



*Connecting Thinkers...*

## *Thinklet's New Year Greetings*

### *Message from the President - Dr. Chenraj Roychand*



Dear Researchers at JAIN,

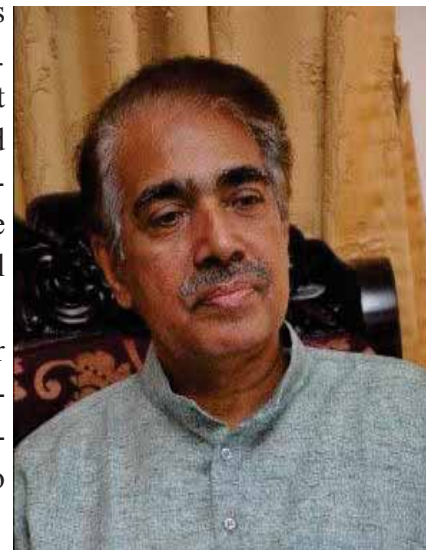
It is indeed a privilege to wish each one of you a happy, rewarding and successful 2019. As we step into the New Year, I hope your efforts and dedication of the past years transforms itself into positive results in the new year.

JAIN has always strived to create a 'Culture' that is conducive to pursue quality research. We have always encouraged our researchers to strive for excellence and focus on socially relevant, development and change oriented, empirically grounded research that has social transformation as a key goal. Let 2019 see your research work further expand and you bring joy and happiness to not just your co-researchers but also your family and friends. All the best for this year!

### *Message from the Chancellor ~ Dr. C.G. Krishnadas Nair*

Greetings of the New Year to each one of you! JAIN is indeed proud of its researchers who are striving to achieve quality and excellence through their research endeavours. Over the years, I have noticed that both the quality of research and the quantum of output has steadily improved. We have been able to secure a large number of externally funded projects, expand our consultancy profile and also have a much larger number of researchers secure their Ph.D degrees. The Annual Research Retreat has allowed us to showcase this research contribution of our scholars. THINKLET has also provided a platform for all our researchers to exchange ideas and share information.

I am sure 2019 will be a year that would see everyone making a sincere effort to further build on the Research Culture we have created at JAIN and make the best use of the opportunities provided. I wish all our Researchers, Guides and Doctoral Students a successful, fruitful and satisfying year ahead. May you bring greater laurels to yourselves and to the University. Wish you a HAPPY 2019.



### *Message from the Vice - Chancellor - Dr. N. Sundararajan*

I extend my warm New Year greetings to the THINKLET team, Research Guides and Research Scholars.

Firstly, I would like to acknowledge the sincere efforts of the Research Team in their collective efforts in contributing to the realisation of the Research Mandate of the University. The year 2018 was filled with various landmarks and achievements. Looking ahead, 2019 should reflect a radical change in the focus and attitude through a marked commitment to research, innovation, leadership, integrity, commitment and professionalism. I am sure that the Research team would contribute meaningfully and in tangible ways to the growth of the University, which they have already been doing. There are numerous opportunities for growth and development in the field of research and innovation. Our efforts in technology development, incubation, transfer and commercialisation, research and innovation become the bedrock of our very existence and the reason for our success. I wish to acknowledge and thank all those who have contributed at each and every step to this research magazine and are committed to the mandate in our academic programmes and research, development and innovation outputs in the year 2018. I trust they will continue the same in 2019. I sincerely hope the THINKLET team will strive to execute more effectively the opportunity bestowed upon them. I once again wish the entire team "A VERY HAPPY 2019". GOOD LUCK!



### *Message from the Pro Vice - Chancellor - Dr. Sandeep Shastri*



Dear Fellow Researcher at JAIN.

On this first day of 2019, it is such a delight to wish each of you the very best in all that you endeavour and hope for. Let me create a short wish list for 2019

I wish 2019 is witness to individual achievement of a level that brings your family, your institution and yourself, unmatched satisfaction and a sense of accomplishment.

I wish 2019 is a year where we all dare to be different in terms of innovation and creativity, resulting in research output that sets new benchmarks.

I wish 2019 is spent heralding joy and fulfilment in our professional and personal lives.

