR 300 and INR 200 respectively.
3	08/02/2019 at Exposition Hall, DTU	<b>ALCHEMIST - Technical Paper Presentation</b>	<ul style="list-style-type: none"> <li>• A Technical Paper Presentation event which aspires to encourage, identify and acknowledge new research done in Chemical and Polymer fields by students and academicians alike.</li> <li>• Alchemist allows participants to showcase their research and to bask in the recognition they deserve. This event helps in adapting readily to changing technologies and problems emphasis and develop creative solutions that are responsive to the society as a whole.</li> <li>• The judges, Dr. Poonam Singh, Dr. Manish Jain &amp; Dr. Anil Kumar judged the papers based on the level of research of the papers.</li> <li>• The winners were awarded a prize money of 10,000/- INR which was sponsored by IChE (NRC).</li> </ul>
4	08/02/2019 at Wind Point, DTU	<b>CHEM CAR</b>	<ul style="list-style-type: none"> <li>• Participants prepared a very bewitching and unique model of a car that can run on by means of a simple chemical reaction.</li> <li>• By car, it meant that it should be a moving model as simple as a PET bottle with two or four wheels.</li> <li>• The participant, who beaten the chase the fastest, won exclusive cash prizes and goodies.</li> </ul>
5	08/02/2019 at Wind Point, DTU	<b>CHEM MODEL</b>	<ul style="list-style-type: none"> <li>• In this event, the students were given a chance to display a working model of a chemical process.</li> <li>• The judges, Dr. Deenan Santhiya, Dr. Poonam Singh and Dr. Raminder Kaur viewed the working models in detail. The winner was decided based on practicality of what was presented.</li> </ul>
6	09/02/2019 at PCT 2nd Year Classroom, DTU	<b>IDEATION</b>	<ul style="list-style-type: none"> <li>• In this event the participants were provided a platform to present their ideas on a problem that shall be pre-provided based on what the country's rural population suffers.</li> <li>• With counter-urbanization becoming a</li> </ul>

			<p>flashy trend in recent years in the developed nations, India, being a developing nation anchored around agricultural stands with about 32% of the massive population still being rural. The development between urban and rural areas increase with every advancement in science and culture.</p>
7	10/02/2019 at Smart Class L1, DTU	<b>CONFLUENCE</b>	<ul style="list-style-type: none"> <li>• The Annual Technical Confluence hosted by the Department of Applied Chemistry, DTU was the final event of TATVA'19.</li> <li>• This edition saw 4 eminent speakers from a diverse range of academia and the industry.</li> <li>• Prof. Rajamani Nagarajan, Prof. B.D. Malhotra, Dr. Vishal Choudhary and Mr. Ejaz Ahmad.</li> <li>• These speakers spoke on pressing issues as well as on topics which are of great importance.</li> </ul>
8	8-10/02/2019	<b>FUN EVENTS : (8th – 10th February, 2019)</b>	<p><b><u>CHEM CHARADES (Canopy)</u></b> Chem Charades has been inspired from the game "Dum Charades " yet in a very distinct way that involves enacting of specific chemical related terms. This competition has the basic concept that the participants should able to convey the words within themselves without the use of sound.</p> <p><b><u>CHEM DART (Canopy)</u></b> Chem Charades has been inspired from the popular dart game yet in a very distinct way that involves making chemical compounds from ions listed on Dart Board.</p> <p><b><u>CHEM-PICTIONARY (Canopy)</u></b> Chem Pictionary has been inspired from the game "Pictionary" yet in a very distinct way that involves representation of specific chemical related terms. This competition has the basic concept that the participants should able to convey the words within themselves with the help of</p>

			a white board without the use of sound
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<b>University School of Chemical Technology – Guru Gobind Singh Indraprastha University</b>			
<b>S. No.</b>	<b>Date &amp; Venue</b>	<b>Event/ Programme</b>	<b>Details</b>
1	10/10/2018 at C-Block auditorium , USCT-GGSIPU	<b>ORIENTATION</b>	Orientation programme was conducted for the freshers batch. The event was addressed by Dr. Dinesh Kumar, coordinator for the IICHE USCT Student Chapter. It was also addressed by some of our seniors and they shared their experiences as being a member and also it includes facts as well as some fun stories.
2	11/01/2019 at USCT- GGSIPU, Delhi	<b>ONLINE POSTER MAKING COMPETITION</b>	Online Poster Making competition titled "Avishkar" was conducted. It is based on the theme to provide expert solutions in tackling technological hurdles encountered in Biochemical/Chemical Engineering. It enraged a lot of some unusual ways of tackling hurdles.
3	12/03/2019 at USCT- GGSIPU, Delhi	<b>Q-FIESTA</b>	A Quiz competition titled "Q-Fiesta" was conducted .The quiz was based on general knowledge of science related to Biochemical and Chemical Engineering. It was conducted involving three rounds Preliminary Quiz, Pictionary and Stage Round. It was a success as it enraged students from 1st to 4th year.
4	12/03/2019 at USCT- GGSIPU, Delhi	<b>CHEM-E-SHAYARI</b>	A shayari event "Chem-e-Shayari" was conducted which had brought a pleasing side to event and enraged audience for some innovative verses.

### **AMIChE Examinations**



We have conducted two AMIChE Examinations - one in **September 2018** and the other one in **March 2019**.

