# **14<sup>TH</sup> CONVOCATION**

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# DIRECTOR'S REPORT

## **Dr. MINI SHAJI THOMAS**

### DIRECTOR



# NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI

### FOURTEENTH CONVOCATION 28<sup>th</sup> JULY, 2018 DIRECTOR'S REPORT

Good morning and Welcome!

Professor Anil D Sahasrabudhe, members of the Board of Governors, representatives from the HRD Ministry, Members of the Senate, Special Invitees, our Distinguished Alumni, Members of the faculty and the staff, Graduands and their proud Parents -- I Greet you on the day of the 14<sup>th</sup> Convocation of the National Institute of Technology, Tiruchirappalli.

It is only in the fitness of things that the 14<sup>th</sup> Convocation is graced by Professor Anil Sahasrabudhe whose scholastic achievement is the stuff of legend. As an undergraduate, training to be a Mechanical Engineer, he was University Topper for all the ten semesters and the Karnataka University recognized him with a Gold Medal. A Fellow of the Institution of Engineers, this academician and educationist is streamlining the technical education system in India, in the capacity as Chairperson of the All India Council for Technical Education. I am doubly delighted today: While we thank him for consenting to be our Chief Guest, we also congratulate him on being granted a second term at the helm of the AICTE. It is a testimony to his sterling work in the last 3 years!

Thank you Professor Sahasrabudhe for finding time to be with us today!

The 35<sup>th</sup> President of the United States, John F. Kennedy once said: "Efforts and Courage are not enough without Purpose and Direction.

At NIT Tiruchirappalli, we have been doing well as a community of, largely, scientists and engineers committed to the cause of teaching and harvesting the fruits of research that may benefit society. For three consecutive years now, NIT, Tiruchirappalli has been ranked First among NITs in the NIRF India Ranking: 2016-2018. Among engineering institutions, nationally, we are 11<sup>th</sup> and have improved our overall position to 31 from 34. The campus community has been responding to the challenges admirably, thanks to the robust work culture that has evolved.

We have made our mark. However, an India ranking is not enough as the big wide world is our new theatre and we must aim to get there, now. Our students are talented. Our faculty and staff are capable. But this journey will have to be made with shrinking financial resources. I take strength from the words of Michael Korda: "One way to keep momentum going is to have constantly greater goals." We do have one.

In the previous year, we spent considerable amount of time in shaping our vision for the future and strategizing for the next 5 years. We analyzed our strengths and weaknesses and are realistic about our opportunities and threats. We have put together an action plan which points towards interdisciplinary and multidisciplinary research. The specific dimensions of that future are accelerated research, a habit of innovation, a culture of entrepreneurship and synergy through collaborations. We should extend the hand of cooperation with Industry even as we strengthen our bonds with peer institutions. Let us turn our focus on Internationalization by expanding our circle of influence and by increasing our perception. The day is not far when we see a global multi-cultural and plural campus.

Can we do it? Yes, We Can.

Let me lay out the specifics. 25 among the 1000 top notch JEE students in the 2018-19 admissions have opted for NIT Trichy. Our research output has increased from 552 to 582 publications in Web of Science and from 616 to 692 in Scopus. Last year we received research projects to the tune of Rs.12 crores and efforts are on to double the projects. We filed 30 patents last year and are actively involved in prototyping and transferring of these technologies for the benefit of society. The coming together of key elements like capable students, competent faculty coupled with good infrastructural and research facilities would provide the Institute the much needed momentum to surge ahead in the years to come.

Six months to a day, beginning 11<sup>th</sup> of October, last year, the campus was abuzz with faculty recruitment which was in limbo for 10 years and I am very excited by the results. At the end of a remarkable exercise, there are 40 new, energetic faculty members; most of them

with international exposure and promising research potential. Another cause for cheer is the fact that over a hundred regular faculty got their deserved promotions which has brought a new lease of energy to the campus. Professionals would rightly recognize their elevation as the call to shoulder greater responsibilities for the journey ahead.

We are trying to do things differently in order to break out of old, unproductive practices. The modern day management guru, Joseph A. Schumpeter theorizes economic development as "Entrepreneurial profit [which] is the expression of the value of what the entrepreneur contributes to production". Walking in the direction of "entrepreneurial profit", in the 20 months that I have been here, I am excited to announce the forthcoming inauguration of the Centre of Excellence in Manufacturing, in collaboration with Siemens, at an investment of 190 crores, comprising 10 state-of-the-art laboratories, advanced robotics, IoT, and process control labs. More importantly, this center is a step towards interdisciplinary research which is the need of the hour. 7 Departments are involved in this endeavor and I am sure this will be a landmark in the history of the NITs. The Centre will serve the Institute as well as the Industrial units nearby, besides, sharing the concerns of Tier-II and Tier-III Institutions around us. Professor Duraiselvam of Production Engineering deserves praise for successfully formalizing NIT, Tiruchirappalli's tie up with Siemens. In addition to Manufacturing, we have identified two more domains that will become centres of excellence, namely, Artificial Intelligence, Intelligent machines including IOT and energy harvesting & Storage which, I am sure will expand our research horizons.

