

Director, ICT Jalna





Prof A B Pandit Vice Chancellor



# INTERACTION WITH ICT ALUMNUS SWAR TARANG : CULTURAL CELEBRATION OF SANKRANTI

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Editor: Dr. Kapil Sagrolikar





Swar Tarang
 Celebration





Swar Tarang Celebration : Kite Flying

Sankrant Celebration with Support Staff



#### Affectionate Message from MARJ Director





Many programs such as intercollegiate Industry Defined Competition were planned towards the end of the March and throughout the April. However, Corona said "Kuch Karo Na", "Ghar Raho Na", so all of us are undergoing "Gruha Vas", yet we found a way to continue our academic activities - weekly meeting, daily on line teaching, webinars, home IPT projects, etc to keep ourselves more than busy.

#### Dear MARJ Family Members, Parents and Well-wishers,

Year 2020 has witnessed very unusual situation across the world due to Corona fear and lockdown since last few months. At the outset, I congratulate all of you for the support offered to continue online teaching since March 16th till date. Many students had to leave the industrial training and rush back home and a few were stranded for several weeks in other states at the Industry guest houses. We are extremely thankful to staff and HR managers of these industries, the parents, students and faculty as well who have handled the situation without panic and in a very poised and mature way. My dear students, let me confess here that you are too brave and too strong as a person at such a tender age. I can visualise you all emerging as great professionals and leaders in your field a few years down the line!

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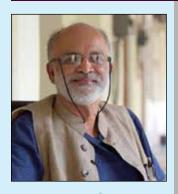
Honourable then Chief Minister Devendraji Phadanvis during the 5<sup>th</sup> Convocation of ICT announced in March 2016 that the State Government would like to support ICT (Mumbai) to open a sub-centre in the Marathwada region. Since then over a period of 4 years, we have admitted 2 batches of i-M.Tech., over 25 doctorate students, and recruited a team of 16 Teaching Staff. My heartfelt thanks to the state government of Maharashtra for releasing funds. Because of this, we could place the orders for procuring high end analytical instruments. It cost nearly Rs. 10 Crores. My sincere thanks to the former and current Vice chancellor, deans and officers who have tirelessly worked to realize the dream come true- to have an ICT-Mumbai off campus at Marathwada!

January 2020 started with several curricular, co-curricular and cultural programs. On 14th January we enjoyed kite flying and savoured hot Jalebis and crunchy Fafada. In the evening we had Sankrant and Haldi-kumkum program where some students' mothers too participated. This was a month of birthdays for some of our teachers where we had lots of fun with cake cutting and other celebrations. Dr. Radha Jayaram and Dr. Jayashri Nagarkar, senior professors from ICT Mumbai, specially travelled to Jalna to conduct Lab Safety Workshop. This training is very important for every student working with chemicals, machines and electricity in labs and industry. The month of January was also marked with organizing the first Hands-On Skill Development program on HPLC. Dr. Manoj Jadhao and Dr. Manoj Gawande worked tirelessly to make this program a grand success. This workshop benefitted over 30 persons (students, researchers, teachers and others) from industry, universities and institutes from the Marathwada region. National Science Day was celebrated on February 28th when Jeevanrao Pare High School and Shree. M.S. Jain English School students visited MARJ campus and its various Labs. Our students did a great show in developing interest in science in the young minds. March was marked by Women's Day Celebrations. The theme of 2020 Women's Day was "women scientists". Needless to say, MARJ Director herself had many invitations across Maharashtra to deliver talks, public lectures, conduct interactive sessions with women self-help groups and thus inculcate scientific temper in the students and teachers, and share her life story of a successful Indian women scientist.

Many more programs such as intercollegiate Industry Defined Competition were planned towards the end of the March and throughout the April. However, Corona said "Kuch Karo Na", "Ghar Raho Na", so all of us are undergoing "Gruha Vas", yet we found a way to continue our academic activities – weekly meeting, daily online teaching, webinars, home IPT projects, etc to keep ourselves more than busy. We at MARJ believe in converting liabilities into assets by converting problems into challenges and solving them in Win-Win way! So have fun, learn new things, stay home, stay safe!

Prof. Smita S. Lele Director, ICT MARJ

#### A Heart Touching Word from the Vice Chancellor



In spite of this extremely difficult situation, you have not let it dampen your high spirits and have continued with your cultural and social activities such as Swar Tarang, Kite Flying on Sankranti, with the moto "Show must Go On".

Sector MARJ NEWSLETTER

#### My dear Colleagues and student friends,

At the outset, I would like to thank you all for giving me an opportunity to communicate with you through the voice of Margjal. After I took over as VC in November, I had an opportunity to visit you and address you through SKYPE a couple times and I am impressed by the commitment and resolve shown by you all in this unprecedented pandemic situation. In spite of several hardships and constraints imposed by the current situation, ICT MARJ continues to celebrate and practice professional commitments as if the situation is near normal and yet showing environmental and social sensitivity while performing and celebrating these events.

In the last quarter of January 2020 to April 2020, in addition to your regular academic duties using digital and remote, and online modes of teaching successfully, you all have gone ahead and conducted useful co-curricular activities such as- HPLC Skill development workshop, safety workshop, National Science Day celebration, etc. Your colleagues from ICT, Mumbai, Prof Radha Jayaram, Dr. Jayashree Nagarkar and Dr. Snehasis were also the resource persons of it. A hallmark of an event was the signing of the MOU with the oldest educational institute from Jalna- Jalna Educational Society (JES), which nicely integrated ICT MARJ with the academic environment of Jalna.

