



commuNITTy

The official newsletter of NIT Tiruchirappalli

September - October 2019

Volume 2 Issue 5

THEME:
CULTURAL FESTIVAL



INSTITUTE



STUDENTS



ALUMNI



Director's Message



Dear Friends,

Greeting you and wishing you a prosperous New Year 2020 and a memorable decade to follow. NIT, Tiruchirappalli for a very long time had kept holistic development of students as one of its important goals. The importance of good physique and sound thinking have always been emphasized.

I am glad that the editorial team has decided on "Cultural festivals" as the theme for the present edition of commuNITTy. These Festivals help the various cultures to freely intermingle and develop a deep comradeship within our Institute. The Institute's dance troupe and music troupe have always won many laurels in renowned events.

I present to you this edition which contains interesting snippets and nostalgic photographs of Festembers down the ages.

Mini Shaji Thomas
Director

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Dr.S.Arul Daniel
Professor, EEE

Dr.Vinod Balakrishnan
Professor, Humanities

Dr. N. Sivakumaran
Professor, ICE

Dr.K.N.Sheeba
Associate Professor
Chemical Engineering

Dr.Nisha Radhakrishnan
Associate Professor
Civil Engineering

Dr.G.Muruganatham
Associate Professor,
DOMS

Dr.S.Mekala
Associate Professor
Humanities &
Social Sciences

Dr.B.Janet
Assistant Professor, CA

Shri K.Pradeep
Technical Officer, CSG

Dr. Sateesh Kumar
Assistant Professor,
Production Engineering

Dr. Josephine R L
Assistant Professor, EEE

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AND MEDIA TEAM**

CONTENT TEAM

B. Vamsi Krishna Reddy,
Mechanical Engineering
R. Harishwar,
Chemical Engineering
Swesha Venkateswaran,
Production Engineering
Vasanthraj Kirubhakaran,
Department of ECE
Sivasri Maganti,
Department of MME

DESIGN TEAM

V. Sathwik Kumar
Department of Civil Engineering
Abhishek Surada
Department of Civil Engineering
Varsha Bonam
Department of ICE

Office of PR&Media
Ms. T.R.Priya

INSTITUTE

International Conference on Multifunctional and Hybrid Composite Materials for Energy, Environment and Medical Applications

The Department of Chemical Engineering organized an International Conference on Multifunctional and Hybrid Composite materials for Energy, Environment and Medical applications (ICMHCEE 2019) during 9-11 September 2019 at National Institute of Technology, Tiruchirappalli to bring together leading academic, scientists, and industries to exchange their expertise in the application of multifunctional hybrid materials.

Dr. Ahmed Fauzi Ismail, Deputy Vice Chancellor (Research and Innovation), AMTEC, University Technology of Malaysia served as the Chief Guest for the inauguration ceremony.

The Convener of the conference Dr. G. Arthanareeswaran, Professor, Department of Chemical Engineering declared the conference open and mentioned that the conference would bring together academic and industrial expertise and discussed about the problems the world is facing right now and come up with innovations and solutions. A total of 123 Presentations from all over the world, 2 Plenary Addresses and 18 Keynote Addresses were delivered by the participants and eminent people from academia and industries.

Dr. Mini Shaji Thomas, the Director of the Institute said she was extremely delighted to welcome all the delegates to the Conference and wished the conference a grand success.

The Chief Guest for the valediction, Dr. Devaraj Veerasamy of Suraaj Mahir Consultancy of Malaysia, congratulated the organizers for their splendid work. Dr. Muzafar Zulkifili from Universiti Kuala Lumpur Campus, Malaysia, Dr. Wirach Taweepreda from Prince of Songkla University, Thailand, Dr. Chua Yong Shen from Universiti Sains Malaysia and other participants shared their experiences during the conference. Prizes were awarded for the best presentations.



An Ocean of Opportunities for Engineering and Technology Startups at Indian Navy

Prof. Mini Shaji Thomas, Director, NIT, Tiruchirappalli emphasized the students and faculty members to join the Indian Navy and to serve the nation. She also said NIT, Tiruchirappalli will be involved in designing innovative design for Indian Navy to manufacture in our country while welcoming the Chief Guest Rear Admiral V Mohan Doss, Vsm, Assistant Chief Of Naval Staff (Air Material) and Captain M.Ramasubramanian, Indian Navy on 16th November 2019. She was delighted in enumerating the accomplishments of NIT-T and appreciated the initiative of addressing the students of NIT-T.

The Guest speaker Rear Admiral Mohan Das, enlightened the students about the vast opportunities available in the Indian Navy for various streams of science and engineering departments. He also encouraged the student to engage in creating Startups and produce indigenous product for the Indian Armed forces and join the Make in India movement.

Rear Admiral. VM Doss, VSM, ACNS (Air Material) addressed the students and faculty members on "Indian Navy and Ocean of Opportunities". He said a deep understanding and learning of the Indian Navy is essential for students and researchers. He added that 3 lakh crores of money is spent for defence, of which 75,000 crores of Indian money are spent every year to import defence equipments. India has millions of engineers to work on innovative technologies.

Festember Facts

Festember was inspired by Mardi Gras, the cultural festival of IIT, Madras, which is renamed as Saarang in 1996. Festember was known for the hospitality it offered. The A-Mess by itself was a major draw for the crowds to attend Festember. The simple reason for this was that they provided free quality food to anyone and everyone who entered the campus.

Feeds, 2017

He stressed the need to establish strong industry-institute interactions and ask the students to focus on the state of art techniques on Machine learning, different segments and computational intelligence in Indian Navy. He motivated the students by showing them a path to join Indian Navy. Captain M.Ramasubramanian, communicated the students about the personal benefits in joining the Indian Navy, who is also in the service of the counselling student community for career opportunities in the Armed forces.



Festember Facts

Festember started off with a modest participation of 5 colleges and a budget of INR 5000. The Audio-Visual Quiz was a novel feature that attracted lots of participants in the 80s when the television was a rarity.