I wish 2019 helps us all take one more positive step forward towards realising our dreams and vision for the future. Looking forward to meeting you all in 2019

## *Editors' Message - Dr. Mythli P. Rao and Dr. Priyanca Mathur*



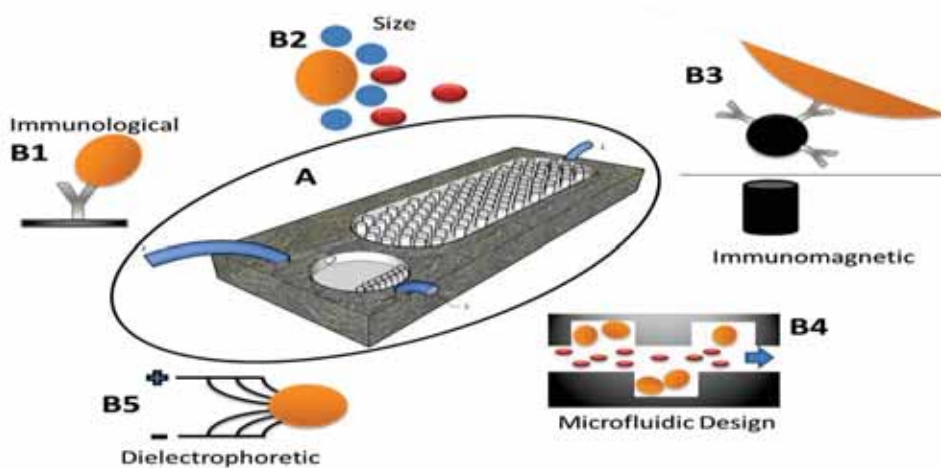
As we come to the close of yet another year, we are flooded with messages about the new year through all possible mediums. Like the years gone by this year too has been a mixed bag with highs and lows, sorrows and joys, hits and misses. It raises within us the hope for better prospects in the days to come, the hope which keeps us going and moving, striving for the goals that we have set for ourselves. With THINKLET too we have completed the 4th year successfully, not missing a single issue and releasing the same on the first of the month. This has been possible only because of the support of the research fraternity. As we welcome 2019, while we think about ourselves and our families in this context, let us also give some thought for the country and see what we can do to make it reach greater heights. In this first issue of the New Year, along with our regular features, we bring to you New Year Greetings from our President, Chancellor, Vice-Chancellor and Pro-VC, followed by some new segments just for this issue. The first section titled 'Mentors' Speak' is where Research Guides outline their research plans. Next is 'Reflecting on the Deep Dive' where Research Scholars, who have successfully completed their research journeys, look back. Then, in the section titled 'Wading Deep into the Research Waters', Research Scholars, who are in the middle of their doctoral programme discuss their research priorities. In the next section titled 'Testing Waters' newly enrolled Ph.D Research Scholars express their immediate research priorities too. All of these reflect the varying levels of perspectives and visions that any research involves. Hope you enjoy going through them as much as we did bring them to you. From Team THINKLET and the Ph.D section, here's wishing you all the very Best of Luck in the days to come!

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## MENTORS SPEAK

### 2019 Research Priorities

Cancer being one of the major threats to human beings at present times, robust, affordable, reliable devices are the need of the hour for the diagnosis and prognosis of the cancer disease. Tumor cells of epithelial origin acquires the migratory property through a process called EMT (Epithelial Mesenchymal Transition) and starts circulating along with the blood cells, called Circulating Tumor Cells (CTCs). Capturing these CTCs and enumerating them provides huge information in the field of oncology. To date much of the focus has been given on the immunological capturing of the tumor cells through various devices including the commercially available product CellSearch. Owing to the facts that CellSearch has many disadvantages, our focus is to develop Microfluidic devices for trapping CTCs by using multi strategies as illustrated in Figure 1. The device can be fabricated from PDMS material through soft lithography and the advantages of using PDMS material is that the material is flexible, with possibility of surface modification, transparent for the visualisation. The major challenge is the trade-off nature between ‘throughput’ and ‘capturing efficiencies’ of the devices. We are working on the novel Microfluidic devices for the first time which will break this trade-off nature and improve the throughput as well as capturing efficiencies.