In spite of this extremely difficult situation, you have not let it dampen your high spirits and have continued with your cultural and social activities such as Swar Tarang, Kite Flying on Sankranti, with the moto "Show must Go On".

I salute you all. I salute your leader Prof Smita S Lele and her dedicated intrepid team at ICT MARJ which consists faculty and staff, and my student friends for a successful completion of this crucial quarter. I am sure, with your infectious enthusiasm, you all will come out of this crisis yet stronger and resolute and teach your seniors a thing or two in future.

Wishing you all a great coming academic 2020-2021.

#### Prof. Aniruddha B Pandit Vice Chancellor, Institute of Chemical Technology

 The Vice Chancellor Prof. Pandit interacted through video conferencing on the Send-off Function Day of Prof. Smita Lele (Director, Jalna Campus)



My best wishes to Prof. Smita Lele who completed 65 years and superannuation today i.e. on 31st January 2020. I am happy to announce that the Board of Governors has given her extension of servicesso she will be continuing as Director and Professor on the same post. My Best wishes to entire MARJ family for further growth under her leadership!

#### **New Joining**

#### **Faculty Members**

ICT MARJ Family welcomed aboard eight well qualified and highly motivated Assistant Professors, a highly deserving Librarian and a couple of support staffs in its fraternity. It would be pertinent and apt to begin this issue of Margjal with a look at their profiles and research interest.



**Dr. Nagsen P. Meshram** B.Sc. (Physics, Chemistry, Mathematics), M.Sc. (Physics), Ph.D. (Materials Science)

Assistant Professor, Applied Physics

Joined on 09 December 2019



**Dr. Debashis Kundu** B.E. (Chemical Engineering), M.Tech. (Chemical Engineering), Ph.D. (Chemical Engineering)

Assistant Professor, Chemical Engineering

Joined on 30 December 2019



Dr. Atul H. Bari B.Tech. (Chem.), M.Chem.Engg. Ph.D. (Chem.Engg).

Assistant Professor, Petrochemical Engineering

Joined on 05 May 2020



**Dr. Kapil Irwantrao Sagrolikar** B.A. (English, History & Public Administration), M.A. (English), Ph.D. (English/Interdisciplinary)

Assistant Professor of English (Communication Skills and Humanities)

Joined on 20 December 2019



Dr. Saurav Raj B.Sc Engg.(Electrical and Electronics Engineering), Ph.D. (Electrical Engineering) Assistant Professor, Electrical Engineering

Joined on 31 December 2019



Dr. Sushobhan Ghosh B.Sc. (Chem.), M.Sc. (Chem.), Ph.D. (Supramolecular Chem.) UGC Assistant Professor, Chemistry

Joined on 06 May 2020





Dr. Hitendra J. Patil B.Sc. (Comp. Sci.), M.L.I.Sc. Ph.D. Library and Information Science Librarian Joined on 25 February 2020

#### Support Staff

Earlier in the year 2019 there were 7 support staff. In this first quarter of the year 2020 ICT MARJ recruited two new support staff. Dheeraj Sanjay Bhandari (HSC) joined the campus as Office Attendant on 22 January 2020 and Ganesh Sudam Barbaile, completed BCA and appeared for MBA, joined the campus as Laboratory Assistant on 05 May 2020.



Dr. Somen Mondal B.Sc. (Chem.), M.Sc. (Phy. Chem.), Ph.D. (Chem)

Assistant professor, Physical Chemistry

Joined on 23 December 2019



**Dr. Joyita Sarkar** B.Sc. Microbiology (Hons.), M.Sc. Biotechnology, Ph.D. Biological Sciences & Bioengineering

Assistant Professor, Biotechnology

Joined on 01 January 2020



#### Presentation on Research Interest by Newly Joined Faculties

In educational institutions well-qualified research-oriented faculty takes the institutions to new heights of achievement. Institute of Chemical Technology believes in qualification, research and this is why we procured the research minds. The newly joined faculty gave presentations on the kind of research work they have done so far, and the research they will engage themselves in future. The highlights of their presentation is :



**Dr. Nagsen P. Meshram** gave presentation on the topic "Synthesis and Characterization of Silicon Nanowire using Hot Wire Chemical Vapour Deposition". He discussed his PhD and Post-Doctoral Research carried out in South Korea. In the future plan, he proposed to do the research work in the area of synthesis and characterization of various metal oxides photocatalytic materials via simple chemical methods such as hydrothermal method, Chemical bath deposition for energy and environmental applications.

Dr. Kapil I. Sagrolikar discussed his doctoral research work entitled "Singing the Tradition and Grinding the Culture: A Study of Self, Censorship and Subversion in Grindmill Songs by Maharashtrian Women". He discussed its interdisciplinary nature and similar work to be done in the future: Post-Doctoral Research, Research Projects, Blending of Research and Teaching, and Creation of Archive (Jatyavarchya Ovya and Lok Ramayan).





**Dr. Somen Mondal's** presentation title was "Long Range Charge Separation and Recombination in Quantum Dot Doped Biopolymer: Application Towards Optoelectronics devices". He showed his publication in the Journal of American Chemical Society. He discussed his post-doctoral Research on Biexciton Dissociation Dynamics in Nanohybrid Au-CuInS2 Nanocrystals. He said that in future his group would develop spinpolarised optoelectroinc devices and conducting bipolymers for biomedical application.

Dr. Debashis Kundu with the title "Synthesis and Characterization of Polysaccharide based Hydrogel and Subsequent Application in the field of delivery of Biomolecules and Metal ion adsorption" discussed his PhD thesis. He concluded the session with his future research interest in two areas: structural, transport and thermodynamic properties of hydrogel: A molecular simulation study; and extraction of value-added compounds using deep eutectic solvent: Theoretical formulation and experimental methodology.