Feeds, 2017

Mental Strength, Not Just Physical Fitness, The Key to Self-Defense

Over 500 women participated in the two-day workshop on self-defense organized at NIT-Tiruchirappalli campus during 17-18th September 2019. For those who believed that self-defense is all about physical strength, a two-day workshop held at NIT-T was an eye-opener. Sponsored by the institute's Technical Education Quality Improvement Programme (TEQIP), the workshop focused on empowering women mentally and physically through its carefully crafted training sessions and was organized by the Internal Complaints Committee (ICC) and the Students' Council of NIT-T.

The workshop was attended by over 500 women, including students and faculty members of NIT-Tiruchirappalli. The sessions were handled by Franklin Joseph, CEO of the Indian Institute of Special Tactics and Combat Sciences (Bangalore). A self-defense guru and specialist in women safety & psychological empowerment, he is also the founder of Franklin Joseph's Krav Maga Self Defense Military Combat Academy in Bangalore. Leading the session, Mr. Joseph stressed the need for women to have a strong mind and a sound personality to be able to handle challenging situations. "Self-defense is not about mere learning of tricks and martial arts, but is all about training the mind to judge a situation and face it courageously," he told the participants. "Self-defense is not a measure of physical fitness; rather it speaks about a strong mind and a sound personality," he added.



Mr. V.Balakrishnan I.P.S., DIG, Trichy Range, and Mr. Pravin Dnghare, I.P.S., ASP, Tiruverumbur were Guest of Honor's at the valedictory function. Speaking at the valedictory session, Mr. Balakrishnan said that women need to be mentally tough and should practice the self-defense tactics daily.

Addressing the participants on the occasion, Dr.Mini Shaji Thomas, Director, NIT-T, exhorted them to excel in self-defense tactics through practice and advised the students to learn something really useful for tackling real-time situations. She also added that the girls should make use of the tactics learnt from the workshop in their day to day life and to practice the same to excel in the same.

Dr M. Venkatakirthiga welcomed the gathering while

Dr.K.M. Meera S Begum, ICC Chairperson, briefed about the workshop. Dignitaries also flagged off 'Vahani'- a vehicle facility to pick-up NIT-T's female students and staff from nearby bus stops & areas on odd hours. Helpline numbers for the facility were shared by security officer Mr. Murugan.

Festember Facts

Students would bid for the food and beverage stalls as teams, and conduct the sales. Bids received were usually as high as INR 16,000, way back in the '80s. Sponsors were approached by the principal himself, apart from the students. A 10% collection bonus was added to the budget from the institute's treasury.

Feeds, 2017

Free Eye Checkup Camp

A Free Eye Checkup Camp was organized at NIT-T with the aid of Joseph Eye Hospital and Opticals, Trichy on 21st September 2019 at NIT-T hospital. The event was jointly supported by the NIT-T hospital team and NSS. The main motive behind this Eye Camp was to examine people for eye illness and disorders so as to provide them with appropriate remedies.



The inauguration began with a welcome address by Dr. Mariappan, NSS Coordinator and the inaugural address by the Institute Director, Dr. Mini Shaji Thomas who shared the importance of maintaining good eye health with a few experiences of her own. This was followed by a talk on the significance of eye donation by Dr. Sujatha Umapathy, the consulting ophthalmologist at NIT-T and the Head of Glaucoma and Cataract Operation, Joseph Eye Hospital Trichy which greatly enhanced the crowd's awareness on the same.

The valuable points of the Institute Medical Officers Dr. Malaymala Sarasveni and Dr. Priyanka concluded the inaugural ceremony. The NSS Programme officers Dr. Ganesh Chandra Nandi and Dr. Brindha were also present for the inauguration ceremony.

Festember Facts

The events were conducted among the Mechanical Engineering department, the former cinema hall (present EEE Audi) and the empty space behind the Admin buildings (presently the Barn Hall). All music related events were held in the Mechanical Engineering, Cinema hall for the valediction and the NSO ground for the fireworks display.

Feeds, 2017

National Institute of Technology (NIT), Tiruchirappalli Co-operates with Texas Instruments for Collaborative Programs

National Institute of Technology (NIT), Tiruchirappalli has signed a Memorandum of Understanding (MoU) with the Texas Instruments (TI) engaged in the design and development of semiconductors and software to promote interaction between NIT-T and Texas Instruments in mutually beneficial areas and to provide a formal basis for initiating interaction between NIT-T and TI through setting up a TI Research Lab at NIT-T premises.

The MoU envisages joint R&D projects over a period of three years for the development of new technologies in various engineering domains. The MoU was inked in the presence of Dr. Mini Shaji Thomas, Director, NIT-T and Shri. Sanjay Srivastav, Director, Texas Instruments India University Program.

Speaking on this occasion, Professor Dr. Mini Shaji Thomas, Director, NIT-T, said, "We are motivated about partnering with TI to collaborate in pioneering semiconductor engineering technology for learning and mobility. As various promising opportunities seem to exist, the setting up of TI Research Lab is at the top priority and subsequently be nurtured and grown after considering the learnings and experiences from TI.



As a part of this MoU, TI will deliver products and EVMs worth USD 25000/- (United States Dollars Twenty-Five Thousand Only) from 2019 till the expiry of this MoU. These TI products and EVMs will be used by NIT-T in curriculum teaching and research in the area of Analog IC applications, Power Management and Embedded Systems. It is mutually agreed that free of cost training to all teaching assistants, research assistants and lab assistants towards the usage of EVMs towards curriculum teaching will be provided by TI. NIT-T will encourage students to participate in Student Contests conducted by TI.

This partnership will help to bridge the gap between academic excellence and business requirements and to create an industry-ready workforce. This initiative also supports the Government's 'Make in India', 'Skill India' and 'Startup India' program, preparing the Indian industry to compete at a global platform."