Number of candidates appeared for the AMIChE Exams in Sept' 2018 - 143

Number of candidates appeared for the AMIChE Exams in March' 2019 - 100

### **Publications**

- 25<sup>th</sup> Lovraj Kumar Memorial Lecture
- All the events presentations, photographs and videos are available on our website [www.iichenrc.org](http://www.iichenrc.org) which is continuously updated.

### **New Members**

We are glad to inform that this year we have added 69 new student members from USCT-GGSIPU chapter and 23 student members from DTU chapter. We are hopeful that we will be able to continue such performance this year as well.

An updated list of members' directory is also available on our website.

### **Get-together**

The following get-togethers were organized in 2017-2018:-

1. 14<sup>th</sup> July, 2018 - 45<sup>th</sup> AGM
2. 19<sup>th</sup> January, 2019 - Foundation Day Celebration of NRC

### **NRC Building**

- 1) The second and third floor sublet to M/s MMTC-PAMP India Pvt. Ltd from 2011, the floors were vacated on 31<sup>st</sup> March, 2018. These floors have sublet to M/s Centre for Catalyzing Change w.e.f. 07/01/2019 for the period of three years and extendable for another three years.
- 2) Miscellaneous Building Maintenance  
  
The entire area of basement, ground floor and first floor including staircase, common area on ground floor and first floor were got painted after a gap of six years.
- 3) Projector of auditorium was replaced; a new projector and screen were installed in the Committee Room. The LED display TV was also installed outside the entrance of auditorium.
- 4) Future activities planned

As per the guidelines of HQ, a Corpus Fund for building has been created and also we are required to use 25% of subletting charges for Building Maintenance and upkeepment. We are already spending on building maintenance, safety & security and upkeepment from the income of subletting charges. Regarding refurbishing and remodeling of building, Building Committee is working on the requirement and submit the report, based on the report, the activities will be planned.

### **Scholarship**

In response to our circular inviting applications from Government colleges in the northern region, we received 38 applications and out of this, 20 students (16 B. Tech/ B.E. Students and 4 M. Tech/M.E. Student) were awarded the Golden Jubilee Scholarship for the year 2018-19. Out of this, one scholarship\*\* has been instituted by G. J. Samaj Kalyan Nyas. Scholarship cheques of Rs. 20,000/- each and certificates were distributed by senior members of IChE (NRC) during the Foundation Day celebration of NRC held on 19<sup>th</sup> January, 2019 to the following students:-

<b>Sl. No.</b>	<b>Student's Name</b>	<b>University</b>	<b>Year in which studying</b>
1	Ms. Jeba Jameel	AMU Aligarh	II (B.Tech)
2	Ms. Anushka Gupta	AMU Aligarh	II (B.Tech)
3	Ms. Sadaf Ashraf	AMU Aligarh	II (B.Tech)
4	Mr. Mohd Samar	AMU Aligarh	IV (B.Tech)
5	Mr. Ankit Saraswat	AMU Aligarh	III (B.Tech)
6	Mr. Nadmaan Fazeel	AMU Aligarh	III (B.Tech)
7	Mr. Anmol Bawa	BCET Gurdaspur	III (B.Tech)
8	Mr. Sachin Kumar	DCRUST Murthal	IV (B.Tech)
9	Mr. Prem Chaudhary	DCRUST Murthal	IV (B.Tech)
10	Mr. Manish	DCRUST Murthal	IV (B.Tech)
11	Mr. Mangal	DCRUST Murthal	IV (B.Tech)
12	Mr. Abhishesh Kumar	IIT Delhi	IV (B.Tech)
13	Mr. Ajay Kumar	IIT Delhi	IV (B.Tech)
14	Mr. Neetan Kumar Lalotra	IIT Delhi	II (B.Tech)
15	Mr. Arun Shelke	IIT Delhi	IV (B.Tech)
16	Mr. Sahir Sarwar **	AMU Aligarh	III (B.Tech)
17	Ms. Shreya Chowdhury	IIT BHU	II (M.Tech)
18	Mr. Amitabh Bharti	DCRUST Murthal	I (M.Tech)

19	Mr. Vishal	DCRUST Murthal	I (M.Tech)
20	Mr. Sumit Kumar	IIT Delhi	V (Dual Degree)

The Executive Committee in its last meeting has proposed a Scholarship Corpus Fund by enhancing the existing Corpus of Rs. 33,21,027/- to Rs. 60,00,000/-.

### **Other activities**

#### **IChE (Northern Regional Centre) Award**

IChE NRC has been giving award for best paper presentation during Student Chemcon. The same was continued in 2018 by awarding Rs. 8,000/- to the best student.

### **Forthcoming Events:**

S. No.	Event	Date
1	Annual General Meeting of Northern Regional Centre	July 13, 2019
2	IChE (NRC) "Learning with the Leaders" Lecture Series	August, 2019
3	26 <sup>th</sup> Lovraj Kumar Memorial Lecture in association with IChE (NRC)	October, 2019
4	Lovraj Kumar Memorial Trust Workshop-2019 on "Changing Energy Paradigm – Challenges & Opportunities" in association with IChE (NRC)	November, 2019
5	72 <sup>nd</sup> Annual Session of IChE on the congress theme "Advances in Chemical Engineering for Industrial Applications" organized by IChE (NRC) in collaboration with IIT Delhi	December 16-19, 2019

We were able to conduct all the above stated activities because of the hard work and untiring efforts of all the employees of IChE NRC, participating members and EC members of IChE NRC. Finally, I thank all of you for your past support and I solicit your guidance and support for the growth of our Institute in future.

Thank you to all.



**(Abhijit Bikas Pal)**  
**Honorary Secretary**