The MoUs we signed recently are transforming engineering practice with Faculty spending long hours on the shop floor in order to identify and solve real-time industry problems. At the same time, collaboration with our peer institutions is strengthening and expanding the research fraternity. This summer, many faculty members spent valuable time at TATA motors, BHEL, IIT Mandi, IIT Madras and IIIT Hyderabad.

The aspiration for world rankings is not because others are in the race but because we want to do better than ourselves. The way forward is to shift from Vertical Departments to

Horizontal Centres, from Research Laboratories to Centres of Dynamic Excellence with features of Profit Centres and Cost centres. We need to come out of our narrow specializations to build the teams through which we optimize resources and funds, thereby, enhancing Productivity.

Let me put together some of the outstanding achievements of the Institute last year:

- We were selected the best Innovation Club among all the Centrally-Funded Institutions, in the Festival of Innovation and Entrepreneurship (FINE 2018) held at the Rsahtrapathi Bhawan in March 2018. We were in competition with the IISc, the IITs, the NITs, and the Central Universities. I recognize the efforts of Professor. A.K. Bakthavatsalam and Daksh Khanter, the president of the Student Council and all the technical clubs.
- Our Mechanical and Manufacturing departments featured in the 351-400 range in the QS world rankings which is a matter of great pride. Congratulations to the Departments of Mechanical and Production!
- NIT, Tiruchirappalli won the Green Campus award from the Tamil Nadu Pollution Control Board, Govt of TN in May 2018, for the green efforts like large-scale tree plantation, laying of sewage treatment plants, installing solar panels on the terraces and many similar efforts. Professor C Natarajan, Professor S.T Ramesh and their team worked overtime to prepare the proposal, which deserves our praise.
- NIT, Tiruchirappalli signed an MoU with the Institute of Electrical and Electronics Engineers (IEEE), EPICS Purdue (Engineering Projects In Community Service) to encourage students to gain a deeper understanding and appreciation of technology and its uses in improving their local communities by way of establishing a curriculum (Elective course & Projects).
- NIT, Tiruchirappalli hosted the Grand finale of the Smart India Hardware Hackathon, on the theme "Waste Management" in May 2018. A Special thanks to Professor Samson Mathew, Professor M. Bhaskar and their team for pulling off a remarkable event in a matter of 14 days.

• We have had consultative meetings on "Collaboration Opportunities and Strategies" with CII and with Tamil Nadu Small and Tiny Industries Association (TANSTIA) to discuss various areas of collaboration with the Institute, and finalize time-bound action that will benefit SMEs of Tamil Nadu.

We have also recruited 10 senior administrative officers which has injected a new blood into the office administration. Our office is getting fully automated and soon, with the support of all stakeholders, we expect to see a paperless office.

We have also embarked on a greening initiative of the campus and its neighborhood, buoyed by the Green Campus award from the Tamil Nadu Pollution Control Board. We have planted around 2000 saplings in the last few months and will add another 10000 in the coming months.

A Smart campus initiative is on, with a bus tracking app developed by the students.

The ancient Tamil savant, Tiruvalluvar's Kural no. 400 reads thus:

kedil vizhuchelvam kalvi oruvarukku/ madalla mattrai yavai.

It means: Of all the riches one can amass, the wealth of learning alone is truly imperishable.

I congratulate all the graduands for having acquired the riches of knowledge. A special mention about the parents who have come to witness their dreams come true; the graduation day of your child. I can feel and see the joy and pride in your eyes, as each one of you waits patiently to be in the moment when your little one picks up the degree certificate.

We are also proud of your children, our students, for giving us a fine opportunity to mold them, make them better engineers who would, at the same time, be rounded individuals.

This institute is proud of each of you graduands and I am confident that in addition to the knowledge you acquired, we have been able to inculcate in you the values which will take you a long way in your life, like compassion, social responsibility, and the pride of an NITTian

Dear Graduands, some of you are innovators; we got the Best Innovation Club of the Year Award from the Honorable President of India in March 2018, due to your efforts! Continue to innovate. The unforgettable Steve Jobs said: "Innovation distinguishes between a leader and a follower." Many of you have the dream of moving into the start-up ecosystem. I wish you good luck; that is the order of the day! My best wishes to the ones who have chosen higher studies; we see ourselves in you for deciding that your scholastic seeking does not end here. Your work beyond this campus will, one day, bring you back as a distinguished academic in your chosen field. I am proud of the fact that you are the beneficiaries of the mentoring, the education, the tremendous freedom we gave to experiment, explore, examine and express.