*Dr. Saurav Raj* explained the concept of "Reactive Power Planning". In his future research work, he is interested to implement and examine the effectiveness of FACTS devices like TCPAR, UPFC and STATCOM. He will also work on minimizing fuel cost, fuel cost emission and combined cost emission while scheduling of conventional and nonconventional

*Dr. Joyita Sarkar* contemplated on the topic "My Journey with Cryogels: Past Research and Future Research Interest". Her presentation started with the discussion of her PhD. She completed her presentation with her future research interest i.e. working on 3D bio printing applications and nanobacterio constructs for cancer theranostics, nanobacterio-constructs for cancer theranostics and food by-product-based biomaterials.



#### **Academic Endeavour**

## Lectures, Pep Talks, Workshops & Trainings

Derric Yuh Ndim, a social entrepreneur and student of human potential, once said, "the best way to prepare for life is a combination of formal traditional education, reading, seminars, and workshops, coupled with experience as well as tapping into the knowledge of experienced people". We usually at ICT MARJ involved in a range of workshops, training sessions, lectures and pep talks. These co-curricular activities help students, faculty and also the support staff learn wide range knowledge and information pertaining to the chemical engineering, food engineering and industry, design and processing engineering, chemistry, safety, basics of outcome-based learning and preparation of NBA, and personality development.

#### Interaction with ICT Alumnus Dr. Azza Silotry Naik (08<sup>th</sup> January 2020)

Dr. Azza, an ICT alumnus and currently a Postdoctoral Research Fellow in Food Bio Sciences Department Ireland, delivered a lecture on "Identification of Potential Commercial Extract/Products from byproduct Mussel" on 08 January 2020. Her talk focussed on valorization of seafood industry byproduct of blue mussels (Mytilus edulis) which is majorly consumed in Europe. The talk provided an

A little about me.

overview on the potential applications of other byproducts. For example, the byssus threads can be a good source of collagen, an important protein while the shells can act as a great source of calcium.



### Workshop on Safety (17th January 2020)

Prof. Radha Jayaram and Prof. Jayashree Nagarkar, Department of Chemistry, Institute of Chemical Technology Mumbai conducted a One-Day Workshop on "Safety" on 17 January 2020. In the forenoon session Prof. Nagarkar spoke on "Good Laboratory Practices"





Prof. Nagarkar's talk contemplated on Standard Operating Practices (SOP), Safety, Health and Environment Management (SHE), Material Safety Data Sheets (MSDS), National Fire Protection Association (NFPA), etc. Prof. Jayaram's lecture deliberated on the possible hazards at Laboratory (related to chemical, electrical, gases, glasses, biological and liquefied gases, etc) and how to prevent them.

whereas Prof. Jayaram spoke on "PPE and Storage of Chemicals".

Prof. Nagarkar started her talk with the school days' memory of the poetic lines "Chiu Taichya Pila, khar khar sang mala, Abhalatle raste sapadtat kase tula" (Meaning: hey sparrow, tell me frankly, how do you explore the ways in the sky). This led her to speak on how safety in general is important and one must follow the safety norms. According to her, "Safety is freedom from danger and accident, and one must change mind-set or should be positive about safety". Her talk contemplated on Standard Operating Practices (SOP), wearing PPE, handling of gas cylinder, daily inspection, chemical hazards and toxin, Safety, Health and Environment Management (SHE), Material Safety Data Sheets (MSDS), National Fire Protection Association (NFPA), etc.

On the other hand, Prof. Jayaram, at the outset, discarded the general notion "being disorganised means being more modern, better scholar or well accomplished," and put more stress on 'safety mantra' and developing the culture of keeping safety first. She proclaimed that one must value oneself more than anyone and anything else. Later on, she spoke on the issues pertaining to the chemical reactions, prevention of accident. Her lecture deliberated on the possible hazards at Laboratory (related to chemical, electrical, gases, glasses, biological and liquefied gases, etc) and how to prevent them. Her stress was on knowing one's lab and equipping labs with Safety Shower, First Aid Kit, Eye Wash Fountain, Fire Blanket, Fire Alarm, Telephone, Fire Extinguishers and Sand Buckets, proper labelling, proper storage of chemical bottles. Her lecture ended with deliberation on the record keeping. She was of the opinion that all accidents must be recorded, evaluated by the departmental safety committee for eye protection, hand protection, lab clothing and legs.

In the afternoon session both Prof. Nargarkar and Prof. Jayaram spoke on "Waste Management and Disposal" and "Catalysis and Green Revolution" respectively. Prof. Nagarkar discussed how we should handle the broken glass while working in the lab and how we should remove chemical spills. Prof. Jayaram discussed the need for a new approach in chemistry, reach of catalysis, catalysis addresses GC Principles- a few glimpses and future and scope of catalysis.

#### Mr. Manish Antwal's session on Food Development for SMES (17th January 2020)

Mr. Antwal, Project Engineer in Three P Solutions Satara, spoke on project management, process management and product development, on the one hand, and on the other, about Three P Solutions, Raghuleela and Matrix which is a consulting firm. He divided his talk in three categories. First, he talked about 3P Solutions, then about Raghuleela Innovation Centre and ended the session by discussing Matrix. He concluded by talking about their 60 plus projects





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which are running in more than 6 countries (e.g. National Ice-Cream Bombay, Baker Perkins UK (for Parle ka Kachcha Aam), COATECH Netherland and CM-OPEM Italy), how they worked with almost all the food companies, etc.