Siemens CoE, NIT-Tiruchirappalli Signed MoU with Institutions

The Siemens Centre of Excellence in Manufacturing, NIT Tiruchirappalli has signed Memorandum of Understanding (MoU) with six more Institutions, Saranathan College of Engineering, Trichy, M.A.M College of Engineering, Trichy, Muthuyammal College of Engineering, Rasipuram, Paavai Engineering College, Namakkal, A.V.C College of Engineering, Nagapattinam, Sri Krishna College of Technology, Coimbatore in the presence of

Prof. Mini Shaji Thomas, Director, NIT-T and Dr.M.Duraiselvam, Head of Siemens CoE on 20th September 2019. Through this MoU, the Institutes have access to the services of the CoE such as skill development courses, internships and projects offered to students. In addition, faculty of the institutions signing MoU shall execute consultancy projects utilizing the facilities of the Centre.



Workshop on Machine Learning, Deep Learning and Computational Intelligence for Wireless Communications

A workshop on Machine Learning, Deep Learning and Computational Intelligence for Wireless Communications was conducted during September 16th - 20th, 2019. The participants included faculty, research scholars, B.Tech/M.Tech students from various institutions like ONGC, VNIT, NIT Puducherry, Anna University, IIIT Nagpur and other institutions. The topics covered were Dimensionality reduction techniques, Multiple input multiple output linear regression, Introduction to perceptron and probabilistic discriminative models for multiclass problems, probabilistic generative models, maximum likelihood solution, Support Vector machine and its kernel trick, GMM and HMM, Multilayer perceptron, Steepest descent algorithm, Particle Swarm optimization, Ant Colony technique, Auto encoder, Deep reinforcement learning, CNN, Generative Adversarial networks, Recurrent neural networks, Social Emotional optimization algorithm and Socio Evolution & learning optimization, Mobile data localization, Mobility analysis and User localization, Data driven applications for wireless communications, Wireless sensor networks, Network Control theory and network control security, hands on session using MATLAB. Lectures were delivered and coordinated by Dr.E.S.Gopi. Dr.G.Thavasi Raja and Dr.Rebecca of NIT-T.



All India Workshop on Theory and Practice of Sustainable Manufacturing

The Institution of Engineers (India), Tiruchirappalli Local Centre in association with the Department of Production Engineering, National Institute of Technology, Tiruchirappalli organized a two day All India Workshop titled "Theory and Practice of Sustainable Manufacturing" during 20-21st September 2019. Faculty members, students from various Engineering colleges and engineers from industries participated in this workshop. Experts were invited from academia and industrial establishments. Sessions were focused on fundamental theory of sustainable manufacturing highlighting the tools/ techniques and methodologies with modelling and performance measurement. Research insights and industrial applications of sustainable manufacturing were deliberated. Software modules of sustainable manufacturing were demonstrated.



Workshop Series of DoMS, NIT Tiruchirappalli

Department of Management Studies (DoMS), National Institute of Technology Tiruchirappalli organized a workshop series in the month of September 2019. With 40 years of excellence in the field of management education, DoMS has programmed the workshop series with its impeccable expertise in the field of analytics. Knitted group of DoMS faculty – Dr. P. Sridevi, Head of DoMS, Dr. B. Senthil Arasu, Professor, Dr. V. Lavanya, Assistant Professor and Dr. S. Nivethitha, Assistant Professor coordinated the workshop series.

Festember Facts

"The college had held a contest to find an appropriate name for the event they launched in 1976. "I combined 'a festival in September' to come up with Festember, and it won me Rs.25 in those days"

- Mr. Kalyanaraman,
who organised Festember in 1978.

Festember Facts

The college that gets the maximum points gets the Festember Rolling Trophy. The Rolling Trophy was originally named the "Ilayaraja Trophy" after the maestro himself performed at Festember in 1978

Festember Facts

Mr Venkatasubramaniam a.k.a. Katni, a student at REC-T, designed and constructed the audio systems himself to support the events as Trichy did not have the sophisticated audio equipment.

Feeds, 2017

Slated from 7th -11th September 2019, was a 5-day workshop on Data Analysis using Partial Least Square method and Structural Equation Modelling; followed by a 5-day workshop on Business Analytics and its application using R was scheduled from 28th September – 2nd October 2019.

First workshop focused on rendering a holistic understanding of data analysis using Partial Least Square method and Structural Equation Modelling to the participants. In the current context, PLS & SEM are widely used in social sciences and business research disciplines. Additionally, the workshop emphasized on the fine points of interpreting and reporting the results in the context of journal publications. Second workshop engrossed on the business analytics tools and techniques and its wide application in the industry. Hands-on exercises with multiple analytics tools and advanced predictive concepts like Machine learning algorithms, Data Visualization, Cloud Analytics using R were explored to the participants by associating business scenarios.

Resource persons for the workshop - industry experts and academicians deliberated on different concepts and use cases related to the theme of workshops. Programme attendees for both the workshop were industry employees and academicians – faculty members, post-doctoral scholars, doctoral scholars and post graduate students. Workshop has attracted nearly 100 participants from diverse disciplines across nation. In addition to the routine technical and hands-on sessions, DoMS organized tree plantation and outbound activities for the participants as a part of the workshop series.



ISNT National Conference on NDE

ISNT National Conference on NDE for Research Scholars And Students was organised by Department of Physics, NIT –Tiruchirappalli jointly with Indian Society for Non-destructive Testing (ISNT) during 25th -26th September 2019. This is a series of conference organised by ISNT in collaboration with IIT, NIT, R & D Labs and National Labs.



The conference aimed to bring together researchers and students from various academic institutions and industries to solve practical problems in Non-Destructive Evaluation (NDE). It was a platform for young researchers and students to network with professionals in academia and industry. Around 5 invited talks, 8 oral presentations and 24 poster presentations were made in this conference from WRI, BHEL-Trichy, IGCAR, NIT-T and Singapore. Participants were from NIT-T and nearby colleges.





1981 Batch: Barn Built
Ilaiyaraaja - Chief guest for Fe



National workshop on Humanoid Robot and Drone Development



Research Scholars Forum, NIT-T conducted a 4 days national workshop on Humanoid Robot and Drone development during 3-6th October, 2019. Around 60 students participated from NIT-T and various institutes. The workshop was inaugurated by Dr. S. Kumaran who is the faculty advisor of the forum. The workshop was coordinated by Eduxlabs (Esoir Business Solution LLP), Gurugram, Haryana.