**Figure 1:** Illustration of isolation of CTCs through Microfluidic devices

*Dr. Mahaveer Kurkuri*  
 Research Guide, CNMS, JAIN (Deemed- to- be University)  
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## **My Research Priorities for 2019**

My topmost research priority in 2019 is to successfully complete my project undertaken with a Senior Fellowship from the Ministry of Culture, Government of India. This project involves the study from manuscripts of the TMSSM Library, Thanjavur, of songs that were in vogue a few centuries back. The study of these involves comparative analysis with musicological descriptions from Sanskrit treatises of the medieval period and modern period. I also plan to take up the study of Haridāsa songs preserved in manuscripts from other libraries such as Keladi and GOML, Chennai as well as in oral tradition. My other area of research interest is the study of stringed musical instruments, particularly drone instruments. This kind of study would involve analysing sculptural, literary, musical and musicological data. I look forward to guiding my research and MA students in the areas of contemporary issues pertaining to Karnataka music such as the influx of new types of musical forms and emerging trends in musical presentation. I would also like to build up catalogues and indexes pertaining to research metadata (such articles and songs) that could be made available on the internet to enable easy access for researchers.

*Dr. Arati Rao  
Research Guide and Coordinator - Music, Department of Performing Arts - Music and Dance  
JAIN (Deemed-to-be University)  
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## **My Research Priorities for 2019: Probiotics and Health**

A brand new year has just rolled in. With celebrations and hangovers, it might have been indeed difficult to spare some time and keep a watch on our health and dietary habits. Thankfully, our traditional foods can go a long way to keep us fit. It is often said that milk and cereal-based fermented foods are packed with multiple nutritional benefits. We often finish our meal with traditional dairy products such as buttermilk, dahi, curd rice or lassi. These fermented dairy products contain live beneficial bacteria, called probiotics, which aid in better digestion, proper bowel movement, prevent and treat gastrointestinal disorders, synthesize peptides that help to reduce cholesterol and hypertension, promote sleep, boost immunity, etc. Although the use of probiotics has been extensively researched on, the isolation, identification and characterization of novel strains of probiotic cultures can help us unravel their physiological properties and therapeutic potential. Therefore, this year my research priorities would include isolation and characterization of bacterial cultures in order to investigate their probiotic attributes. This study is likely to enrich our knowledge of the tiny living creatures functioning day and night to promote our well-being.

*Dr. Arijit Das  
Research Guide and Assistant Professor , Department of Microbiology  
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## ***Reflecting on the Deep Dive***

### **How My Research is Developing in 2019**

Climate change, global warming and natural resource depletion are the three human caused detrimental factors impacting natural environment and the human species on planet earth. In the next 40 years, India will experience one of the most dramatic transitions in the history of mankind if, all the demographic projections in the backdrop of rural-urban migration come true; from 300 to 700 million in cities. Increase in population demands infrastructure development leading to industrialisation and eventually, the three critical factors mentioned above.

As the construction industry contributes about 40 per cent to the total impact the objective of my research was to provide the construction industry with an evaluation tool that helps assessing sustainability levels of buildings and infrastructure projects well ahead of the actual construction phase. This tool helps in classifying buildings, materials and construction methodologies into Sustainable, Moderately Sustainable, Non Sustainable categories. This shall help designers all over the world to evolve strategies in mitigating global warming. By the time I completed my research, I had seven published papers and several presentations in the national and international conferences. The completed tool was based on real time data of 25 live projects across all climatic zones and hence could be readily applied to the field. Hopefully, my research, will gain momentum in the next few years especially in the developing countries and helps in establishing more Sustainable Societies.

*Dr. Ajit Sabnis*

*Awarded Ph.D in Civil Engineering in September 2018*

*UNDP Sustainability Evaluator*

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### **My Research Priority for 2019**

Rainfall is an uncertain natural phenomenon which occurs due to the hydrological cycle involving evaporation, condensation and precipitation. It is highly variable in both space and time. Variability in monsoon rainfall is a natural hazard that India faces every year. The total seasonal rainfall in the month of June, July, August and September is generally known as southwest monsoon (SWM) rainfall. While the season recurs annually, the variation about the long term expected value can be as high as 40-50 per cent in some parts of the country. The hazard due to droughts and floods caused by extreme variations can be mitigated to some extent if the rainfall time series can be modeled efficiently for simulation and forecasting. It is well known that the interest in understanding rainfall variation has been in India since very long time.