#### First Skill Development Workshop for Chemistry Researchers at ICT Jalna (18th January 2020)

Skill India is a campaign launched by Prime Minister Narendra Modi. To align with it, ICT (Mumbai) Marathwada Campus Jalna organised first Skill Development workshop on HPLC- "High-Performance Liquid Chromatography". M.Sc. students, teachers from more than 10 colleges and universities, and industry experts too from Jalna, Aurangabad, Nanded, Parbhani, etc. attended the workshop. Dr. Manoj Jadhao (Assistant Professor chemistry at ICT-MARJ), Dr. Manoj B. Gawande (Associate Professor at ICT-MARJ) and technical



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experts from HPLC Supplier were the resource persons to conduct the training. The workshop ended with valedictory ceremony which was graced by a distinguished alumnus of ICT, Shri. Ashish Mantri, M.D., Abhay Nutrition Jalna. Shri. Mantri gave valuable suggestions for conducting many more skill development workshops in future.

### Interaction with ICT Alumnus Sagar Gadewar (25<sup>th</sup> January 2020)

Dr. Sagar Gadewar did his Ph.D. from University of Massachusetts specialising in process design and process engineering.

ICT MARJ Faculty had an opportunity to interact with the ICT alumnus Dr. Sagar Gadewar who did his Ph.D. from University of Massachusetts specialising in process design and process engineering. In the interaction he graciously offered his help in the research guidance, technical assistantship and also promised to connect the ICT Jalna community to the ICT Alumnus network to make ICT Jalna "the best institute". The meeting highlighted two basic pertinent topics: formulation of syllabus and focusing on the research area. Apart from it, the interaction also catered to have video conference (VC) lecture or workshop with experts from US and Europe. The interaction concluded with the possibility of collaboration and student exchange programs.

#### Dr. Snehashis Chakraborty's Lectures 12 February 2020

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First lecture on Food Preservation by Retort, High-Pressure and Pulsed Light Processing (Thermal-Non-Thermal Its Overview) and the second one on Assessment and Evaluation in Outcome Based Education.

Dr. Snehashis presented an informative talk on the importance of food preservation and various food preservation processes that are typically followed in industries. While discussing the advanced techniques on food preservation, the speaker introduced various technical definitions and terminologies like self-life of food, pasteurization, sterilization etc. In the afternoon he delivered the second lecture on "Assessment and Evaluation in Outcome Based Education". In which he dealt with learner-based education and the NBA preparation. He interacted with MARJ Faculties





regarding NBA and how the dissemination of education should be outcome based.

#### Sessions on Personality Development and Time Management by Sayali Khot (03<sup>rd</sup> March 2020)

As we believe in "learning by doing" and "think quality and not quantity", we invited Sayali Khot to engage the ICT MARJ fraternity. Her three sessions on "Personality Development and Time Management" involved the active participation of ICT MARJ students, faculty and support staff. She shared how to manage time- day-wise, week-wise and month-wise. While doing so she explained the "Pickle Jar" technique (relating this to everyday life or planning or managing



Ms. Khot shared how to manage time- day-wise, weekwise and month-wise. While doing so she explained the "Pickle Jar" technique (relating this to everyday life or planning or managing time) and "Four Quadrant Therapy"

time) and "Four Quadrant Therapy" (Time spending according to 1. Important and urgent; 2. Important but not so urgent; 3. Urgent but not so important; and 4. Neither important nor urgent.). She discussed certain study skills, goal setting, visualisation, revision technique, concentration technique, instructional strategy, etc, for the students. With the faculty she discussed the importance of motivation, self-esteem/ self-confidence, self-grooming that include tone, professional decorum, maintaining communication, clothing and body language.

#### Shining (Efforts of) TARAs

Two of the Teaching Assistant cum Research Associates i.e. TARAs have undergone special training in their field of research. They gave presentation at ICT MARJ on what they learned there and how it helped their research.

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Ms. Anjali Nanwate discussed "Fractional Calculus Today" which she learned at a workshop during 2-7 December 2019. In general, her presentation reflected the basic of the fractional calculus, and its applications in various fields of science, engineering, economics, environmental studies etc. She explained the concept of Reimann Sheet for reducing unstable region of system. Her presentation included the contribution of Leibnitz, L'Hospital, Abel, Euler Lagrange, Fourier and many others.

Ms. Sweta Khushwaha presented on "CRISPR-Disease in Plants can be Solved by this Method". She attended a ten days training on Genome Editing of Crops: Methods and Application conducted by National Agriculture Higher Education Project, Centre for Advanced Agriculture Science & Technology from 27th December 2019 to 8th January 2020, at ICAR-National Institute for Plant Biotechnology (NIPB) and Indian Agriculture Research Institute (IARI), New Delhi. In her presentation she discussed the main focus of this training which was to have better understanding of the CRISPR tool and get hands on experience to solve some of the critical problem facing in their research work. She also discussed how this training helped her understand the 3 components of CRISPR: CrRNA, CAS Protein, Trans-RNA. 1

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### The Outdoor Activities of ICT-MARJ Faculty

The Director, Faculty Members and Research Scholars showcased and shared their knowledge as invited speakers, motivational speaker, subject expert and aspiring subject scholars at the various renowned educational institutions. Their efforts uplifted the ICT MARJ head and reverberated ICT name in and around Maharashtra state. Let us look at their showcase.

#### Prof. Smita S. Lele

ICT MARJ Director Prof. Smita Lele, one of the renowned personalities in the field of science & technology, was indulged in delivering inspiring lectures, guest talks and motivational speeches at various educational institutions in Maharashtra. The Dynamo appeared as the motivational speaker, chief guest, and inaugurator at several schools and institutions like Devgiri Nagari Sahkari Pat Jalna on 11 January 2020; Shri M. S. Jain English School, Jalna 14 January 2020; Jivanrao Pare Vidyalaya Chandanzira on 26 January 2020; Fortis Mahim (Diet and Nutrition event) on 26 January 2020; and Vidyarthi Sahitya Sammelan Jalna organised on 1-2 February 2020.