The workshop consisted of complete practical robot and quad hardware sessions. Mr. R. Anirudha, Senior System Engineer, and Mr. Bharath, Design Engineer from Eduxsys solutions gave a detailed training on these systems to the participants. The participants learn to build a two legged robot which will have six degrees of freedom with a hip, knee & foot and mimic the walking action of humans. The workshop also helped participants understand the concepts and use of the accelerometer sensor, microcontrollers and wireless communication in designing and controlling a Quad copter. The workshop concluded with the valediction by honoring the guests from the industries.

Integration of Biomechanics, Control and Neurophysiology

Department of Instrumentation and Control Engineering, NIT, Tiruchirappalli organized a five days course on “Integration of Biomechanics, Control and Neurophysiology” under Global Initiative of Academic Networks (GIAN) funded by MHRD from 3rd Oct 2019 to 7th Oct 2019. Totally 56 participants from various parts of India took part in this course. The participants include biomedical students from various colleges, Doctors from AIIMS, Scientists from DRDO-DEBEL and researchers from various institution.

Prof. Mini Shaji Thomas, Director, NIT Tiruchirappalli inaugurated and presided over the program. Dr. B. Vasuki, Professor, HOD -Instrumentation and Control Engineering, welcomed the gathering. Dr. R.Periyasamy, Assistant Professor, Instrumentation and Control Engineering, Course Coordinator gave a motivational talk about the course briefly. Dr M.Umapathy, Dean of R&C felicitated the gathering with a speech on importance of GIAN course for an academician.

Festember Facts

The backdrops for the stages were put together using individual chart papers by the Architecture students of the college. Each day of Festember presented a different backdrop and a different sponsor –Feeds, 2017.

The objective of the course was to explore the participants to the field of integrative applications between Biomechanics, Robotic Control, and Neurophysiology. The chief guest was Dr. Michael E Hahn from Oregon University, USA. He geared up the session with an Introduction to Joint Kinematics/ Kinetics and discussed on pressure measurement within shoe. He went on to explain about control theory versus

Motor Learning and stages of learning like the cognitive stage, associative stage and autonomous stage with an application of Brain-Computer Interface (BCI). He also discussed about emerging technologies of modern assistive devices for prosthetic limbs and feet. A session on Neuro Game therapy that encounters the clinical problem and challenges due to muscle contractures and muscle disuse due to injury was discussed. He also handled three journal discussion sessions on writing a technical paper and reviewing a paper.

Dr. Deepak Joshi, IIT-Delhi gave a talk on Instrumentation for Neuromechanics: Electroencephalogram (EEG), Electrocardiogram (EcoG) and Electromyogram (EMG) and extended to Artificial proprioception for myoelectric control. He also discussed about the signal processing challenges in Neuroprosthetics and machine learning for mapping of neural activity for locomotion. Live Demo session on EEG, FMG and EMG data Acquisition was streamed from IIT-Delhi which benefitted all participants.



Festember Facts

Introduced in 1981, 'Buggy' was a three-wheeler designed by the RECTians and powered using a scooter's engine. It plied in and around transporting students and goods during Festember serving as a vital component – Feeds, 2017 .

Video Standards Create a Global Stage

On the occasion of World Standards day 2019, a guest lecture was organized by Bureau of Indian Standards, Southern regional office on October 14th, 2019. Dr E.S.Gopi delivered a lecture on "Video Standards create a Global Stage". The talk included the need for the digital quality standards for images and videos. The technology behind the videos and images should be subjected to the World Standards. In future, artificial intelligence will play a major role in official, entertainment and sports videos and images. Increase in the use of videos and images provokes a question on the quality of videos whether it is original or tampered. With the advent of artificial intelligence, it is possible to create an image or video of a person who does not exist. To avoid this, digital quality standards should be followed similar to the quality checks in Gold, Silk etc. The talk was inaugurated by T Kalaivanan, Deputy Director, BIS Southern Regional Office.

Sanjeev Chaturvedi, Scientist, BIS, Narasimha Sharma, Director, IIIT Trichy, M.S.Ramesh, Additional General Manager, BHEL were also present during the lecture.

Article on Why Critical Reading Matters

An article titled 'Why critical reading matters' by Dr. Joseph Ponniah, Department of Humanities and Social Sciences had been published in The Hindu/Education Plus in the Chennai and New Delhi editions.

Why critical reading matters

Though academic reading may seem like an unrewarding exercise, it makes one analytical and creative.

BLACKBOARD
R. JOSEPH PONNIAH

The increased pressure to achieve high scores in standardized tests compels students to focus more on the probable content expected in the test. This, eventually, would prompt them to cram the content in isolation without understanding and learning concepts. In fact, the acquisition of concepts and the creative processing of conceptual knowledge are possible by reading academic texts. Academic reading can contribute to the development of all aspects of skills required for both academic and professional growth.

Pressure
Teaching to test has become quite a common practice in academia because grades and scores decide the calibre of students, and this impels them to cram the stuff without comprehending concepts, thereby becoming less creative. Such learning forbids them from learning, challenging theories and concepts to avoid the risk of getting low scores in exams, and eventually resulting in the acquisition of shallow knowledge. However, this approach to learning may not allow them to think for themselves and further, it may deteriorate the thinking skills. In order to make students analytical, critical and creative, they must be motivated to do more academic reading.

Ideation
Academic/critical reading is an active engagement with meaning that involves cognitive processes such as analysing, evaluating, interpreting, and synthesising. When we read academic texts, we relate different ideas, reorganise them in novel ways to come up with new ideas, and even relate them with personal experiences to gain further insights into theories, facts and concepts. The creative engagement with meaning, positively affects both language and conceptual knowledge. Further, the reading would facilitate the brain to generate new ideas, and in the process, it subconsciously generates new language structures.