The objective of my research was to provide new statistical approaches in modeling and forecasting Indian rainfall time series. As a research scholar I could develop statistical models to forecast southwest monsoon rainfall for the broad regions of India. These models will be much more useful for agricultural industry, if they can be developed at shorter time scales and also at smaller spatial scales. Hence my focus in the year 2019 will be mainly on developing statistical models for the same. I hope that, by developing more statistical models in the near future, I will be able to provide a way to deal with natural disasters such as floods and drought.

*Dr. Kokila Ramesh*

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## *Wading Deep into the Research Waters*

### **My Research Priorities in 2019**

I wish to pursue scholarly research in Marketing as a means of balancing solid grounding in the fundamentals of the discipline with the flexibility to combine and create new knowledge that is derived from my research interest. My doctoral research in the area of business to business marketing is a first step in this direction.

My journey as a doctoral scholar has helped me evolve as a thinker. I wish to be part of an intellectually-stimulating and demanding environment that requires participation in: doctoral consortium, conferences, seminars, interactive discussions and workshops, which are delivered by research scholars, faculty and experts from the respective areas. This knowledge ecosystem will encourage me to develop original ideas, collaborate on research projects and present my work at major national and international conferences, going forward.

My methodological and theoretical research as a doctoral scholar addresses advanced marketing theory and models. My scholarly research is guided by the research principle of exploring and finding solutions to real world problems that results in the improvement of the quality of life of all stakeholders. The envisaged contribution of my work is the establishment of a new perspective to the analysis of data in a business-to-business research paradigm that explores the buyer behaviour among decision making units (and buying centres) in agricultural marketing and their further impact on seed marketing distribution channels—a yet unexplored area of empirical research in Marketing.

*Moon Hun Ham*

*Ph.D Research Scholar in Management  
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As my research journey forays from M.Phil to Ph.D, I am very excited about the opportunities to truly make a difference to society. My topic explores the deep rooted connections between human values and music and I would like to establish a scientific basis for the same. My priorities for 2019 are to bridge the gap between the abstract and the concrete in music through my research.

Research though exciting, involves the grills and grinds that call for super effective time management skills, and ensuring the above is my prime priority for 2019. Secondly, research involves a keen eye, ear and heart for data collection and analysis, and I would try to keep sharpening this skill. Thirdly I would like to improve my research writing, and work towards this in the coming year. Last but not the least, I would like to lay a strong foundation to my research by a thorough review of literature and a well planned synopsis, learning from my M.Phil journey, and at the same time, keeping an open mind, and having the end goal always in sight.

*Narayanan P Iyer*

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## *Testing Waters*

### **My Research Priorities for 2019**

Days crawl, years roll. This has been the case for me in 2018. I have a hunch that 2019 is going to zoom by, speedier than ever, because I have a lot of things on my plate. After completion of Term 1 at JAIN, scholars are supposed to do an in-depth Literature Review and finalise Synopsis presentation in the presence of experts. As a Ph.D Scholar specialising in Cognition, Transpersonal Psychology, and Indian and Indigenous Psychologies, after mutual agreement with my guide, I will be researching mind wandering in the clinical population and how task-unrelated mind wandering can be eradicated by indigenous Indian therapeutic interventions and by the employment of transpersonal psychotherapies. For this purpose, I plan to get in touch with subject matter experts and perhaps do a short-term internship under them. If need be and if I get funding from government bodies, I might perhaps travel outside the country to Institutions abroad focusing on Transpersonal Psychology to gain a better understanding on the application of transpersonal therapies and also to gain multicultural perspectives and indigenous knowledge. I need to condition myself to a very industrious upcoming year. I reckon 2019 will be charged, awe-inspiring and intellectually loaded.

*Samhita K*

*Ph.D Research Scholar in Psychology*

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Dance helps us achieve the intangibles through tangibles. Tangibles are the techniques that dancers are trained in. The grammar is perfected but while performing the dancer needs to forget the grammar in order to transcend to a higher level of mental and emotional state (Intangible). The energy vibrates at a higher frequency and this “feel good” factor leads to positivity. This transcendence or acceleration of energy is not restricted to performing artistes alone. These artistic processes can be learnt and used by anyone who aspires to live an energetic and successful life. Having been trained in these processes for the past 5 decades, it has been my goal to share these processes with others.