Prof. Lele, being a Food Technologist, had been to various educational institutions



as a resource person, chief speaker, panellist and subject expert to deliver talks in the field of food technology from January to March. She enthralled the audience with the variety of themes. For example, she went as a speaker and participated in the panel discussion on the theme "Food as Medicine: a Traditional Perspective" conducted by Dr. Nidhi Kumar, Doordarshan Asia Anchor and Yogini Shloka at S.L. Raheja Hospital, Mahim Mumbai on 26 January 2020. She was the chief speaker at the Indian Institute of Packaging's Safar and

Sustainable Packaging Group on 05 February 2020 and also at Kshatriya Samaz Shikshan Samiti on 09 February 2020. She gave two lectures on SME and Food Processing at National College Mumbai on 09 February 2020. Her expertise in the Food Engineering came handy at an International Conference on 'Natural Products-Quality, Safety and Efficacy' on 6<sup>th</sup> and 7<sup>th</sup> March 2020 at SIES ASCS Mumbai.

The theme of this year's National Science Day was "Women in Science". Prof. Lele, being one of the renowned women in the field of science & technology, delivered several speeches on this occasion at several institutes in all over Maharashtra. She inspired several aspiring female students, scientists, faculties and other women in the field at SRTM University Nanded, Dr. Babasaheb Ambedkar Marathwada University Aurangabad. For example, when she went to Sanjay Ghodawat College Kolhapur as chief guest on 22 February 2020. Dr. Pallavi Bhange, one of the organisers, was deeply inspired by Prof. Lele and said-

Your presence for few hours has changed our way of thinking. We will always remember you for your positive attitude, helping and friendly nature, your confidence and extraordinary and different way of thinking. Thank you, Madam for the beautiful gift.

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The theme of this year's National Science Day was "Women in Science." Prof. Lele, being one of the renowned women in the field of science & technology, delivered several speeches on this occasion at several institutes in all over Maharashtra.



This FDP program

was organised from

24-28 February 2020 by the department of

Chemical Engineering,

SGGS Institute of

Engineering and

Technology Nanded.

Dr. Girish Joshi

#### As an Invited Speaker at an International Conference at SRTM University, Nanded

Dr. Girish Joshi delivered a Talk on "Polymer Composites for Energy Applications" at the International Conference on "Advancements in Renewable Energy" (ICARE-2020) during 10-11 January 2020 organised by school of Physical Sciences, SRTM University Nanded, Maharashtra. His talk highlighted the importance of conducting polymers crucial for energy harvesting applications. He also discussed the recent developments of advanced materials which enable to utilise the synthetic materials for renewable energy sources.



### As Resource Person in the QIP Program at SGGS Nanded

Dr. Joshi went to AICTE sponsored QIP Program on the interdisciplinary theme "Advanced Functional Materials in Engineering". This FDP program was organised from 24-28 February 2020 by the department of Chemical Engineering, SGGS Institute of Engineering and Technology Nanded. He delivered a Talk on "Functional Materials and Engineering Applications" on 25 February 2020. The talk highlighted the various roots of functional materials and their impact on engineering applications. It was well appreciated by the teachers-participants from various engineering colleges in Marathwada region.



This AICTE QIP FDP on "Advanced Functional Materials in Engineering" was organised during 24-28 February 2020.

#### Dr. Manoj B. Gawande

Dr. Manoj B. Gawande delivered two invited talks- on "The Rise of Nanomaterials: Synthesis and Applications of nanomaterials" and "Synthesis and Catalytic Applications of Nanomaterials", at Department of Chemical Engineering, SGGS Institute of Engineering and Technology, Nanded on 25 February 2020. This AICTE QIP FDP on "Advanced Functional Materials in Engineering" was organised during 24-28 February 2020. In his talks, he spoke on the basic concept of nanotechnology and nanomaterials, its applications in several fields. His second talk was

related to his research activities: nanomaterials/nanocatalyst including core-shell nanocatalysts and single atom catalysts and its applications in organic catalysis and energy.

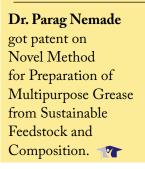
#### Feathers in ICT MARJ Cap: Patents, Awards and Achievements

ICT MARJ had several feathers of achievement in its cap. The following are the feats ICT MARJ achieved.

#### **Patents**



ICT MARJ Director **Prof. Smita Lele** was granted patent on Iron Fortified Legume Based Flour Premixes, and Method of Manufacture.









#### Rushali Dudure winning Third Prize at the International Conference on Drug Discovery (ICDD 2020)

Miss. Rushali Haridas Dudure, Teaching Assistant cum Research Scholar (TARA) at ICT-MARJ campus, won third prize for her poster under the title "Effect of Artificial Sweetener Aspartame on Amyloidogenic proteins: FTIR Spectroscopy and Molecular Docking Approach" at the International Conference on Drug Discovery (ICDD 2020) organised by Schrodinger, USA in collaboration with BITS Pilani, Hyderabad during 28<sup>th</sup> February - 2<sup>nd</sup> March 2020 ICDD 2020 for poster presentation.

#### Joyita Sarkar won the outstanding DST-AWSAR Award in PDF category

Dr. Joyita Sarkar's story- "Coming Soon: Animal Model-Free System for Pharmaceutical Testing" won the outstanding DST AWSAR Award in PDF category. She was felicitated and handed the award on National Science Day by President of India. Her attempt was to disseminate her story among the masses in an easily intelligible and interesting way. She also interacted with Prof. Ashutosh Sharma, Secretory, DST, Govt. of India.

