



Connecting Thinkers..

Editor's Message



The #MeToo movement and the sacking of professionals and higher academics all across the globe today reveal to us a deep lacunae in leadership training and human ethics. Clearly, there is a lot around us that is not right. Besides, Ph.D and Master's students worldwide report rates of depression and anxiety that are six times higher than the general public (T. M. Evans *et al. Nature Biotech.* 36, 282–284; 2018). This study, based on the responses of 2,279 students in 26 nations, has found rates of depression amongst them to be alarmingly high. Teresa Evans, a neuroscientist at the University of Texas Health Science Center at San Antonio and the study's lead author notes that universities should provide students with training to help them manage their time and cope with stress as the findings of this research underscore the severity of the problem and the need for a response.

Very often scholars report the stress of maintaining a good work-life balance. Along with this, long hours of reading in solitude and taking down notes creates a lot of pressure and they need to take breaks in between. A good effort in research entails reading numerous research papers, though the number may vary depending on the topic and scholars need to develop high levels of patience while skimming the literature, to identify the research gap. Thus, in our profession empathy, attention and kindness are important pre-requisites. They are emotions that doctoral researchers, who are passionate about their work, need to be at the receiving end of. In addition to that, these scholars also need to develop interpersonal skills and a reasonable level of emotional intelligence to relate to the doctoral guide and committee members.

In another paper Nathan Vanderford, Assistant Professor at the University of Kentucky in Lexington calls for institutions to create programs that see mental health as an essential component of the skill set that is necessary for successful career development, including increasing awareness of mental health issues among students and facilitating access to dedicated support. "In everybody's life there are ups and downs and unexpected turns, and the struggles can become very real very rapidly," she says. "It is very important to know who you can turn to and build that team of people now so that you have them." We are always there for you.

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GUIDE'S COLUMN

Digital Twin

Digital Twin is the replica of a flying aerospace vehicle in the digital world. The twin is modelled with standard finite element software. The loads experienced by the vehicle are measured by sensor based instrumentation and recorded by flight data recorder (FDR). The model in the digital world is subjected to actual loads experienced by the vehicle during the flight. These loads represent the usage spectrum and can map with the help of FEM software the possible damage (or no damage) occurred flight-by-flight (or launch by launch) by the aerospace vehicle.

The vehicle would have been designed for limit and ultimate loads arrived at/or specified through years of experience in flying the same class of vehicles. During the usage most of the vehicles fly at much lower loads and their life would be much larger than specified by the designer based on design load factors. Health usage monitoring systems (HUMS) or the extended version of Digital Twin would be based on usage spectrum and is capable of estimating the remaining life more convincingly. Currently the operator approaches selected groups for life extension after the designer specified life expired.

The technical content of this technology requires the ability to measure loads during the flight, individual vehicle tracking for the load usage spectrum, big data analytics to identify the load signals from the sensors, fatigue and fracture approach to estimate expended or remaining life, evaluate the results to decide to tolerate the damage or go for repair before the next flight or launch. Similarly the engine and the avionics of the vehicles could be monitored by Digital Twin provided their performance degradation is known by a deterministic or statistical model.

The application of digital twin is not for aerospace alone, but it is a concept applicable for a large number of engineering structures, power plants and primary components. Literature shows the applications span wide types of engineering fields such as Nuclear, Railways, large scale civil installations, aging structures, etc.

In JAIN we have been working in the Department of Aerospace Engineering on life estimation methods from quite long and now we are sanctioned a research project (expecting more of them soon) on Digital Twin for critical Joints. Also we are planning to extend the concept to engines and avionics systems. The life of the vehicle could be the life of some critical primary joints. This is one of the crucial aspects under the gamut of "Aviation Safety".

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What is Literary Criticism?

“Read not to contradict, and confute; not to believe and take for granted; nor to find talk and discourse; but to weigh and consider. Some books are to be tasted, others are to be swallowed, some few to be chewed and digested.”