In the initial phase of my research, I will be establishing the connect between the body, mind and emotional states of being. I will then move on to identify my blind spots in my area of expertise, through review of literature. This would give clarity to frame my research question and also give me direction to explore areas beyond my expertise, like Psychology and probably even Neuroscience which can support my inquiry objectively. Most importantly, I will have to make my research path simple and enjoyable, because any exploration becomes tiring if the climb is too steep.

*Padmini Ravi*

*Ph.D Research Scholar in Dance*

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2019 will be an important year in my journey of research. It will be the year of consolidation where I will apply all the insights and techniques that I have learnt in my Research Methodology course. I plan to do intense review of literature in a trans-disciplinary domain. I believe that the second year of research will give me the elbow-room to experiment with theories before I get focused and single-minded in arriving at my hypothesis. I am right now quite clear about the theme of my study but I also want to be open minded about new discoveries. In education it is believed that learning does not reach the optimum level because of the “misunderstood word”. This means that many a times while learning, one assumes the meaning and intent, which may not be accurate. I recognise that in serious research I would have to go the genesis of an idea rather than make cursory judgments. In 2019 I want to review literature with thorough understanding of all the applicable theories rather than just confining myself to the topic. I would also like to frame a scope of work and begin data collection that would be authentic.

*Shukla Bose*

*Ph.D Research Scholar in Economics*

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The area of my Ph.D is to study atmospheric anomalies as described in ancient Indian texts. While some research work has happened in this area in the past, till now researchers have failed to notice descriptions of meteors, meteoric impacts and tsunamis in them. Recent research at the Center for Ancient History & Culture at JAIN, has shed new light on how to look for such phenomena in ancient texts. As the precise meanings of Vedic literature is hidden in its archaic language, relying on traditional ancillary texts and commentaries coupled with modern scientific understanding of the ancient sky-pictures can now help us decipher meanings of words which routinely used to be mistranslated. Many of these ancillary texts of the Vedic time have not been studied in recent times. One of them, Parashatantra, not found in manuscript form, was reconstructed from quotations and published by our center a few years ago. Another, is a much larger encyclopedic book named Vrddha Garga Samhita, which appears to have been quite a popular reference book in ancient and medieval India is now available only in the form of poorly copied manuscripts in various libraries. The mentions of comets, meteors and meteoric impacts as mentioned in these texts will be the main focus of my study in the next one year. This, am sure, will lead me into numerous alleyways which need to be traversed on the side, to aid in the understanding of the main subject matter. As the celestial phenomena is described using an archaic celestial positioning system that uses positions of stars (different from the later siddhantic astronomy practiced in India after the 3<sup>rd</sup> century CE.), a detailed study in the methods and terminologies of that time describing the night sky needs to be done. Collating and studying findings in geology is needed to correlate the mentions of natural disasters with actual geological field studies of earth layers. Lastly another small but important work is to obtain and study facsimiles of manuscripts which would mean communicating with numerous libraries and visiting them. Thus, I look forward to the action packed upcoming year for my research work.

*Sudarshan H S*

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## Fieldwork Experiences

As part of my postdoctoral research, I was supposed to interview government officials. After some rounds of discussions, it became clear that my fieldwork would entail, approaching the officials of a particular government department (national and state levels), and get their views, experiences and stories on the topic. Fairly straightforward, right? I thought so too until I got down to emailing and calling the officials I had on my list. I was in for a classic textbook setback – my intended respondents did not write back to me, were always busy when I called, and of course, did not answer the text messages I sent them. So I took up two methods to solve this, a) trying to speak to them through a person they would know (more work for me), b) just landing up in their office and waiting till they gave me an appointment. I admit that these are the topmost solutions you would encounter in any research methods class explaining primary fieldwork. But there was a catch.

Initially, some respondents gave me time enough to explain my purpose of visit and what I expected of them, but were not too interested in indulging in a discussion. I also noticed that some junior level officers (who had a little more time to talk), passed off most of my questions by sheepishly saying ‘my boss will be able to tell you this in a better manner.’ But came my reply ‘Could you please ask him for an appointment for me?’ They agreed, and I finally got an appointment with ‘the boss’.

However, at another office, I faced a reverse situation, where the appointment with ‘the boss’ had come through, but the discussion was quite an overview of what I had intended to discuss, and there were no details mentioned. I tried hard to get the respondent to give some details, but he dismissed it saying, that he did not remember all the things since some other junior officer was handling it. I pounced on the opportunity to ask him permission to meet the officer in-charge, and he agreed.

