ANNUAL REPORT 2016-17

(This report covers the Activities of the IIChE (NRC) during the period 1st July 2016 to 30th June 2017)

The Executive Committee formed for the year 2016-2017 was:-

| Chairman | Prof. S. S. Sambi | Vice Chairman | Prof. A K Saroha |
|---------------------------|------------------------|--------------------------|----------------------|
| Honorary Secretary | Mr. Abhijit B. Pal | Honorary Joint Secretary | Dr. S. Nand |
| Honorary Treasurer | Dr. Anil Verma | | |
| Members | Prof. S. Basu | Dr. S. N. Chakravarty | Mr. D. D. Maheshwari |
| | Prof. V. K. Srivastava | Prof. K. K. Pant | Dr. Anand Mukherjee |
| | Dr. Dinesh Kumar | Mr. Amitava Banerjee | |
| Co-opted Members | Mr. Shyam Bang | Mr. Ranjan Goel | |

Activities - NRC

This account covers the period from 1st July, 2016 to 30th June, 2017.

In the year 2016-17, we have been able to organize number of activities on behalf of IIChE (Northern Regional Centre) and jointly with other organizations as mentioned below.

IIChE (NRC) Lecture Series - "Learning with the Leaders"

1. Steam Methane Reforming for Hydrogen Production - *Mr. Rajesh Kumar Ramaswamy, Lead Engineer-HyCo Technology, Air Liquide Global E&C Solutions India Pvt. Ltd, at IIChE-NRC Auditorium.* It was held on 15th October, 2016.

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

The foundation day program was held on 21st January, 2017. During this occasion, Dr. Anjan Ray, *Director, CSIR-IIP, Dehradun* presented a paper on Technology Commercialization at the Interface of Chemistry and Chemical Engineering.

Meetings:

- 1. IIChE-NRC hosted 4th Council meeting for IIChE national council on 9th July, 2016.
- 2. Brainstorming session with council members and senior person from Industry on 8th July, 2016. Various issues were discussed, includes the initiatives, which IIChE can take in collaboration with Chemical Industry. This was followed by evening meeting and get-together with various industry representatives and IIChE Council Members. IIChE NRC thanks Mr Shyam Bang (ex-President) and Prof P De (present President) for this initiative.
- 3. Joint meeting with NRC EC members and Council members 9th July, 2016
- 4. 1st EC meeting dated 13th July, 2016
 - a. New committee constituted
 - b. Decided to continue with existing office bearers
 - c. Review program committee activities
- 5. Special urgent EC meeting dated 23rd July, 2017
 - a. Discussion on DDA official visit
- 6. 2nd EC meeting dated 17th December, 2016
 - a. Review of Solar panel operation
 - b. Discussion on foundation day activities
 - c. Discussion on future activities for NRC
 - d. Plant visit discussion and finalization
 - e. Updates on membership drive
- 7. 3rd EC meeting dated 18th March, 2017
 - a. Review of building maintenance work done in 2016-17
 - b. Plan for interior repair and maintenance 2017-18
 - c. Draft review for future program
 - d. Suggestion of holding SCHEMCON in SNU
- 8. Program committee meeting dated 13th May, 2017
 - a. Review program feedback received from members
 - b. Finalize the program calendar for 2017 early 2018
- 9. 4th EC meeting dated 17th June, 2017
 - a. Discussion of annual accounts 2016-17
 - b. Discussion of annual program calendar 2017-18

Launching Student's Chapter - SNU - 19th August, 2016

IIChE EC members visited Shiv Nadar University, during the opening of the Student's Chapter of IIChE, on 19th August, 2016. IIChE members had one-and-half hours formal interaction with students of Chemical Engineering. This was followed by facility visit with SNU professors.