- Francis Bacon

It is important to understand ‘criticism’ before pinning down on defining ‘literary criticism’. There are two ways of reading a text, one is to simply read and move on to the next text, and the other is to read the given text and evaluate. In both the cases, readers frame their impressions, however, it is a little vague and abstract in the former, and quite accounted for in the latter. Criticism calls for a trained judgment, therefore, its genesis is in questioning. Nothing remains sacrosanct to criticism, and it subjects everything to the closest scrutiny.

Criticism calls for a trained judgment, therefore, its genesis is in questioning. Nothing remains sacrosanct to criticism, and it subjects everything to the closest scrutiny.

Literary theory and literary criticism are terms used quite interchangeably. There is an overlap in what each of them intend to do. The differentiating aspect is that literary theory compiles a set of principles, and is usually general, while literary criticism is practical application and focuses on individual texts. Literary criticism refers to the analysis and interpretation of a given text, which takes into account the nature and function of literature and literary theory, to arrive at an evaluative judgment. A judgment of this sort comes through comprehending a text by applying intrinsic and extrinsic criticism, where the former examines if meanings are naturally there within the text and the latter investigates if meanings are made with extraneous variables such as social, economic and political.

Literary criticism attempts to investigate the structural and thematic design of a literary text, and also examines the text in its contexts. This provides a different perspective of looking at the given text, and which invariably allows the text to grow inviting more questions and thorough judgments.

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Towards Humanity Via Research

Disclaimer: This article is based on true incidents and compilation of facts in no way represents any one person, place or thing.

Well, to begin with, Research has become an inseparable part of me now. Initially, I considered Research only as a learning tool in my life which I believed would not only make me a better educator but also a “value added, respect worthy” person in the society. As my research journey progresses, I reached a point where I had to get down for a while and communicate to people beyond my academic circles (in Research language, it was my “Data collection” stage in a rural place), that’s the time when I had to face noteworthy experiences which I cannot pen down in my thesis, because if I do, my thesis would then become “My life experiments” biography and not a Doctoral thesis! Jokes apart, as a matter of interest cum convenience I chose to conduct a study on financial discipline of rural households in Dakshina Kannada District. Words are falling short to express the wisdom that I gained during this time. It indeed made me a better human being.

Involving myself in interaction with rural community benefitted me in many ways, I am penning down only few: Firstly, it was a challenge to make them understand why I was in their place and my objective of why I am researching on their opinions so that they give me an honest and unbiased response. It was a challenge because I was dealing with a set of people who are not highly educated, not too tech savvy nor too advanced in their livelihood. Well, here is when I realised communication is the lifeblood and simplicity is the best!

Secondly, this field work made me count my blessings and stop complaining about bad things that happens in our lives. The people whom I came across were contented with whatever little they had and were pleased to be the host to a stranger.

Thirdly, meeting unknown people, spending time in villages and speaking to them irrespective of their caste/religion showed me the real positive and healthy version of my country India. Goodness still exists and now I do not term any stranger as “potential harm” anymore. Hence, with successful completion of my data collection for research, the one by-product I could achieve is that I came out as a better human being. The “bad” lies within us, we need to come out of it to see that “good” things are outside.

In the last issue of Thinklet, we learnt that Questioning makes us gain a better understanding of things that we do and I totally support this statement because questioning in research activity has broadened my mind and has made me more empathetic towards people of different categories. This journey of my Field work that is Data collection period has indeed taught me to be flexible, bold, humble, curious for good, empathetic and more open to challenges at any point of time. Even there are times where we stop thinking and say “I am done, I give up” but when I look back at these memories I stand up from where I fell and move forward as a better human being.

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My Journey till the First Milestone... and Beyond!

Upon reading the title, what is the first thought that came into your mind? Hopefully — which is the first milestone? Well, it may be different for every individual. Some may consider the interview for Ph.D. as the first milestone. Others may consider it the achievement of the first objective of their research work. But for me, the first milestone meant the completion of coursework and pre-registration, and finally be known as a **Ph.D Research Scholar**.

