



## Connecting Thinkers...

### Thinklet's New Year Greetings

#### Message from the President



*Dr. Chenraj Roychand*

My dear researchers at Jain University,

It is indeed a unique pleasure to connect with you all as 2018 begins. I would like to wish each and every one of you a year filled with happiness, achievement, and success moving much closer to the goals that you have set for yourselves.

Researchers at Jain University are a combination of senior faculty with decades of research experience who are mentoring and guiding younger researchers, faculty with a Ph.D. who are undertaking post doctoral work, leading sponsored research projects and guiding doctoral scholars and finally scholars pursuing their Ph.D. Our aim at Jain University is to provide a congenial research environment that fosters partnership, accountability and a commitment to excellence. All our efforts are geared towards achieving these goals.

I would like to wish you the very best in the New Year and hope you cross the milestones you set for yourself with confidence, clarity and commitment.

#### Inside the Issue

#### Message from the Chancellor

I am delighted to note the progress being made by THINKLET on fulfilling the objectives for which it was started with the vision of Dr. Sandeep Shastri and ably supported by the dedicated team. THINKLET Team and its leadership are doing a wonderful job by creating a useful network among research scholars of our University. Articles written by Scholars and others are very informative & interesting. THINKLET is indeed a feather in our (Jain University) cap.

I wish a very happy, fruitful and prosperous New Year for the readers and the team. Best wishes to all for their personal and professional life.



*Dr. C.G. Krishnadas Nair*

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## Message from the Vice-Chancellor

*New Year Greetings!*

I am extremely happy to note that Thinklet, the Monthly Research Newsletter highlights the research initiatives and achievements by the Research Scholars and Guides of Jain University. The excellence and diversity of our research across all disciplines and our intensive engagement mean that in addition to our achievements in fundamental research, we should continue to make significant contributions to innovation. In this direction Thinklet has served as a very good platform for all the Researchers of Jain University to share their knowledge. The newsletter enables the readers to access information about the challenges and priorities the year will bring in the research domain and offer views and comments. It is my pleasure to wish a glorious New Year to the Advisors, Editors and all those who are involved in contributing towards the continuing success of this magazine.



*Dr. N. Sundararajan*

## Message from the Pro Vice-Chancellor



*Dr. Sandeep Shastri*

Dear Privileged Members of the Jain University Research Family, As we step into 2018, permit me to express my gratitude to each one of you for having richly contributed to the strength, vibrance and quality that this family stands for. As I look back at the collective progress we have achieved in the last eight years, it fills one with pride and satisfaction. However, achievements are always accompanied with new expectations, success brings in its wake new challenges and thus the journey goes on...

I hope 2018 gives you an opportunity to take your research work forward with quality, competence, accountability and commitment. While 2018 may see you achieving on the profession front I also hope that on the family front you are blessed with good health, a caring and nurturing environment and boundless joy and satisfaction.

Looking forward to meeting you in the new year.

## Editors' Message

Greetings to all our Readers for the New Year, which brings with it multiple opportunities for new beginnings. Team Thinklet is delighted to see THINKLET step into its fourth year of publication. As Editors we would like to place on record our acknowledgement and gratitude to all of you who have contributed to our success. What started as a matter of professional commitment made three years ago, has become an internal part of our personal and professional identities. Every time we open the Thinklet mailbox and receive your contributions, we are delighted at the interest and sincerity that you all have for your newsletter. We take this opportunity to also thank our guides and mentors who have encouraged us constantly and set very high expectations for all of us to fulfill.

May the new year be filled with satisfying achievements that meet the highest standards of research, for all of us.



*Dr. Mythili P. Rao and Dr. Reetika Syal*

## GUIDE'S COLUMN

### Salivate for Health

The current lifestyle and environmental changes have rendered the general population more prone to several lifestyle associated conditions. The increased occurrence of diseases has taxed the health care sector with a rise in need of better / additional treatment facilities. It has also strengthened the need for easier / newer diagnostic strategies. In this scenario, saliva with its potential to reflect the blood conditions has emerged as a potential diagnostic medium to a large extent. This oral fluid carries a composition which is closely drawn from blood, the more conventional diagnostic fluid. Saliva offers an added advantage of being a medium that can be collected repeatedly with minimum discomfort to the patient and in a cost effective fashion.