### MoU with JES (Jalna Education Society)

ICT MARJ Director Prof. Lele and JES Principal Dr. Kabra signed MoU to continue academic and research collaborations between ICT and Jalna Education Society.



#### **Publications**

Our faculty published research articles at various reputed journals such as ACS Catalysis, Chinese Journal of Physics, Chemical Engineering Journal, Advanced Applications of Bio-degradable Green Composites, etc.



**Dr. Girish Joshi** published three research articles in the journals like Chinese Journal of Physics and SRTMU's Research Journal of Science. They are-

- "Polymer nano dielectric blends for multilayer capacitor applications".
- "Growth and characterization of pure and picric acid doped ADP single crystals".
- "The complex impedance, dielectric relaxation, complex modulus and photoluminescence studies of pure and L-Methionine doped ammonium dihydrogen phosphate".

**Dr. Manoj Gawande** published six international research articles in the period of four months in the journals like ACS Catalysis, Green Chemistry, Chemical Engineering Journal, Molecules, ACS Sustainable Chemical Engineering, etc. They are-

- "Carbon-based Single Atom Catalysts for Advanced Applications".
- "Recent development of covalent organic frameworks (COFs): synthesis and catalytic (organic-electro-photo) applications".
- "Sulfonated dendritic mesoporous silica nanospheres: a metal-free Lewis acid catalyst for the upgrading of carbohydrates".
- "Fe(0)-embedded thermally reduced graphene oxide as efficient nanocatalyst for reduction of nitro compounds to amines".
- "Rapid and Scalable Wire-bar Strategy for Coating of TiO2 Thin-films: Effect of Post-Annealing Temperatures on Structures and Catalytic Dye-Degradation".
- "Graphitic carbon nitride-nickel catalyst: from material characterization to efficient ethanol electrooxidation".

**Dr. Manojkumar Jadhao** published a Book Chapter titled, "Application of Biodegradable Lipid Composites in Drug Delivery, Materials Research Foundation" in Advanced Applications of Bio-degradable Green Composites, 2020 Vol. 68, pp 156-195.

**Dr. Sandeep Bhairat** published his article entitled "Existence and stability of fractional differential equations involving generalized Katugampola derivative" in the Studia Universitatis Babes-Bolyai, Mathematica Journal.

#### Acknowledgment

i-M. Tech students went for the IPT at various industries in Jalna, Aurangabad, Baramati, Bhiosar, Mumbai, Krishnagiri (Tamil Nadu), Chennai, Hyderabad and Kolkata during the January-April 2020. Due to unprecedented Covid 19 emergency, all of them had to get back to their respective homes towards the end of March 2020. Some of them were stranded for several weeks in other states at the industry guest houses. We are extremely thankful to industry staff and HR managers. To complete their industry training students were given home projects. The List of the students and their training industry is as follows-

#### List of Industries Placement : IPT Batch 2019 - A (January to April 2020)

S.N.	NAME OF STUDENTS	NAME OF INDUSTRY
1	Shreya Shahapure	Vinodrai Engineering Pvt Ltd Jalna
2	Abhay V.Gandhi	SASMIRA Worli Mumbai
3	Abhinav S. Tidke	Rajuri Steels Pvt Ltd Jalna
4	Abhishek S. Ighare	Bhagyalaxmi Steels Pvt Ltd Jalna
5	Aditya Deshpande	Roopam Steels Pvt Ltd Jalna
6	Aditya A. Samdani	Abhay Cotex Pvt Ltd Jalna
7	Aditya V. Shinde	Divya SRJ Foods Jalna
8	Aditya D. Toshniwal	Vaidehi Masale Industries Jalna
9	Aniket S. Shitole	Envirocare / RB Centre SNDT Vidyapeeth Mumbai
10	Aradhana Thombre	Vinodrai Engineering Pvt Ltd Jalna
11	Arti S. Hajare	Vinodrai Engineering Pvt Ltd Jalna
12	Aryan C. Saldanha	Haffkine Bio-Pharma Pvt Ltd Mumbai
13	Ashish R. Sagare	D'orsogna, Dolciaria, Baramati
14	Ayush S.Gulhane	Thakurji Solvex Pvt Ltd Jalna
15	Ayush P. Redasni	Metaroll Steels Pvt Ltd Jalna
16	Darshan S. Munot	Divya SRJ Foods Jalna
17	Mrudul N. Shroff	Vaidehi Masale Industries Jalna
18	Debasmit Ganda	Bengal Surgicals Ltd Kolkata
19	Devvrat K. Thattekar	Roopam Steels Pvt Ltd Jalna
20	Farooqui Md Altamash	Metaroll Steels Pvt Ltd Jalna
21	Gauri G. Ladda	Vinodrai Engineering Pvt Ltd Jalna
22	Harsh R.Jaiswal	Thakurji Solvex Pvt Ltd Jalna
23	Harshraj S. Borude	Laxmi Cotspin Ltd Jalna
24	Himanshu M. Nagnure	Bhagyalaxmi Steels Pvt Ltd Jalna
25	Hrushikesh P. Chandodkar	Abhay Cotex Pvt Ltd Jalna
26	Jidnyasa M. Chintamani	Divya SRJ Foods Jalna
27	Saraya S. Nair	SASMIRA Worli Mumbai
28	Ketaki V. Patil	Kalash Seeds Pvt Ltd Jalna
29	Khushal R. Agarwal	Laxmi Cotspin Ltd Jalna
30	Shruti D. Patil	Kalash Seeds Pvt Ltd Jalna
31	Manan N. Modi	Mehta Pharmaceuticals Pvt Ltd Dahanu Mumbai
32	Vrushank J. Dhake	Bhagyalaxmi Steels Pvt Ltd Jalna
33	Manthan M. Kulkarni	Ajanta Pharmaceuticals Ltd Aurangabad