In order for academic reading to happen effectively, readers need to first skim the text to grasp key themes, concepts and arguments, as it provides appropriate content for reading. Since academic reading is critical and analytical in nature, it requires in-depth reading of concepts, sometimes re-reading for better and clear understanding, and even negotiation with the content to have deeper insights. If the reading content is difficult to understand, readers can pause and reflect on what they have read and can further reorganise it for better comprehension to read continuously. This enables them to perform better even on high-stakes standardised tests, in addition to the acquisition of skills and knowledge. Since academic reading is about the active engagement with meaning, a reader should focus only on the meaning, and not on the grammar of the language. In fact, focusing on grammatical aspects impedes the understanding of the text and eventually discourages one from reading.

Reading academic texts may be an unrewarding experience for novice readers as they can have difficulty understanding complex academic writing styles. Such readers must be encouraged to read recreational books as, light reading makes academic reading easier.

Reciprocal relation
Academic reading improves writing, which in turn improves reading as there is an undeniable connection between the two. When we write, we read to gain deep knowledge on the subject because writing is a composing process which requires knowledge of the subject at a deeper level. Further, when writing, we use our current knowledge and present it using creative and analytical abilities gained by reading. Therefore, students must be encouraged to write while reading.

In order to reap the benefits of reading, quality reading programmes must be conducted in schools and colleges because in-class reading develops a positive attitude towards reading which, in turn, will prompt students to do more out-of-school reading.

The writer is associate professor and head, Department of Humanities and Social Sciences, National Institute of Technology, Trichy.

Research-based Industrial Consultancy

Dr.V. Anandkrishnan, Associate Professor, Department of Production Engineering received a grant to the tune of Rs. 1976500 for Research Work to establish HPTR brazing at GTRE for 18 Months, funded by GTRE-CARS

Dr.M. Duraiselvam, Professor, Department of Production Engineering received a grant to the tune of Rs. 2276000 for Research work on Laser Micro Cladding of Titanium and Nickel based alloy shafts for 18 Months, funded by GTRE-CARS

Dr.M. Sridevi, Assistant Professor, Department of Computer Science & Engineering received a grant to the tune of Rs. 963470 for Research work on Laser Micro Cladding of Titanium and Nickel based alloy shafts for 15 Months, funded by GTRE-CARS

Sponsored Research Project

Dr. Sishaj P.Simon, Associate Professor, Department of Electrical & Electronics Engineering, received a grant to the tune of Rs. 1580832 for Indo-Danish collaboration for data-driven control and optimization for a highly Efficient Distribution Grid (ID-EDGe) DST ID-EDG3 Project along with IIT Roorkee and IISC Bangalore as partnering Institution for 3 years, funded by DST Project through IIT Roorke.

Dr. Somenath Garai, Assistant Professor, Department of Chemistry, received a grant to the tune of Rs. 6642259 for Boosting the H2 Economy by Harnessing the beauty of Encapsulation Chemistry: Augmented Kinetics for Water Splitting Reaction under Confinement for 3 years, funded by DST-HFC

Ms. Swathi is selected under the DST Inspire Fellow scheme, with a grant to the tune of Rs.2118400/- under the supervision of Dr. R. Nagalakshmi, Associate Professor, Department of Physics for 5 years.

Consultancy

Dr.N.Siva Shanmugam, Associate Professor, Department of Mechanical Engineering, on Wire EDM-flat Tensile Test specimen, Tensile Test for M/s School of Mechanical Engineering, VIT University, Vellore, Rs.38350.

Dr.K.Muthukumar, Professor, Department of Civil Engineering, on Testing of Soil samples of Borehole SVP-88 for PMP test for MECL Veeranam Project, Cuddalore, Rs.489700.

Dr.K.Baskar, Professor, Department of Civil Engineering, on Design Vetting -DXN -Gate Complex Structure, for M/s.Arch Project Consultants Pvt Ltd, Chennai, Rs.236000.

Dr. V. Muthupandi, Professor, Department of Metallurgical and Materials Engineering, on Technology Development – Durni Coating on Half shell and to handover the complete principles & process for coating the system for M/s.Loesche Energy Systems India Pvt Ltd, Chennai, Rs.1132800.

Dr.R.Raghavan, Assistant Professor, Department of Civil Engineering, on Design of supporting structure for 3 Nos of Cooling towers: a. Structure with RCC Column, beam slab (in 3 phase construction) along with staircase B) Footing Design, for M/s. AGM(Engg.Civil) Airports Authority of India, Trichy, Rs.53100.

Dr.V. Sunitha, Assistant Professor, Department of Civil Engineering, on Bitumen Extraction Mix-design, for SD Infra Test on Embankment, Rs.66080.

Dr.V. Sunitha, Assistant Professor, Department of Civil Engineering, on Bitumen Extraction Mix-design, for Yoga & Co, Chennai, Rs.204140.

Prof. R. Jeyasankar, Associate Professor, Department of Civil Engineering, on Soil Investigation, for M/s Tamil Nadu Slum clearance Board, Rs.590000.

Dr.K.Baskar, Professor, Department of Civil Engineering, on Design Vetting -DXN -Structural Design Vetting for coffee shop Building, GMP Building, Cosmetic Building, Utility Building, Canteen Building, Admin Building and Integrated warehouse Building Document, for M/s. Electro Tech Engineers, Telangana Through M/s.ARCH Project consultants Pvt Ltd Chennai, Rs.911868.

Dr.R. Gandhimathi, Associate Professor, Dept. of Civil Engineering, on Performance Monitoring of EPP, for M/s. Tamil Nadu Water Investment Company Limited, Chennai, Rs.41276.

STUDENTS

Sports Fete

NIT - Tiruchirappalli witnessed a firework of emotions during the four days of Sportsfete, the annual inter-departmental sports festival of the college, was held. From 27th to 30th October, students were in a frenzy all over the grounds and stadia, thronging to play the games, win and cheer for their respective Departments. The theme "Chaos Is The new Order" strung true with the atmosphere around.