My earlier research on malignant transformation of oral cancer, one of the most prevalent cancers in India, has served as a background for my current salivary research exploration in understanding the metabolic variations of oral cancer. The prevalent smoking and drinking habits, poor oral hygiene and limited health awareness are considered to be the prominent etiological factors that predispose to the development of this disease. India alone contributes to 1/3<sup>rd</sup> of the total global oral cancer burden. All this gives rise to a need for diagnostic methods that may even be used for population screening to facilitate early diagnosis and putting a check on the high mortality rate.

The study now being carried out by our team involves tracking the possible changes in small size metabolite profile (termed 'metabolomics') in saliva of oral cancer patients and healthy control subjects. Saliva being the tumour vicinity fluid, the hypothesis is that it may reflect at least a few of the tumour tissue specific changes. Observations from this research may pave way for identification of oral cancer specific biomarkers in an easily accessible biofluid. Development of diagnostic tests / tools based on this futuristic biofluid may be a cost effective blessing to both patients and clinicians alike.

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**The 7th Annual Convocation of Jain University will be held on 6th  
January 2018 at the Global Campus, Kanakpura.  
Ms. Nirmala Sitharaman, Honourable Union Minister for Defence, will  
be Convocation Speaker.**

## Emotional Intelligence to Cope with Stress

Stress is killing workforce productivity and lowering employee morale. We cannot always eliminate stressful situations but we can equip employees with the tools they need to successfully deal with these situations. There are some obvious or well-known causes of stress in the workplace including heavy workload, poor management and lack of job security. Knowing the causes of stress does not help to control it but utmost care has to be taken at all levels in the organization.

*Self-management is the skill to control negative responses to stressful situations*

Self-management is the skill to control negative responses to stressful situations. It involves handling feelings and making situations lead to positive results. These two aspects are integral for employees dealing with intense workplace stress. Additionally, workers need the skills to build good relationships with co-workers. By advocating training in Emotional Intelligence we have the opportunity to change our workforces' way of thinking

According to the American Institute for Stress, "Numerous studies show that job stress is far and away the major source of stress for American adults and that it has escalated progressively over the past few decades." A study carried out at the Athens University of Economics and Business at the University of Greece found that higher levels of emotional intelligence were associated with lower levels of stress in the workplace.

The 7 ways that emotional intelligence can help us cope with stress and prevent burnout are:

- ◆ Self-Awareness
- ◆ Awareness of others
- ◆ Ability to respond rather than react
- ◆ Deep listening ability
- ◆ Having an extensive emotional vocabulary
- ◆ Ability to see different viewpoints
- ◆ Ability to be aware of our limitations and ask for help

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## Smart Solution for Low Frequency Problem

Frequency instability leads to massive and cascade blackout in the power system. Restoration after blackout takes time. Smart grid makes future power system abundant, clear, efficient and reliable. However, it may suffer from some challenges and problems, such as effective frequency regulation. Supply and load mismatch creates low frequency problems. Using GSM technology and advanced metering infrastructure, is seen as a possible solution to this problem.

*Smart metering is the most important mechanism used in the SG for obtaining information from end users' devices and appliances*

Smart metering is the most important mechanism used in the SG for obtaining information from end users' devices and appliances, while also controlling the behavior of the devices. AMI contains many devices like data management center master station communication center, intelligent terminal and smart meter. Among all ABT meter is the key component of the advance metering infrastructure.

In ABT meter the load should get shutoff as per priority. Domestic load is the least priority load, so it should get shutoff first. In charge engineer of that jurisdiction will receive a message on the smartphone from ABT meter itself and load will be shutoff automatically. Second priority can be given to industrial load. Certain sector loads which are top priority such as hospitals, airports etc. will never get shut off. If this feature of prioritization is added to the current ABT circuitry, the low frequency issue can be eliminated.

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## *Hit Refresh* – by Satya Nadella – A Book Review

### Empathy at the core of his beliefs

The world knows Satya Nadella, the CEO of Microsoft the IT giant nestled in Seattle in the USA. He is steering the globe straight into the next industrial revolution, frequently described as a time in which machine intelligence will rival that of people. But as Satya, 50, says in his inspiring new book, *Hit Refresh*, that revolution is about more than just designing new apps. "At its core, it's about humans and the unique quality we call empathy, which will become ever more valuable in a world where the torrent of technology will disrupt the status quo like never before," he says. In other words, technology is nothing without the soft touch of humanity. His latest book is an insider look at Microsoft's culture and more: the honest struggle of a father grappling with a family he never expected but cherishes.