Program with Lovraj Kumar Memorial Trust:

LKMT has two annual events, similar in line with other years. This included both the annual R&D conclave and annual lecture.

| Topic | Speaker |
|--|---|
| Issues pertaining to imaging in thrust fold belt areas | Mr. K. Dasgupta Oil India Ltd. |
| Non Seismic methods in Oil & Gas Exploration | Mr. David Moore CGG |
| Acquisition of non-seismic data and integration for | Ivica Mihaljevic M/s Schlumberger |
| seismic imaging in faulted thrust belt areas | |
| Issues in hand, current status in the industry and the | Shri J P Dobriyal, COD, HP-HT ONGC Ltd. |
| challenges being faced | |
| HPHT Challenges and Possible Solutions; | Ms. Juli Singh & Mr. Krishna Bordeori |
| Fracturing in HPHT Reservoirs | M/s Schlumberger |
| Focus on relevant technology and services-available | Shri A. Reghu Padmanabhan M/s |
| and in pipelines | Weatherford |
| Exploration for Natural Gas Hydrate – Way Head | Dr. Pushpendra Kumar GM (Gas Hydrate |
| | Programme, ONGCL |
| Exploitation of Fractured Reservoirs – A Lab Scale | Dr. Jyoti Phirani Assistant Professor Dept. |
| Approach | of Chemical Engineering, IIT, Delhi |
| | |
| Thermal Technology in Search of Hydrocarbon | Mr. Anil Kumar Director, M/s Nityam Geo |
| | Services Pvt. Ltd., & Dr. Igor Glushchenko |
| | and Dr. Vladimir Kuzenkov |
| | |
| | |
| | |

The annual lecture was conducted on 29th November, at India International Center. It was delivered by *Shri B.K. Chaturvedi, IAS (Rtd.), former Cabinet Secretary, Govt. of India*, on Emerging Challenges in Public Governance.

The 2-day R&D conclave was organized on 2nd and 3rd Feb, 2017 – at India International Center. The LKMT Upstream R&D Conclave focused on some of the major issues being currently faced by the upstream Operators and the work being done by major service providers and technology leaders in areas to overcome these issues. A total of 95 delegates, including 20 student delegates participated in the conclave. Following were the topics and presenters for the conclave:

Survey – Learning with the Leaders Series

One online survey was conducted among the NRC members in order to understand members feedback and expectation on "Learning with Leader" program – our flagship program. The program was started in 2012 and continuing for last few years. This year was considered a good time to review the program. Here is the survey analysis:

28% of the respondents are member of IIChE less than 3 years.

Regarding program

93% of the respondent are satisfied with duration

85% of the respondents are satisfied with the venue

75% of the respondents are satisfied with frequency of the program

People like to spread the venue as well – other part of Delhi, Gurgaon and Faridabad was suggested

75% of the respondents are satisfied with the relevance of the subject

Suggestion included having diverse areas of interest including latest innovation, Process intensification, environmental issues, areas other than petroleum, application of codes and standards etc.

50% of the respondents indicated that they would not like to have fee associated with this series

While there were multiple suggestion, two specific areas came up in multiple responses

Members want to see the activities beyond seminars – they are looking for training session, online training sessions, workshops etc.

Members also want to see IIChE more active within policy-making community and take leadership role in the industry.

The number of respondents were less. If members wish, we can launch the survey again. In that case we would request more members to come forward and send the response.

Student Chapters

During recent year, IIChE has taken a decision that the Regional Centers will mentor and guide the student's chapters. Based on that IIChE-NRC takes keen interest in the student's chapters. This is the consecutive second year, when a new student chapter is added in NRC. Following are the details of the student's chapters in NRC:

| Sl. | Student Chapter | Coordinator |
|-----|--------------------------------|-----------------------|
| No | | |
| 1. | DCRUST, Murthal | Prof D P Tiwari |
| 2. | Delhi Technological University | Dr. Ram Singh |
| 3. | Shiv Nadar University | Dr. Dhiraj Kumar Garg |

All the student's chapters had multiple activities. The details of the account of the activities are attached to the report. The three chapters also confirmed that they do not have any bank account and they had not incurred any expenses regarding the activities. None of the chapters submitted any account statement. They have submitted student enrollment forms and fees – but as they do not have any bank account, none of the student chapters received subvention amount.