#### List of Placement - IPT Batch 18-B (January to April 2020)

CN		
S.N.	NAME OF STUDENT	NAME OF INDUSTRY
1	Adwait Tulsidas Sawant	RCF Ltd Chembur Mumbai
2	S Vishnu Pradeep	IA Flow Elements Pvt Ltd Chennai
3	Akshat Sanjay Bedmutha	Exotic Fruits Pvt Ltd Krishnagiri TN
4	Bhavesh Shrigopal Dayma	Garware Polysters Ltd Aurangabad
5	Rohan Rupesh Wankhede	RCF Ltd Chembur Mumbai
6	Harshal Kailash Kasat	Exotic Fruits Pvt Ltd Krishnagiri TN
7	Smith Vivek Patil	Camlin Fine Chemicals Ltd Boisar
8	Piyush Rahul Dhage	HPCL Ltd Chembur Mumbai
9	Raunak Sandeep Dayma	Sanjay Techno Group Aurangabad
10	Aum Manoj Chaudhari	HPCL Ltd Chembur Mumbai
11	Aniket Dashrath Pinjari	Sanjay Techno Group Aurangabad
12	Dhananjay Pandurang Nagre	Garware Polysters Ltd Aurangabad
13	Ashutosh Darak	Dr Reddys Research Centre Hyd University Hyderabad
14	Vishwas Sameer Erulkar	Metalman Auto Components Pvt Ltd Aurangabad
15	Abhishek Satish Mote	Garware Polysters Ltd Aurangabad
16	Aditya Vinod Bhalerao	Metalman Auto Components Pvt Ltd Aurangabad
17	Janhavi Tukaram Dhumal	Concept Pharmaceuticals Pvt Ltd Aurangabad
18	Harshal Bhausaheb Kavhale	Sanjay Techno Group Aurangabad
19	Adarsh Vinod Chhabda	Concept Pharmaceuticals Pvt Ltd Aurangabad
20	Kartik Baliram Ghate	Sanjay Techno Group Aurangabad
21	Bhumi Sunil Borade	Concept Pharmaceuticals Pvt Ltd Aurangabad
22	Ravinutala Shivani	Dr Reddys Research Centre Hyd University Hyderabad
23	Sachin Kailas Adhe	Rajuri Steels Pvt Ltd Jalna
24	Shrenik Hiren Bakhda	RCF Ltd Chembur Mumbai
25	Nikhil Pundlik Umale	Rajuri Steels Pvt Ltd Jalna
26	Yogesh Shivaji Mhetre	Concept Pharmaceuticals Pvt Ltd Aurangabad
27	Sidhant Unde	Garware Polysters Ltd Aurangabad
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#### **Acknowledgment of Donation**

We thankfully acknowledge the donation of Rs. 2 Lakhs by MARJ Director Prof Lele. This donation is given under the title "Prof. Smita Lele Endowment". Various awards have been instituted. It started in January 2019 and the first award was given to the i-M.Tech MARJ student in the same year.

PSR & ISR Personal, Social Responsibility & Institutional Social Responsibility

#### 16th to 30th Jan 2020

#### Swachchhata Pakhwada

As per the directives of the Ministry of Human Resource Development, Govt. of India, the Swachhata Pakhwada was to be observed from 16<sup>th</sup> to 30<sup>th</sup> January 2020 by all the Universities/Institutions. In this connection, we arranged the following activities-

- 1. Swachhata Pledge on 16<sup>th</sup> January 2020
- 2. The PLOGGING event on  $17^{\text{th}}$  January 2020
- 3. Cleaning activity at Tejomay Hostel 28th January 2020
- 4. Cleaning activity in New Building Corridor, Foyer and Veranda 30th January 2020



Swacchhata at MARJ



The Students, Staff and Faculty Members assembled at MARJ Auditorium at 3.00 pm on 16<sup>th</sup> January 2020. We took Swachhata Pledge and initiated our participation in the "Swachhata Pakhwada" from 16<sup>th</sup> to 30<sup>th</sup> January 2020. The pledge preceded Prof. Lele's briefing of PLOGGING activity to be carried out the next day. The next day morning i.e. on 17<sup>th</sup> January 2020, we actively participated in PLOGGING Event. While jogging we picked the littered items in and around the MARJ campus. The students participated in cleaning the Tejomay Hostel surrounding on 28<sup>th</sup> January 2020. On the alternate day i.e. on 30<sup>th</sup> January 2020 the MARJ faculty, TARAs and Students enthusiastically participated in cleaning the new academic building corridor, foyer and veranda.



#### 24th January 2020 A Visit to Kalash Seeds Pvt. Ltd. Jalna



Kalash Seeds

Kalash Seeds Pvt. Ltd., Mantha Road, Jalna invited ICT MARJ family members to visit to its Open Days Crop Show 2020 held during 20-24 January 2020. The i-M. Tech. students, research scholars and faculty members visited the stalls, various labs, and open space farm on 24 January 2020. They also witnessed wide range of crops which included more than 400 varieties of 45 different crops. They interacted with the scientists, breeders, and technical persons.

#### 19th-21st February 2020 Industrial Visit to Satara Mega Food Park, 3 P Solutions Pvt. Ltd. & Trilok Food



We believe in "involve the students and make them learn" for which the second year i-M.Tech students visited 3P, Mega Food Park (Satara) and Chitale Bandhu (Pune) factories. They had first-hand experience to see how the products are made in different stages.