Satya's deeply empathetic nature owes much to his eldest child, Zain, 21, who is severely disabled. He was born weighing just three pounds, having suffered asphyxiation in utero; as a result, he is visually impaired, has limited communication and is quadriplegic. He later was blessed with two more daughters. Before long, it was clear that one had learning differences beyond what local schools could successfully cope with. His wife, Anu found the answer in a special needs school in Vancouver, which focuses on the neuroplasticity of the brain — essentially training the brain to function at a new level. Anu shuttled their daughter back and forth for five years and played a role in the establishment of the Eaton Arrowsmith Academy in Redmond, Washington.

*Technology is nothing without  
the soft touch of humanity*

Through it all, Satya rose steadily at Microsoft, a company that was beginning to sag under bureaucracy and infighting. In February 2014, he was tapped to be its CEO, and he ignited a fresh growth mentality emphasizing pushing oneself to look at things in new, often empathetic ways. "After Zain, things started to change for me," Satya says. "It has had a profound impact on how I think, lead and relate to people." His wish: that we'll all feel empowered to create our own change at home and at work, one empathetic step at a time — starting with the happy-life lessons he and Anu have learned over the years. He has broken some well perceived rules to rise to the top. Satya Nadella once had to give up his green card so he could get an H1-B visa so his wife could come to the U.S. When he was in the running to replace Steve Ballmer as Microsoft CEO, Ballmer advised him to go against common wisdom and be himself, rather than pretending to be more aggressive than he naturally was. When his son Zain was born with cerebral palsy, it forced Satya to change how he looks at relationships.

As a research scholar what interested and intrigued me about this wonderful memoir is an account of the Human Resources policy that was implemented in the IT Company thanks to the efforts of its CEO. The book chronicles all his personal highs and lows which somewhere meet to form the organization culture and vision of the company.

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## Research Work Made Easy

It is a matter of pride and elation for me to acknowledge the contribution of all the individuals who have been my inspiration during my research journey. I am immensely grateful to the Research Coordinator and the administrative team who support the research program at Jain University. They have been responsible for easing out the shortcomings during our research, thus allowing us to concentrate on our work, rather than worrying about administrative formalities. All the mentors and teachers who have taught us throughout our Ph.D. have been persistent in their encouragement and constructive criticism. With their vast knowledge and experience, they have cooperated with us and helped us to excel in research.

*All the mentors and teachers  
have been persistent in their  
encouragement and construc-  
tive criticism*

I also step forward to express my deep gratitude to the Academic Council at the University, especially the Pro-Vice Chancellor for not only providing all the necessary facilities for our research but also for organizing skill development workshops, research retreats and conclaves so that we may get an insight into the various aspects of research from our colleagues as well as experts. After having spoken to many friends in different universities across the world, I can proudly say that research work is made more pleasurable for everyone even as the highest standards are maintained, at Jain University.

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## A Journey from a human being to being Human

There is a saying that, 'It is not the destination which is important, but the journey'. In the same way Ph.D. Research is a lively journey, a real travel of research, with the aim of a systematic search for something still unknown, but a truth. Human mind is a valuable instrument in research. However, to aim and believe is not enough, the researcher has to perform all tasks with mindfulness.

*The researcher has to perform all tasks with mindfulness*

The first milestone in this journey is the pre Ph.D. course wherein various aspects of research methodology are explored and the relevant domain topics are discussed. My medical research background motivated me towards the research on mindfulness and internal personality.

Training in research methodology and discussions with my guide and other scholars created enthusiasm to work on the research topic. Participation in conferences and seminars and article writing for publication generated more awareness and inspired me to read in-depth and march towards the ultimate goal. Ph.D. Research is in fact, a process of thinking and rethinking and a process of 'knowing, growing and becoming'. The research journey therefore is full of enjoyment and pleasure.

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## Virtual Learning

The Centre for Distance Education and Virtual Learning (CDEVL) was created at Jain University in the year 2010 to promote seamless learning on the virtual platform. In the process of developing and implementing various virtual methodologies of learning, teachers and content developers along with IT professionals work together to develop and digitize the content, which includes digital lectures, question banks, illustrations and assignments. This uploaded content is then available online for access by the students. However, with the advancement in technology, '**Multimedia in Education**' has come to be appreciated world-wide. In a Google-KPMG study it has been documented that **Multimedia is indeed the future of Education in India**. Keeping this in mind, CDEVL has chalked out the following plans, it proposes to develop and execute:

- ◆ Prepare SLMs & Virtual Class room lectures for all programs offered
- ◆ Design new under-graduate & post-graduate course programs in 'Multimedia'
- ◆ Create a platform for technocrats like Engineers, Doctors & Lawyers to exchange their technical ideas and also earn certification.