#### **Student achievements**

- 4 out of 10 Cargill Fellowships this year have come to NIT Trichy, besides, we also bagged 12 DAAD, 6 MITACS, and SN Bose fellowships in 2018, I congratulate all the recipients.
- The Institute also offers Steel, Avery, ABB, TCS fellowships to students.
- We host 34 Deity scholars currently.
- Among the Prime Minister's Research fellowship awardees, two scholars are from NIT Trichy.
- IGNITTE-The teaching club of NIT, launched online coaching lessons for JEE and NEET coaching. This year20 students cracked the NEET exams and 2 cracked the JEE exams
- I congratulate the President's Gold medal winner of 2018 Miss. V. Arthi from Metallurgical and Material Sciences.

Pragyan, our signature ISO certified Techno-managerial festival saw an unprecedented array of speakers and participation from far and wide. Our 15 tech clubs helped us win the Innovation award from the Honourable President of India.

On the sporting front we are doing very well; we won medals for Athletics, Basketball, handball, kabaddi, kho-kho, tennis, volleyball and swimming

The 20 cultural clubs are doing a splendid job and Festember and NITTfest, our cultural festivals, are consistently spectacular to attract the best of talents every year.

Regarding social responsibility, we have always taken the lead. This year we helped a large number of underprivileged children and deserving differently abled persons in multiple ways.

This afternoon, each one of you, graduands, will be inducted into the proud league of Alumni of NIT Trichy, a 30,000+ strong force. From the 1969 batch, who will celebrate the 50<sup>th</sup> year of graduation next year, to the youngest in the group it is a club of some fine and interesting men and women. This afternoon, you will also get a chance to listen to the Illustrious Alumni who have made us proud and who will inspire you to scale new heights. Welcome to the Club.

### Alumni who achieved notable recognition in recent times:

- T. V. Narendran, elevated as the Global CEO & MD of Tata Steel
- Jayshree Seth, 1986 batch, has been elevated as the Chief Science Advocate of 3M
- N. Alagesan, 1981 batch, was appointed Chairman and MD of ITI ltd.
- Nambirajan Sheshadri, received the IEEE Alexander Graham Bell Award 2018
- N S Kannan, 1986 batch was appointed the MD and CEO of ICICI Prudential
- Keethi Vasan, 2016 batch, is the IAS Tamil Nadu Topper 2018 (AIR 29)
- Ms Haripriya, 2017 President's Gold medalist at the last convocation, received the prestigious 'Schlumberger Faculty of the Future Award, 2018', instituted to encourage women to take up teaching as a career in the STEM domain

That brings me to another initiative we took last year in creating an Alumni-Institute Interaction Cell. There has been an overwhelming response to this initiative and we are in the process of finalizing some projects for the Alumni so that they can contribute their time, talent and treasure to the Institute. I hope the next year will be celebration time when our first batch who graduated in 1969 celebrate fifty years as Alumni.

#### **ACKNOWLEDGEMENT**

Before I conclude let me sincerely thank the Ministry of Human Resources Development (MHRD), Government of India for providing support and encouragement to this Institute. I thank the members of the Board of Governors and the Senate for extending their support towards the growth of the institution.

The faculty members of the Institute have contributed immensely to the success of each student and I congratulate both teaching and non-teaching staff members for their dedicated service.

I am grateful to the Deans, the Registrar and all the staff. A special thanks to the student council 2017-18, who helped us run the Institute effectively.

I wish to place on record my appreciation and gratitude to the Convocation team 2018 comprising of Faculty, staff and students, whose hard work for the past few months has made this event memorable.

The Chief Guest of the 13<sup>th</sup> Convocation, Mr. Narayana Murthy wrote and I quote:

When, one day, you have made your mark on the world, remember that, in the ultimate analysis, we are all mere temporary custodians of the wealth we generate, whether it be financial, intellectual, or emotional. The best use of all your wealth is to share it with those less fortunate.

The world is waiting for you, to share your wealth, intellectual, emotional and financial, to solve the problems of the society, whether it is a plastic free word, or cybersecurity &AI, deep learning, IoT, digital currency, climate change or even inventing methods of seamless changing of the email IDs or a smart phone with full day battery life!

Wish you the very best in life!

Jai Hind!