Even after conducting several research studies, and discussing about methods with a lot of scholars, nothing prepares you for what you will encounter on the field. There are smaller hiccups, and sometimes bigger challenges that you face, and are left heartbroken. For a shorter study such as mine, which had a four month period for field work, I spent two and a half months just pursuing and requesting people for interviews, with little success. But the last month of fieldwork was better, and I was able to get appointments fairly easily (which still meant two email requests and at least three phone calls to the office).

Two small learning from my experience thus far have been a) to be persistent in research, because sooner or later, they will yield results, and b) to celebrate small victories- that one appointment, one interview, a eureka moment which connects the dots. My experience may seem as a small thing to some people, but it was enough to give me sleepless nights when I could not overcome it, and gave a great deal of satisfaction and achievement, when I did.

*Dr. Reetika Syal*  
*Assistant Professor at CERSSE, JAIN (Deemed-to-be-University)*  
*Currently on leave to pursue Postdoctoral Research at Indian Institute of Technology, Delhi*  
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## Writing Skills: Core of Research

*“Knowledge is having the right answer. Intelligence is asking the right question.  
Prudence is demonstrating both in a simple language.”  
– Unknown Authorship*

Any formal research starts with an intelligent question, matures into finding an answer and culminates in demonstration of both intelligence and knowledge through prudent writing in a simple language.

Now, an important question arises for a budding research scholar. How to develop writing skills? The following article pondered over this question and attempted to provide some tips that many may find relevant and useful. These tips are the result of my fifteen-months long journey into the formal research program.

**Tip #1: Develop writing as a daily habit** – Much like any other habit, longer we sustain ‘daily writing’ better will be our thesis; research articles; conference presentations; and easier we can progress to public consumerism of our research

**Tip#2: Remember the Three Pillars (CNT) of writing – Collecting Things, Noticing Things and Thinking of Things** – This is taught in the Research Methodology class and probably is the most important take away that will travel with us through the entire journey of our research – TNT explodes but the CNT explores!

**Tip#3: Read, Study, Take Notes and Stick to a Schedule** –These result in an effective CNT – reading anything helps improve our understanding of writing styles (reading our mails in the ‘Sent’ folder is an useful step in self-assessment); sifting and studying relevant articles sharpens our focus; taking notes improves our comprehension and sticking to a schedule grows into a habit that naturally develops the ability to contemplate – the T of CNT.

**Tip#4:** Do not forget that a research journey is not to a destination but for the simple joy of journey itself. So, learning never ceases and so does the continual improvements required in mastering writing skills.

*S. Sivaram  
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## Achievements and Publications

**Sundar Subramanian**, Ph.D Scholar in Mechanical Engineering had published a paper titled “**Design Optimization of Nano Cavity based Photonic Accelerometer Sensor for Vehicle System**” in International Journal of Mechanical Engineering and Technology on October, 2018.

**Dr. Arati Rao**, Co-ordinator, Department of Performing Arts-Music and Dance, JAIN (Deemed-to-be University) had been asked by Bharatiya Vidya Bhavan, Delhi Kendra to write an article for a special thematic digest being brought out by them which was released on 3rd November, 2018.

**Samarendra Narayanan**, Ph.D Scholar in Biotechnology’s Research Paper on “**Epigallocatechin Gallate, a Green Tea Polyphenol Inhibits Mycobacterium smegmatis: In Silico and In vitro Studies**” co-authored by K. V. Ramesh published in the Indian J Pharm Sci, 2017;79(4):625-632, has been adjudged as the Best Paper in the field of “Pharmaceutical Biotechnology & Microbiology” and awarded the Prof. M. L. Khorana Memorial Prize on 22nd December, 2018 at Delhi.

**C P Ramesh**, Associate Professor, Civil Engineering Department’s, SET– JAIN (Deemed-to-be University) Research Paper titled “**Engineering Properties of Self-compacting Concrete Containing Class C Fly Ash and Processed Slag Sand**” was accepted and published in Springer publication with SET-JU affiliation on 29th October, 2018.

**C P Ramesh**, Associate Professor, Civil Engineering Department’s SET– JAIN (Deemed-to-be University) Research Paper titled “**Proportioning of CLSM Containing Class C Fly Ash, GGBS, Quarry Dust and Processed Slag Sand**” was accepted and published in Springer publication with SET-JU affiliation on 29th October, 2018.