*Multimedia can be recorded and played, displayed, interacted with or accessed by information content processing devices*

Multimedia is the content that uses a variety of techniques such as text, audio, images, animations, video and interactive content to convey information more effectively. Multimedia contrasts with media that uses only rudimentary or traditional forms such as text-only or traditional forms of printed or hand-produced material. On the other hand Multimedia can be recorded and played, displayed, interacted with or accessed by information content processing devices such as computerized and electronic devices

and can also be part of a live performance. Multimedia is differentiated from mixed media in fine art, by including audio, for example, as it has a broader scope. Performing arts may also be considered multimedia considering that performers and props are multiple forms of both content and media. Since media is the plural of medium, the term "multimedia" is used to describe multiple occurrences of only one form of media such as a collection of audio CDs. This is why it's important that the word "multimedia" is used exclusively to describe multiple forms of media and content.

Static content (such as a paper book) may also be considered multimedia if it contains both pictures and text or may be considered interactive if the user interacts by turning pages at will. Books may also be considered non-linear if the pages are accessed non-sequentially. The term "video", if not used exclusively to describe motion photography, is ambiguous in multimedia terminology. Video is often used to describe the file format, delivery format, or presentation format instead of "footage", which is used to distinguish motion photography from "animation" of rendered motion imagery. Multiple forms of information content are often not considered in modern forms of presentation such as audio or video.

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## WorldSkills Competition: An Olympic of Skills

*This report is by one of our Ph.D Scholars in Management, who was part of the WorldSkills Competition in Abu Dhabi 2017. He is a professional chef and Co-founder and Director of Academics at Lavonne Academy of Baking Science and Pastry Arts, India. He writes about the competition, and how research helped him win an award.*

The WorldSkills Competition, a flagship event of the WorldSkills International, organised every two years, is the biggest vocational education and skills excellence event in the world. The 44th edition of this prestigious event was hosted at Abu Dhabi, from October 14-19, 2017. Over 1,300 participants from 59 WorldSkills member countries and regions showcased their talents across 51 skills competitions. The mega event was held at the Abu Dhabi National Exhibition Centre, one of the largest exhibition centres in the Middle East. The Indian contingent comprising 28 participants represented the country in 26 skills this time around.

**About WorldSkills International:** WorldSkills is the global hub for skills excellence and development. Through international cooperation and development between industry, government, organizations, and institutions, they promote the benefits of and need for skilled professionals through grass-roots community projects, skill competitions, and knowledge exchange. Today WorldSkills represents more than 45 skills in over 75 member countries and regions, all working together with youth, educators and industries to help prepare the workforce and talent of today for the jobs of the future.

**About WorldSkills India:** As part of Skill India mission, World Skills India is an initiative of the National Skill Development Corporation (NSDC) under the aegis of Ministry of Skill Development and Entrepreneurship (MSDE), Government of India. NSDC, through its World Skills India initiative, has been leading the country's participation at World Skills International competitions since 2011.

I was chosen to be the expert and coach for baking science and additional coach for confectionery and pastry arts for India. What we achieved is a silver medal -the only medal in hospitality skills, which comes under the sector skills of Tourism and Hospitality Skill Council, Government of India. It is in fact a great privilege to represent India but what helped me to have an upper cut is the research orientation during my PhD program at Jain University. I am ever indebted to my guide, the Pro-Vice Chancellor, the Research Coordinator, and all research faculties and colleagues at the University.

Research has a special mention in my dairy due to many reasons. Competitors from different countries are given a very early training to compete in the WorldSkills. The privilege of being trained from a small age is a herculean task for us Indians due to the academic importance of our curriculum rather than the skills. Vocational exposure is given at a higher age but the WorldSkills participation is only for youth under 23 years of age. What we did was a thorough research of the competitor, their skill competencies and made an attempt to learn their skills and modus operandi. We coached the candidates and the skills were sharpened by cross training in other aspects like stress management, performing under pressure, disaster management, interpersonal skills etc.