We are pleased to inform that USCT, GGSIP University student chapter is in the process of formation and will be enrolled as a regular student chapter.

Activity summary – DCRUST, Murthal

DCRUST, Murthal is the oldest student's chapter within NRC. Following are the activities conducted in their university:

| Sr. No. | Date | Name of Activity |
|---------|--------------|-----------------------|
| 1. | 07.10. 2016 | Mindbreakers |
| 2. | 13 .10. 2016 | Treasure Hunts |
| 3. | 21.03. 2016 | General Chemical Quiz |
| 4. | 22.03.2017 | Chemcizz Jumbling |

<u>Activity summary – Delhi Technical Unive</u>rsity:

Delhi Technical University is one of the most active and creative Student's chapter in NRC. DTU has added 45 new members in their student's chapter. They also transitioned to newly elected governing body. IIChE NRC wanted to put on record the great work done by the outgoing governing body.

The detailed report is added as attachment. Following is the summary of activities:

| Sr. No. | Date | Name of Activity |
|---------|------------|---|
| 1. | 08.08.2016 | Treasure Hunt |
| 2. | 07.09.2016 | Orientation |
| 3. | 26.10.2016 | ION – A chemistry Card Game |
| 4. | 16.01.2017 | Senior Interactive Session |
| 5. | 30.01.2017 | Industrial Trip to E-pack Polymers, Greater Noida |
| 6. | 10.02.2017 | CHEMCAR |
| 7. | 11.02.2017 | CHEMFISSION |
| 8. | 12.02.2017 | Confluence |
| 9. | 20.02.2017 | Dart Game |

Activity summary – Shiv Nadar University:

Shiv Nadar University opened up the Student's chapter in the year of 2016. The inauguration ceremony was attended by EC members, where the membership certificate was handed over to their coordinator. The following are the programs organized by SNU Student's chapter:

| Chemical | Date | Speaker Name | Title of the talk | |
|------------|-----------|--|---|--|
| Series No. | | | | |
| 1. | 02 Feb'17 | Mr. Bipin Vora | Opportunities & Technologies for Ethylene | |
| | | | and Propylene Production Units in India | |
| 2. | 16 Feb'17 | Prof. J.J. Horng | Why is HAZMAT or Chemical Emergency | |
| | | | Response important? | |
| 3. | 27 Feb'17 | Dr. Jyoti Chatterjee Holtec International and Its Inherently Safe | | |
| | | | Modular Nuclear Reactor | |
| 4. | 10 Mar'17 | Mr. Bipin Vora | From Concept to Commercialization | |
| 5. | 25 Mar'17 | Dr. S. Nand | Development in Technology for Production | |
| | | | of Ammonia and Urea | |
| 6. | 25 Mar'17 | Mr. Manish | Energy Conservation in Fertiliser | |

| | | Goswami | Plants | |
|----|-----------|-------------------|--|--|
| | | | 2. Environmental Considerations in | |
| | | | Production of Fertilisers | |
| 7. | 01 Apr'17 | - | Visit to National Fertilizer Limited (NFL), | |
| | | | Panipat for 3 rd and 4 th year B.Tech. | |
| | | | (Chemical Engg.) students and faculty. | |
| 8. | 08 Apr'17 | Prof. A.K. Gupta, | Technological Development, Professional | |
| | | | Ethics and Modern Life | |

Annual Plant Visit

Annual Plant visit is one of the eagerly awaited event in NRC. This year total 18 NRC members and 5 students from GGSIP Univ. visited the plant in Meerut. We received about double the confirmation, and we had to cancel some of the last minute requests (especially from the students), as first preference goes to the members. Unfortunately, there was about 50% drop-out. NRC makes a humble request to members in order to reduce the number of last minute drop-outs.