Workshops were the main part of the last few months of coursework. We learnt important lessons on grooming, speaking, presenting and ways to overcome difficulties that we might face in the course of research.

First few months of the coursework meant regular intellectual sessions which helped us to identify the various aspects of research, and most importantly, the reason for pursuing doctoral research. From research ethics to importance of literature review, we learnt a lot during these interactions. Interactions because, the faculty encouraged us to speak our minds and thoughts, and guided us to be better researchers.

We also learnt the basics of our core subject which, in a way helped to cover our bases for our research.

Workshops were the main part of the last few months of coursework. We learnt important lessons on grooming, speaking, presenting and ways to overcome difficulties that we might face in the course of research. Subject knowledge was also enriched by the shared experience of the faculties.

Last but not the least, the synopsis presentation! It was time to demonstrate all the skills learnt and all the knowledge absorbed. And yes, I crossed the First Milestone and look forward to beyond.

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“As long as poverty, injustice and gross inequality persist in our world, none of us can truly rest.”

- Nelson Mandela

ART OF DYING — Journey to Ph.D

Art of Dying is nothing but Jain Sallekhana which is a voluntary approach to death by spiritual way to attain peaceful Samadhi. Entry to JAIN University and enrolling into Jain Studies was my desire. For a long time the subject of Jain Sallekhana was in High Court. The debating issue in the court of law was “Jain Sallekhana is fast unto death and suicide”. It was a welcoming opportunity to me to share my knowledge, as learning platform as well as challenge. So the choice of institution to pursue as PhD research student was right so got confirmed

The day of inauguration of Ph.D programme was most colorful. Our respectable and dear Chairperson’s encouraging message was to keep the goal of education, for the betterment of the society. He inspired and advised us to come out of comfort zones, the curriculum is to learn as cognitive phenomena which takes you to search more knowledge about the unknown.

The research journey started from “Research methodology course work.” The classes were for young and old, focusing on front and back benches. All the classes were with ever fresh knowledge and interesting. Thinking, learning and teaching everything was digital life styled. Our enthusiasm of learning broke the barrier of age, gender, language, food habits and life style behavior. Group discussions, presentations and assignments, all these activities motivated me and strengthened my confidence, as well my communication skills, while presenting our papers in the national and state level conferences. The other exposures like, 1st Conference of Urban transformation, and open viva's of senior Ph.D candidates etc. were to build and upgrade our social attitude and behavior.

Skill development workshop and research retreat activity were memorable events and they reinforced our research aspect to learn effectively. We learnt from learned speakers who enhanced our literary knowledge as well socio-educational developments.

My Ph.D research subject “Sallekhana its effects on mind” is to visit rural and urban areas along with my questionnaire. It involved qualitative and quantitative field work to get maximum information from research participants. I really appreciate their (research participants) height of tolerance to achieve the voluntary death with peace of mind. Their will is to conquer the passion and path to Mukti. To quote, “Perception believed is reality achieved.” The research journey is full of excitement, surprises, challenges and uncertainties. It is a research to learn with systematic focus on search, along with our guides, and research teachers. So, Ph.D journey is an arena of learning which makes us think and rethink, read and reveal, analyse and experience the valid progress ahead. Ultimately one has to achieve the maximum knowledge with peace of mind where sky is the limit.

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Science Related Workshop

Department of Microbiology conducted a Workshop on Collaborative Research, Innovations in Research and Statistical Tools on 11th August, 2018. The first session was conducted by Dr. Padmavathi on Collaborative Research. Followed by Dr. Srividya Shivakumar talk on Innovations in Research. Lastly it was concluded by Dr. Usha M S on Statistical Tools in Research.



Workshop on Collaborative Research

The day was well structured. All the three sessions were found equally useful. Day started with a session on collaborative Research, which gave a good insight of why it is important to collaborative for better research. Second session dealt about how to bring about innovation into ordinary research. The last session was about Biostatistics. The lecture and activity showed the benefits of using statistical tools in bringing reliability and precision and time saving nature of the subject.