Research is one of the most important aspects for any form of competition. *The systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions-* this definition of research is absolutely true in this case. We did research on what Indian youth lacks by doing a prior check on the previous competitors from India in WorldSkills.

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**You may have a fresh start any moment you choose, for this thing that we call 'failure' is not the falling down, but the staying down.**

***Mary Pickford***

## Response to Thinklet Issues

*Dr. Thrayambak Hombale, Research Guide in English, Jain University*

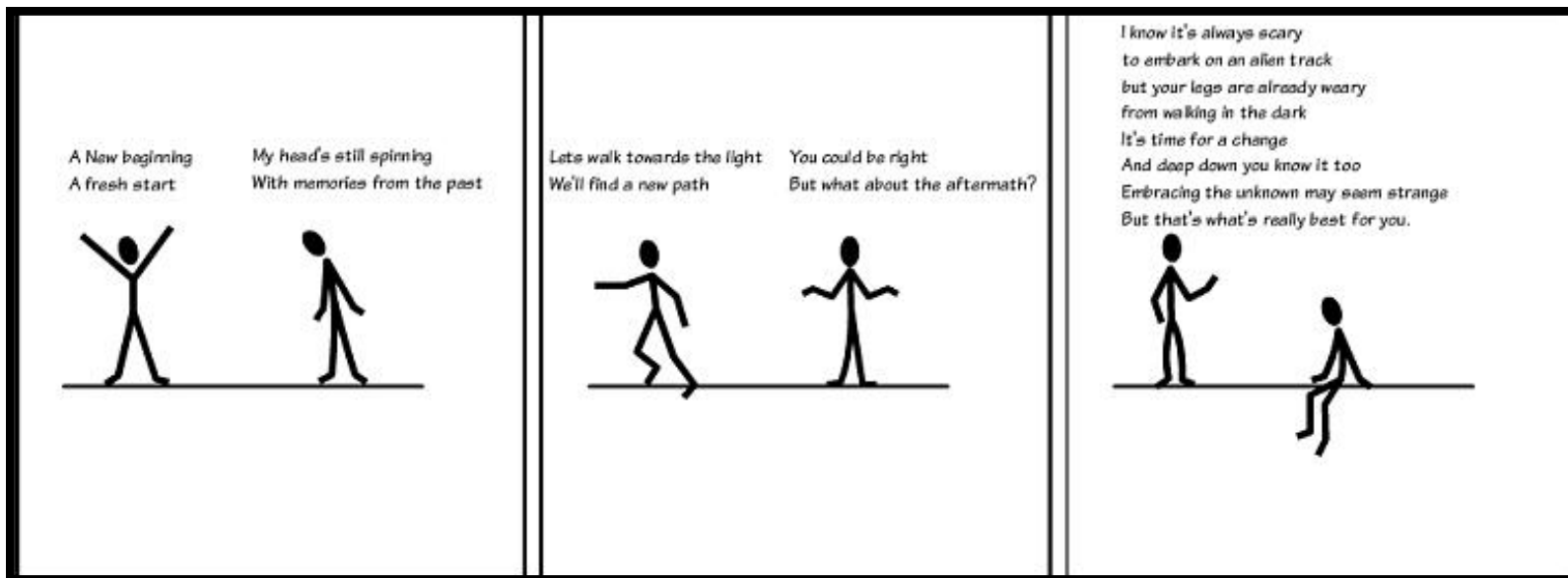
My congratulations to the editors for keeping us informed about the research issues. Congratulations to Dr. Nair, the Chancellor for his achievements!

*Bharathi T, Ph.D. Scholar in Management, Jain University*

December Thinklet has come out well and the Ph.D awardee names which have been added is a great motivating feature to know how many scholars has been awarded in each discipline. I appreciate the entire team for their effort to bring out successive volumes of the newsletter, and special appreciation for Mythili Mam and Reetika Mam.

*N.R. Solomon Jebaraj, Ph.D. Scholar in Computer Science, Jain University*

Each issue of Thinklet is encouraging me a lot. Thank you.



### *Team Thinklet*

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ARTICLES FOR NEXT ISSUE SHOULD BE SENT BY  
**January 20, 2018** WITH **NOT MORE THAN**  
**250 WORDS**  
PLEASE INCLUDE YOUR NAME, E-MAIL AD-  
DRESS AND THE KNOWLEDGE DOMAIN OF  
YOUR INTEREST