14 Departments competed for the coveted shield in over 15 games. In the end, the Production Department triumphed, with Mechanical and Architecture Departments taking the second and third place respectively. The Marathon, Sportsfete's flagship event, was held four days prior on 23rd October. With this year's theme for the same being "Climate Change", over 2000 students from various backgrounds assembled at the starting point near the Physical Department Office. The marathon was graced by the Chief Guest, Mrs. Padmini Thomas, the first ever female President of Kerala State's Sports Council, an Asian Games medalist and an Arjuna awardee, in the presence of Director Dr. Mini Shaji Thomas and the Deans.

Runners were constantly encour-aged from the stands and water stations strategically positioned on the route. Hari from the Production Department ran the men's stretch first, while Kaviya from Architecture ran the women's. The Director admirably finished two laps of the run, with the Chief Guest inspiring the students during the one lap she ran.

Drawing to an end, Sportsfete '19 was a huge success. The major overhaul both in terms of organization and events has paved a new way for the upcoming editions to cement their significance in the students' minds and bring out their talents. With the Chief Guest and Director both having run the marathon, it indeed was a revelation and a confidence booster for students to give the marathon a try and challenge themselves.

Festember Facts

**"You guys were
extraordinarily amazing.
Given a chance I would
love to perform here"**

Singer K K
@ Festember 2007



Festember Facts

**"Festember is the
stage to perform"**

- Singer Srinivas @Festember'10

Festember 2019

Festember, NITT' s annual cultural extravaganza, has grown by leaps and bounds and was held from October 3rd to 6th, 2019. Boasting an annual attendance of thousands of participants across India, the fest organised over 60 events under categories such as fashion, arts, music, literature, dramatics and photography in which students took part. The fest also hosted a guest lecture series called 'Carpe Diem' in which eminent personalities were invited to talk to and interact with the students. This year, Koffee with Anu host Anu Hasan and acclaimed playback singer Naresh Iyer were among the highlights of the Carpe Diem series. National award-winning playback singer Naresh Iyer who was part of Festember, shared with students how he struggled to break into the music industry, and the chance given by music director A R Rahman, which helped him succeed in the contest.

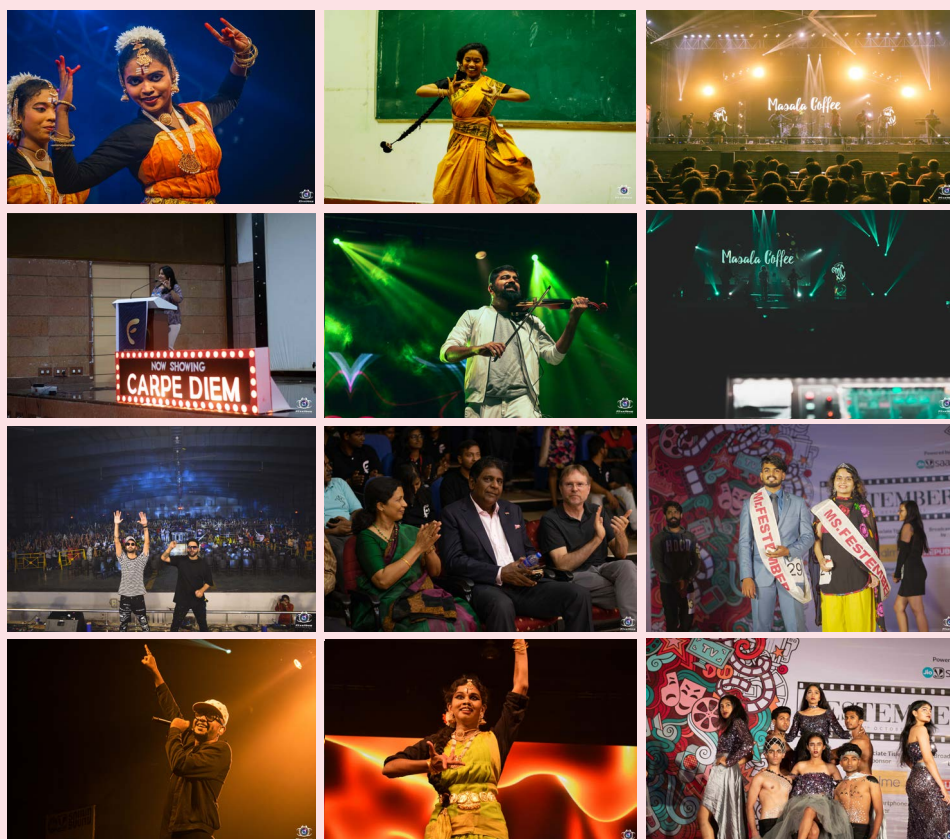
Workshops and Informals were organised throughout the fest, to give the participants an opportunity to learn something new. One of the key highlights of the fest is the ProShows, in which musicians from across the world perform. Playback singer Benny Dayal and renowned band Masala Coffee were among the performers who rocked the stage last Festember. For the up-and-coming musicians, Festember hosts the Indie stage, giving the audience a chance to listen to artists who are on the rise. Exceeding all expectations and creating a buzz across the country, Festember was, indeed a true success.

Earlier in the day, Vijay Amritraj, India's former tennis player, addressed students and shared his mantra, which led him to achieve great heights in life. He spoke about how his mother who was his pillar of support and how she helped him recover from his failures and taught him to move forward in life. Sastra University, Thanjavur has bagged the rolling trophy of Festember 2019 for the 21st consecutive year.