• Date :18th February, 2017

Venue : Nanglamal Sugar Complex, Meerut

Coordinator : Prof. A.K. Saroha

Building and Asset Maintenance

This year NRC spent significant amount as a part of building maintenance. This includes renovation of bathroom facilities, exterior repair and painting, repair and painting of parapet and boundary wall as well as repair of rain-water pipes. These activities were completed after 10 years. We also plan to take-up interior repair and painting in the coming year.

The rain water harvesting was completed this year. We are glad to inform that we are also getting a discount of 10% from Delhi Jal Board (DJB) after their inspection team expressed satisfaction on installation of RWH system. Carpet grass was laid to the entire lawn area, including the RWH section. We have also applied to Net-metering system, as we already have the solar panel installed.

We wanted to put on records the hard-work done by Mr RP Luthra, in order to maintain the facilities, including the completion of all these activities and completion of RWH system.

AMIIChE Examinations

We have conducted two AMIIChE Examinations - one in **September 2016** and the other one in **March 2017**.

Number of candidates appeared for the AMIIChE Exams in Sept' 2016 - 59

Number of candidates appeared for the AMIIChE Exams in March' 2017 - 63

Library

NRC has well-furnished library having large number of books on Biotechnology, Catalysis and Reaction Engineering, Chemical Engineering (General), Chemical Technology, Chemistry, Energy Conservation and Thermodynamics, etc. which are being procured on the recommendations of our members and faculty from IIT Delhi. We have added large number of books from our members as a library collection and we welcome such contribution and sharing.

We had subscribed E-library for the benefit of our members. We are exploring the possibility of esubscription for journals and decision would be taken based on the feedback of members for which suggestions have been invited.

Publications

- 23rd Lovraj Kumar Memorial Lecture
- All the events presentations, photographs and videos are available on our website <u>www.iichenrc.org</u> which is continuously updated.

New Members

We are glad to inform that this year we have added 41 new members from this region. This is one of the largest induction of new Life members in recent times. We are hopeful that we will be able to continue such performance this year as well.

| 1. | Mr. D.K. Rajeev Nambiar | 15. Ms. Isha Sharma | 29. Ms. Suchetana Bandopadhyay |
|-----|---------------------------|-------------------------------|-----------------------------------|
| 2. | Ms. Vartika Shukla | 16. Ms. Ashita Gugalia | 30. Mr. Vinay Kumar Chaurasia |
| 3. | Dr. R N Maiti | 17. Mr. Subramanian Nagarajan | 31. Mr. Sourav Dey |
| 4. | Mr. Vivek Bhardwaj | 18. Ms. Ananya Ray | 32. Mr. Joyfree Simon Mascarenhas |
| 5. | Ms. Pallavi Tyagi | 19. Mr. Sourabh Maithil | 33. Mr. Atanu Mukherjee |
| 6. | Ms. Vatika | 20. Mr. Gaurav Raj | 34. Mr. Akshay Bhaskar Nipane |
| 7. | Ms. Neeru Gupta | 21. Ms. Susmitha Chakkingal | 35. Ms. Sheetal Lokesh |
| 8. | Mr. Chintan S. Shah | 22. Mr. Sandeep Gupta | 36. Ms. Divyangana Sarswat |
| 9. | Ms. Shruti Mittal | 23. Mr. Sonaal Bhanot | 37. Mr. Castro Baskaran |
| 10. | Mr. Suvrendra Chakraborty | 24. Mr. Srikanth Gollavilli | 38. Mr. Abhishek Kumar |
| 11. | Mr. Bhaskara Rao Vennela | 25. Mr. Sakthivelan M. Durai | 39. Mr. Krishnamani Kalaiarasu |
| 12. | Mr. Devesh Sharma | 26. Ms. Shreyoshi Mutt | 40. Mr. Hausila Prasad Singh |
| 13. | Mr. Sachin Arora | 27. Mr. Rahul Garg | 41. Ms. Anchita Deb |
| 14. | Mr. Anup Dhaigude | 28. Mr. Kalyan Prasad Vaish | |

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

Get-to-gether

Two get-togethers were organized in 2016-2017:-

- 1. 27th August, 2016 43rd AGM
- 2. 21st January, 2017 Foundation Day Celebration of NRC