*A.G.S Chandu
Biochemistry
IIHR*

All the sessions were very informative and interesting. We have developed a new perspective of doing our research. All the sessions were something different and innovative than other previous perspective. I have also got the startup idea with Srividya Madam's session. I would like to discuss that with you all, may be that can be one if the initiative of its own kind. But more research can be done on that.

*Ruddhida R Vidwans
Forensic Science*

The collaborative research was very insightful and gave us an idea on collaboration towards interdisciplinary research. The innovations in research was very interesting and Informative. It demonstrated the importance of innovations to. One up with cutting edge quality work. The statistical tools lecture gave us the idea of using statistical software to analyse and solve the experimental data in a scientific way. We thank all thank all the teachers for giving such informative lectures.

*Vrinda and Ashrini
Microbiology and Biotechnology*

One-day Workshop on Design of Experiments (DOE)

A one day workshop was organised by the Department of Physics (Resource person Dr. Dinesh Kumar), School of Sciences, JAIN (Deemed-to-be University) on the **Design of Experiments (DOE) on 28th July 2018**. DOE is a scientific and a very systematic method of planning and conducting of an experiment that yields cause and effect relationship between variables. It is a very powerful tool. If DOE is conducted properly, one can study the effects of many variables simultaneously as well as possibly interaction effects. This helps in reducing the time to get the final research output. The culmination of the objectives was accomplished through 3 talks focusing on vitality of DOE in research, methodology to be followed while designing an experiment and important software mostly used in the process of DOE followed by activities and detailed interactive discussion. The workshop was attended by 30 research scholars from different streams of Jain University.

Highlights of the Workshop include talk by Dr. Rajesh S L on “Unleash the Basic potentials of Design of Experiments (DOE)”. It was followed by Dr. Dinesh Kumar’s talk on “Experimental Design Process”. Lastly the session was wrapped up by Dr. K. R. Santhosh from Christ University on “Role of SPSS in the Design of the Experiment”.



The session on DOE as a part of the science workshop held was very informative. As a research scholar freshly stepping into pursuing research it was very important for me to understand how best to plan and work on my proposed topic. The sessions were well planned and speakers were from esteemed positions sharing their experiences which enriched me greatly regarding the practicality of the importance of DOE in research. I really looked forward to the session on SPSS and its role in data analysis. I found it a little difficult to understand the basic role and application of SPSS since it was not explained rather its application to various case examples were discussed. Overall, the planned sessions were very useful to me to initiate the curiosity in learning more on the topics discussed and to practically apply them in the course of pursuing my research work.

*R. Aparna
Dept. of Forensic Science*



The workshop was very well organised. All the sessions were very good and I like the activities included in it. We enjoyed a lot and we learnt many things.

*MahadevLaxmanShegavi
Dept. of Chemistry*

The workshop on Design of Experiments was very good and informative.

*Nidhi M R
Dept. of Chemistry*

I did find most of the sessions useful. The activities added to the experience and it had a very practical approach.