Festember Facts

“That’s the irony in life. I could not take part in any event in Festember, and today I am the chief guest”

Director Gautham Vasudev Menon
@ Festember 2012



Festember Facts

“My dad wanted me to get good marks to make it to the NIT. But that didn’t happen. I am extremely happy that I am standing in front of you as a chief guest of Festember. I hope my dad cherishes the moment”

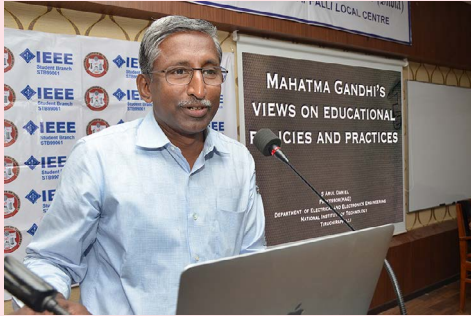
Actor Prasanna @ Festember 2014

Workshop on Antenna & Filter Design

The IEEE Student Branch of NIT – Tiruchirappalli conducted 3 days workshop on Antenna & Filter design using CST, HFSS and ADS tools during 25th- 27th September 2019. The event was attended by research scholars, Post-Graduate students and faculty from the Department of ECE and Dept. of EEE, NIT – Tiruchirappalli. The resource personnel for the workshop were research scholars from the Dept. of ECE. On Day-1, CST tool was introduced to the participants and hands-on session was conducted by Mr. Santhana Mahalingam. On Day-2, HFSS software was taught to the participants by Mr. Harish Aditya and on Day-3 ADS tool was practiced by the participants in the presence of Mr. G. Bharath Reddy. During the course of the workshop, the participants were encouraged to work on Antenna and Filter designs. On the final day, EM simulations using ADS was also taught to the participants. The event was beneficial to the budding research scholars in the field of Microwave circuit design.

IEEE SB Celebrates 150th Birth Anniversary of Mahatma Gandhi

The Institution of Engineers (IEI), Trichy Local Chapter in association with IEEE Student Branch of NIT – Tiruchirappalli celebrated the 150th birth anniversary of Mahatma Gandhi on October 1, 2019 at the IEI building premises, BHEL, Trichy. Dr. S. Arul Daniel, Professor, Department of Electrical and Electronics Engineering, NIT Tiruchirappalli delivered a talk on the theme “Mahatma Gandhiji’s contribution towards nation building & his views on education policy and practice.” The event was attended by past chairpersons, secretaries of the IEI, TLC along with engineers from BHEL and research scholars from NIT – Tiruchirappalli. Dr. S. Arul Daniel highlighted the methods and ideas behind Gandhiji’s



teachings and elaborated how Gandhiji’s teachings were instrumental in bringing about the current curriculum being followed by NITs all over India. He also briefed on how the Gandhian methods can be incorporated in the current education system. During the discussion session, the attendees gave their thoughts on the current education policy and the large divide in rural and urban educational facilities. The event concluded with Dr. S. Arul Daniel stressing the importance of locally relevant education to the development of rural India.

Inauguration of IEEE PES & IAS Student Chapters

The IEEE Student Branch of NIT – Tiruchirappalli inaugurated the IEEE Power and Energy Society (PES), and Industry Applications Society Student Chapters on 15th October 2019. The event was attended by research scholars, Post-Graduate students and faculty from the Dept. of EEE, NIT – Tiruchirappalli. The chief guest for the inauguration was Mr. S. Ingersol, Scientist G, ISRO, India. Mr. S. Devaraj, PG Scholar was nominated as the chair of the IEEE PES and IEEE IAS student chapters of NIT – Tiruchirappalli. The members of the student chapter vowed to keep the chapter active by conducting workshops, lectures on the topics related to power, energy, industry applications so that the students will be updated with the latest innovations happening in the world of power & energy, and industry applications. Later a distinguished lecture on “India on Space Age” was delivered by Mr. S. Ingersol, Scientist G, ISRO, India. Mr. Ingersol briefed about the role of India in space research and motivated the students present to take up the responsibility for providing solutions for everyday problems faced in the research industry. Mr. Ingersol discussed the current scenario with regards to satellite launches and how different engineering teams come together to launch the satellite. Mr. Ingersol also touched upon the subject of ‘Space Garbage’ and its effect on orbiting satellites. He also called upon the young researchers to provide low-cost solutions for cleaning up the space garbage left behind by satellites and space stations in the atmosphere.

Festember Facts

“I cannot forget the Cauvery, Tiruchi, Township, NIT-T and of course songs scored by the legend Ilayaraja as these are all part of my childhood memories”

Actor Prasanna @ Festember 2014



NIT Tiruchirappalli Research Scholar Won DRDO’s ‘DARE TO DREAM’ Contest

The Defence Research and Development Organization (DRDO) has launched ‘Dare to Deam’, a contest to encourage startups and individuals to come up with innovative defence and aerospace technologies. More than 3000 researchers across the country participated and after a two level screening, Mr. K Krushnakanth, research scholar, Dept of ECE of NIT Tiruchirappalli was invited to present his work on ‘RADOME for RADAR applications namely Frequency Selective Surfaces(FSS)’. Due to its uniqueness, his project earned the First Prize Award. He received the commendable



certificate and a cash prize of Rs 5 lakhs from Raksha Mantri Rajnath Singh on October 15 in the 41st DRDO Directors Conference in New Delhi on Technology Leadership for Empowering India in the presence of Chiefs of the three forces & DRDO Chairman Dr. G Satheesh Reddy. Mr. K Krushnakanth said this encouragement had made him to discover and invent products to be used in defence and space research. He owes his success to the fundamental knowledge learnt from the ‘Microwave Subject’ taught by his guide Prof. S Raghavan. Incidentally he earned a national level title ‘Father of FSS’ recently.

Inaugural Concert by Amruthavarshini, the Carnatic Music Club of NIT Tiruchirappalli

Amruthavarshini, the Carnatic Music Club of NIT Tiruchirappalli hosted its Grand Inaugural Concert for the academic year 2019-20. The concert hosted National Awardee 'Yuva Kala Bharathi' Dr. R Kashyap Mahesh, Vocalist and his co-artists, Shri. N. C. Madhav on the Violin (AIR Trichy), Salem Sri. K. Srinivasan on the Mridangam (AIR Trichy) and Vishnupuram Shri. K. Raghu on the Morsing.

Festember Facts

Writer Sujatha (Rangarajan) who was the Chief Guest in one of the Festembers said, " If REC was there at that time, my parents would have surely put me up here". I had to finish BSc first and then join MIT for my 3 years Electrical/Electronics Engg Course."