Scholarship

21 students (15 B. Tech Students and 6 M. Tech Student) were awarded the Golden Jubilee Scholarship for the year 2016-17. Out of this, one scholarship** has been instituted by G. J. Samaj Kalyan Nyas. Scholarship cheques of Rs. 15000/- each and certificates were distributed by senior members of IIChE (NRC) during the 43rd AGM held on August 27, 2016 to the following students:-

| S. No. | Student's Name | University | Year in which studying |
|-----------|---|--|------------------------|
| 1 | Mr. Bintu Saini | DCRUST Murthal | III (B.Tech.) |
| 2 | Mr. Karan Malik | DCRUST Murthal | III (B.Tech.) |
| 3 | Mr. Arpan Katiyar | DCRUST Murthal | II (B.Tech.) |
| 4 | Ms. Shristy Kaushal | Dr. SSB UICET Panjab Univ., Chandigarh | IV (B.E.) |
| 5 | Mr. Sahil Chadha | Dr. SSB UICET Panjab Univ., Chandigarh | IV (B.E.) |
| 6 | Mr. Lohit Goyal | Dr. SSB UICET Panjab Univ., Chandigarh | IV (B.E.) |
| 7 | Mr. Deepak Kumar | Dr. SSB UICET Panjab Univ., Chandigarh | IV (B.E.) |
| 8 | Mr. Manjay Kumar | IIT BHU, Varanasi | III (B.Tech.) |
| 9 | Mr. Vardan Bapna | IIT Roorkee | II (B.Tech.) |
| 10 | Mr. Nishant Raj | IIT Roorkee | III (B.Tech.) |
| 11 | Ms. Mamta Kajla | Dr. BR Ambedkar NIT Jalandhar | IV (B.Tech.) |
| 12 | Ms. Shalu Mathur | Dr. BR Ambedkar NIT Jalandhar | III (B.Tech.) |
| 13 | Mr. Dinesh Dhaka | Dr. BR Ambedkar NIT Jalandhar | IV (B.Tech.) |
| 14 | Mr. Deepak Chauhan | Dr. BR Ambedkar NIT Jalandhar | III (B.Tech.) |
| 15 | Mr. Satyam Sundaram | Dr. BR Ambedkar NIT Jalandhar | II (B.Tech.) |
| 16 | Ms. Monika | DCRUST Murthal | I (M.Tech.) |
| 17 | Mr. Devender Singh | DCRUST Murthal | II (M.Tech.) |
| 18 | Mr. Chandra Shekhar | DCRUST Murthal | II (M.Tech.) |
| 19 | Ms. Nidhi Yadav | DCRUST Murthal | II (M.Tech.) |
| 20 | Ms. Aashna Suneja | MNIT Jaipur | II (M.Tech.) |
| 21 | Mr. Vikram Kumar ** | DCRUST Murthal | II (B.Tech.) |
| | **(Awarded to G. J. Samaj Kalyan Nyas Scholarship) | | |

Forthcoming Events:

| • | Seminar on "Application of Design Codes" | July 15, 2017 |
|---|---|-------------------|
| • | Seminar on "Refineries -The Indian Direction" | August 18, 2017 |
| • | Seminar on "Commissioning of Chemical Plants" | September 9, 2017 |
| • | Lovraj Kumar Memorial Trust Annual Workshop 2017 (In association with IIChE Northern Regional Centre) | October, 2017 |
| • | Seminar on "Turbo-Machinery" | October, 2017 |

 Seminar on "Commercial Developments of Indigenous Technology
November 24-25, 2017

24th Lovraj Kumar Memorial Lecture November, 2017
(In association with IIChE Northern Regional Centre)

Foundation Day of Northern Regional Centre December 16, 2017

Seminar on "Cooling Tower"January, 2018

We were able to conduct all the above stated activities because of the hard work and untiring efforts of all the employees of IIChE NRC, participating members and EC members of IIChE 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