This three-day industrial visit was arranged by ICT Jalna campus in association with AFST Mumbai for Second Year i-M. Tech. students to different food industries in Satara during 19-21 February 2020. Two ICT MARJ faculties, Dr M. Jadhao and Dr Saurav Raj, accompanied them. A senior member of AFST, Dr Prakash Kondekar was instrumental for organizing this industrial visit. The students were introduced to

Industry Visit, Satara



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different process used in spices industries as well as large capacity water treatment plant. They also explored the various advanced chocolate moulding machines and the various process occurred during the production of chocolate. It was indeed a great experience for ICT students as well as faculties.

#### 28 February 2020 Celebration of National Science Day

"Science of Today is the Technology of Tomorrow."



The "National Science Day (NSD)-2020" was conducted successfully on 28<sup>th</sup> February 2020. The event was held in the presence of Director Prof. Smita S. Lele, Shri. Sharad Lahoti, Dean (Industry, ICT MARJ), Dr. Ritika Joshi, NSD-2020 Coordinator, Shri Subhash Pare, Principal, Jeevan Rao Paare Vidyalaya and Shri Soham, Science teacher from M.S. Jain English High School, Jalna. The day included the demonstration of "Fun with Science", visit to Physics and Chemistry labs at ICT MARJ, Poster Presentation and "Just-A-Minute" (JAM) competition involving all the i-M.Tech 1<sup>st</sup> year students, 9<sup>th</sup> class school children from Pare Vidyalaya and M.S. Jain High School as well as undergraduate students from JES College, Jalna.

#### 31<sup>st</sup> January 2020

#### A Surprise Celebration of Retirement of Prof. Smita Lele



A surprise celebration was planned by i-M. Tech students on 31<sup>st</sup> January 2020 on the occasion of the retirement of Prof. Smita Lele. Students expressed their love by sharing their creative piece of work. Among the faculty members Dr. Parag Nemade, Dr. Girish Joshi and Dr. Sandip Bhairat showed their gratitude towards the director and shared how she left an indelible impact on them. ICT Vice Chancellor Prof. A. B. Pandit also joined the celebration through videoconferencing and shared his views. Prof. Lele was overwhelmed and was emotional while recalling her professional journey at ICT. She thanked the students for the surprise. The celebration concluded with the cake cutting ritual.



#### EXTRA-CURRICULAR Sports & Culture

ICT MARJ does not only provide food to the brains but also provides a platform for the students to showcase and nurture their talent on various occasions like Sankranti. Students take part in the cultural and sports events. In the first quarter of year 2020, following cultural and sports events at ICT MARJ-



#### Swar Tarang

#### Cultural celebration of Sankranti (Kite Flying, cultural treat, & Haldi Kunku)

On 15<sup>th</sup> January 2020 ICT-MARJ celebrated Makar Sankranti as Swar Tarang. Students performed a series of cultural events. The day started with the ritual of lighting the lamp and the welcome song of "Rasayan Devika". Students sang and played Flute, Harmonium and Tabla. The forenoon session completed with Prof. Lele's speech. The afternoon session was packed with recreational activities like Kite flying and dancing, and the distribution of refreshment.

Apart from Makar Sankranti, 15th January has got a special mention. It was coupled with the conjoint birthday celebration of Prof. Smita Lele and Dr. Sandeep Bhairat. The Cake cutting happened twice: in the morning with the students and in the evening with the MARJ Staff. This twofold

celebration enhanced our enthusiasm. The vibrant day was concluded with the Maharashtrian traditional Makar Sankranti ritual of Haldi-Kunku.

Some parents of 2018 Batch Students who could not attend the Haldi-Kunku and Sankranti celebration on 15<sup>th</sup> January 2020 at ICT MARJ campus requested the Director to arrange Haldi Kunku and Sankranti celebration at her Talegaon residence later on. The enthusiastic Director hosted the same at her Talegaon residence.

#### URJA: Indoor and Outdoor Sports Activities

The Urja event kicked off on 2<sup>nd</sup> February 2020 with Volleyball tournament. The boys group saw the participation of six teams. The team lead by Utkarsh Patodi emerged as champions. In girls' group, two teams had participated and was won by the team lead by Histeshree Sarode. On 8<sup>th</sup> February table tennis, carrom and Chess tournaments



were organized. In table tennis there was overwhelming participation of 40 boys and 4 girls, in Carrom

tournament 28 teams (mix Boys and Girls) had participated while in chess tournament 25 players had taken part. Aditya Toshniwal and Histeshree Sarode won the table tennis singles tournament in their section. Ameya Mantri and Pratap Gaurav have reached final in chess tournament. Amey Mantri and Pratap Gurav were the winner and runner respectively in the indoor game Chess.

#### Infrastructure

Impetus toiling awarded with a Two Storey Building for the ICT MARJ. Its ground floor has Three Classrooms, Three Faculty Rooms and a Board Room. It is well equipped with various labs e.g. Electrical Engineering Lab, Biotech Lab, Advanced Analytical Lab, Workshop and Chemical Lab. In addition to this, it also accommodates e-library, and provides a study room for the research scholars. On the other hand, the First Floor has laboratories like Chemical Engineering Lab, Food & Oils Lab, Pharma Lab, Material Lab and Drawing Room. It also contains the Guest Room, a Room for the Canteen, Medical Health Check-up Room and a room for recreation. The first floor also has five Hostel Rooms with all the necessary facilities.





Prof. Lele's Outdoor Activity







URJA Sports Event