ALUMNI

NIT Tiruchirappalli Alumni Launched a New Course - 'Business and Entrepreneurship for Engineers' (BEE)

National Institute of Technology Tiruchirappalli, has launched a new course for final years of Under Graduates, on 'Business and Entrepreneurship for Engineers' (BEE) - an experiential and flipped class room course - designed and delivered by the illustrious NIT-T Alumni. This course is fully formulated and conceptualized by a team of 1984 REC-T alumni Mr. Baskar Subramanian, Executive advisor Tetherfi and Mr. Shyam Ramamurthy, Independent Consultant & Founder at Catalynk Business Solutions who were very passionate and enthusiastic in giving back to the institute.

The course was officially inaugurated on August 1st, 2019 by Prof. Dr. Mini Shaji Thomas, the Director, NIT-T and Mr. Ravi Vishwanathan, Chief Marketing Officer, TCS (Alumnus 1981) in Hotel Sangam, Trichy. In this course, the students were exposed to the different concepts of management - finance, legal, operations, marketing, economics, human resource management and design thinking. The class room sessions are followed by Out of Building (OoB) exercises and experiential learning, followed with a Shark Tank type project evaluation by industry experts and venture capitalists. A total of ten business ideas were passionately presented by the students. As a part of the course, students had a fireside chat with the 1984 batch alumni - Mr. Shyam Srinivasan, MD and CEO of Federal bank and Mr. T S Mahalingam, CEO of TSM cars and moderated by Dr Chandru Rajam Management Consultant based in the USA.



NIT-Tiruchirappalli's Alumni Association RECAL AGM, Trichy Chapter Meet and Launch of Global Alumni Meet (GAM) 2020

NIT-Tiruchirappalli's alumni association (RECAL) conducted its AGM & Trichy Chapter Meet in Trichy on Oct 12th 2019 at SRM Hotel. It was also their occasion to promote the Global Alumni Meet 2020 (GAM 2020). Dr. Mini Shaji Thomas, Director, NIT-T, Mr M. Krishna Sai, President, RECAL and Dr S. Raman Sankaranarayanan, Dean (ID & AR), NIT-T and distinguished alumni from the field of academia, entrepreneurship and corporate were present for the meeting. Welcoming the initiative by the alumni, Dr. Thomas said "NIT-Tiruchirappalli is very fortunate to have leading luminaries as its alumni and is very keen to utilize their passion to give back to the college".

Dr. Mini Shaji Thomas, Director, NIT-T, during her speech and presentation, mentioned that she is extremely proud to be part of such an event. She emphasised on the importance of alumni relations as the major stakeholder in the development of the institute and through this platform of AGM & Trichy Chapter Meet and the forthcoming Global Alumni Meet 2020, the relationship between the institute and the alumni gets more and more strengthened. Some of



the alumni (individual/batches) have always been contributing to the institute right from the beginning either through scholarships, mentorships, internships and she hopes that more of such events would inspire more alumni to utilize their time, talent and treasure for the benefit of the institute. She also made a mention of the Institute initiative an “Alumni Institute Interaction Cell (AIIC)” working under the Dean (ID & AR) and having an Associate Dean (Alumni relations). This cell was founded with the main aim of strengthening the bond between the alumni and the institute and forms a node of

contact between the alumni and Institute. From its inception, AIIC has to pace up its activities and working in union with RECAL and their combined venture has been successful.

Mr M. Krishna Sai, President, RECAL mentioned that there are active Chapters in Trichy, Chennai, Bangalore, Mumbai, Delhi, Hyderabad, UAE, Singapore and USA (East & West Coast). Distinguished Alumni of NIT-T is leading several corporates including Tata & Son’s, TCS, Adobe, Bloom Energy (USA) they are many excelling in Universities & Research Institutions across the globe. He mentioned some of the initiatives taken such as Alumni Visiting Faculty Program, Alumni Designing Industry-specific Courses for students, Alumni Mentorship Program and Internship for students in institutions, companies headed or founded by Alumni.

Mr M. Krishna Sai, President, RECAL mentioned to have more than 2000 Alumni & families present from across the globe with a focus on Entrepreneurship Development, Start-Ups and recognizing eminent Alumni for their contributions to academia, entrepreneurship and corporate.

Awards & Accolades - Festember

Best Cultural Fest Award in 2005 by the State Government of Tamil Nadu. YIFA Webslam award for the most creative functional website in 2014. YIFA Hangover award for the best party response the best party response artist’s performance in 2014.

Krishna Sai, also mentioned that recently NIT-T USA Alumni Chapter was incorporated as a non-profit organization in the State of California, USA. The chapter received its “exemption” for Federal Income Tax under the Internal Revenue Service (IRS) and is officially a Registered 501 (c)(3) organization in the USA. He thanked Mr Raja Renganathan, Alumnus for spearheading this effort in the USA.

RECAL also unveiled the Internet of Things (IoT) lab sponsored by the batch of 1981 and the Multi-disciplinary Student Innovation Center (SCIEnT) that was set-up through the efforts of the batch of 1990. “We are planning

to expand the alumni interaction and work closely with the institute to enhance the brand NIT Trichy,” said Mr. Krishna Sai, the president of RECAL.

Most of the RECAL activities including building of the REC Middle School building at a cost of Rs.58 Lakhs in the campus for teaching and non-teaching Staff children and also for the children of the surrounding villages, IoT Lab, SCIEnT Innovation Centre and Student Scholarships worth more than Rs.15 Lakhs are being disbursed yearly to benefit more than 50 students year on year through the RECAL Foundation.

NITT

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EDITED BY:
Dr. S. ARUL DANIEL
Dr. K.N. SHEEBA



National Institute of Technology, Tiruchirappalli
Tamil Nadu, India- 620015,
Institute : +91-431-2503000 / 2504000
Fax : +91-431-2500133
Website : <http://www.nitt.edu>
EMAIL: mint@nitt.edu