**Dr. Udaya Kiran K. T.**, Associate Professor, Department of Performing Arts (Music) presented a paper at a Two-Day National Conference organised by Equal Opportunity Cell (EOC) Empowerment Cell For Differently Abled (ECDA) and Department of Political Science on the theme **Higher Education in India: The Challenges and Opportunities (with Special reference to Dalits, Minorities, Women and PwDs)** at Bangalore University on 11-12th December, 2018.

**Dr. Udaya Kiran K. T.**, Associate Professor, Department of Performing Arts (Music) have been conferred with the title “**Svaraalaya Rathna**” and the same has been featured in 24th December, 2018 Kannada Prabha newspaper.

**Dr. Antonio Davis**, Associate Professor, Dept. of Aerospace Engineering, **Dr. Mathews Samuel** and Research scholar **Jagadish Babu C** were presented a prize money of EUR 200 for winning the **Best Paper Award (Second Prize)** at the **National Aerospace Propulsion Conference 2018**, December 17-19, 2018, Indian Institute of Technology Kharagpur, India with Springer Publishing.





ನಗರದ ಉದಯ ಭಾನು ಕಲಾಸಂಘದಲ್ಲಿ ನಡೆದ 'ಸ್ವರಾಲಯ ಟ್ರಸ್ಟ್ ಸಂಗೀತ ಪಾಲೆ'ಯ ಮೂರನೇ ವಾರ್ಷಿಕೋತ್ಸವ ಸಂದರ್ಭದಲ್ಲಿ ಖ್ಯಾತ ಗಾಯಕ ಡಾ.ಕೆ.ಟಿ.ಉದಯ ಕಿರಣ್ ಅವರಿಗೆ 'ಸ್ವರಾಲಯ ರತ್ನ' ಪ್ರಶಸ್ತಿ ಪ್ರದಾನ ಮಾಡಲಾಯಿತು. ಗಾಯಕಿ ನಾಗಚಂದ್ರಿಕಾ ಭಟ್, ನಟಿ ಚಿಮ್ ಶಿವ, ಲಕ್ಷ್ಮೀ ಹಳಬಂಡಿ, ಸ್ವರಾಲಯ ಟ್ರಸ್ಟ್ ಅಧ್ಯಕ್ಷ ರಾಮ್ ವೆಂಕಟೇಶ್ ಮತ್ತಿತರರು ಉಪಸ್ಥಿತರಿದ್ದರು.

ಸ್ವರಾಲಯ ರತ್ನ  
ಪ್ರಶಸ್ತಿ ಪ್ರದಾನ



Mon, 24 December 2018  
kpepaper.asianetnews.com/c/35141667



**INTRODUCTION**

- > Controlled low strength materials (CLSM) is a backfill material which is neither concrete nor soil cement but it has properties similar to both.
- > proper disposal of waste mud from various industries is a countries causing environmental l
- > The results from this study would b adopt sustainable practice through it waste or by-products in CLSM - in lo concrete or any other material



## Conference and Workshop Reports

**Santhosh S**, Ph.D Research Scholar in Computer Science and Engineering sent a short report of the two days workshop on Enterprise Network Engineering conducted by him as a resource person at Vivekananda College of Engineering and Technology, Puttur on 14th and 15th October, 2018 for 5th semester CS A students.



**Ramya G. Rao**, Ph.D Research Scholar in Biochemistry sent a report on ANACON, the XI Biennial National Conference of Animal Nutrition Association for Reorienting Animal Nutrition Research in the Perspective of Farmer Welfare that she attended and was held at Bihar Veterinary College, Patna on November 19-21, 2018. She had sent two abstracts *“In vitro evaluation of Manganese peroxidase from Clitopilus scyphoides in the bio delignification of some common crop residues for ruminant feeding”* and *“Bio-mining of Hyper Manganese Peroxidase Producing Basidiomycetes and its application in dye decolorization and lignin degradation”* under the categories FFN and NHE respectively. My abstracts were not only accepted for publishing in compendium but were also selected to be presented orally during technical sessions of Day 1 and 2.

### *Team Thinklet*

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ARTICLES FOR NEXT ISSUE SHOULD BE SENT  
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