Desrie Helen Dsouza

Ph.D Theses Awarded - July to September 2018

NAME	SUBJECT	TITLE OF THE THESIS
Anitha H C	Visual Arts	Dakshina Bharatada Bhithi Chitrakala Parampareyalli Shaiva Nirupane Mathu Drushyakaleya Amshagalu – Ondu Adhyayana
Hemalatha B S	Kannada	Adhunikottara Kalaghattada Kathegalallina Vastu-vishaya (1990-2013)
Murugaiya Sridar Ilango	Physics	Textured Fabrication of Cadmium Sulphide/Cadmium Telluride Thin Film Photovoltaic Cell with Back Contacts
Roopa K B	Microbiology	Study on Intermediate Compounds and Enzymes involved in Degradation of Reactive Black 5 dye by Aeromonas Punctata
Anand Poojary	Management	A Study on “Just-In-Time” Inventory Management in Pharmaceutical Industry
Atul Sen Singh	Management	A Study on the Impact of Visual Merchandising on Brand Equity with Reference to Premium Apparel Retailers
Reshma Verma	Electronics and Communication Engineering	Fuzzy Logic augmented H-Infinity filter for Target Tracking
Kusumadevi G H	Electrical and Electronics Engineering	Investigations on Reduction of Voltage Stress across H. Vtransformer Winding Sections by use of MOV and Fault Diagnostics
Raghavi K Bhujang	Computer Science	An Effective Risk Management Model Using Analytical Approach for Efficient Software Development
Mekhala Venkatesh	English	Not Just a Love Poet - A Study of the Kannada Poet K. S. Narasimhaswamy
Amit Kumar Tiwari	Chemistry	Modeling of Anti-HIV-1 activity by Applying QSAR and SAR Study on Piperidine-4-Carboxamide CCR5 Antagonist
Megha Shukla	Biotechnology	Evaluation of Cytotoxic Potential of Bacterial Pigments
Gourishankar Manikrao	Chemistry	Residue Dynamics of Fluopicolide in/on Brassica Vegetables and its Degradation in Soil
N Shivashankarappa	Electronics Engineering	Synergy of Out of Sequence Measurement and Missing Data in Wireless Sensor Network

NAME	SUBJECT	TITLE OF THE THESIS
Shruthi K R	Sanskrit	Aviation Science and Aircraft as Reflected in Vedic and Ancient Texts: Analysis in Comparison with Modern Aircraft and a Few Aspects of Aircraft Technology
Shivamurthy R C	Computer Science and Engineering	Hybrid CBIR Framework for Medical Image Dataset using Knowledge Based Resemblance Synthesis, Filtering and Mechanism of Contribution
Yashoda B S	Electronics Engineering	Optimal Solution for MIMO Receiver Implementation for LTE Systems
Alok Kumar Chhajer	Management	Impact of Financial Inclusion on Savings and Investing Behavior of Rural Society
Samarendra Narayanan	Biotechnology	In Silico, in Vitro and in Vivo Approaches for Evaluating Certain Anti-tubercular and Anti-tumor activities of (-)-Epigallocatechin Gallate and its Derivative
Vinay Kumar S B	Electronics Engineering	Nature Inspired Computation based Floorplanning in VLSI
Mary Conice	Microbiology	Purification and Characterization of Shiga-like toxins from Food borne E. Coli Isolates
Lokamanya Chikmath	Aerospace Engineering	Non-linear Prognostic Analysis of Fastener Joints for Structural Health Monitoring Applications
Swetha Amit	Electronics Engineering	Robust Estimation of Model Error using H-Infinity Framework
Suresh Raj Jain	Mechanical Engineering	An Experimental Investigation on Grain refinement and Modification of LM25-(A356) Aluminium Alloys
Bhargavi P	Mathematics	Numerical Study of Heat and Mass Transfer during the Freezing of Water

Achievements and Publications

Shabana Parween, Ph.D Scholar from Biotechnology Department got first prize in oral presentation at the National Conference on “**Future India: Science and Technology**” on 10th and 11th October, 2018.

Lakshmi Gopaldaswamy, Ph.D Scholar in Dance and Cultural Studies enthralled audience by performing Nritya Vaibhava dance in Mysuru Dasara Cultural Events Day-2 on Thursday, 11th October, 2018.

Dr. Shweta Gupta is the prestigious editorial board member of *Donnish Journal of Biomedical Research* (ISSN: 2984-8954)



JAIN Research Retreat 2018

The Annual Research Retreat of JAIN this year is scheduled on 17th and 18th November 2018. The Retreat brings together all the Doctoral Guides and Scholars of the University on a common platform. There are General Plenary Sessions, Faculty Plenary Sessions, Breakout Sessions and Concurrent Sessions. The Retreat provides an opportunity for Doctoral Scholars to present the progress of their research work before Peers and Subject Experts. This years Plenary speakers include **Dr Shailesh Naik, Director, National Institute of Advanced Studies (NIAS); Dr. Anup Pujari, Chairman of the Karnataka State Skill Development Council; Dr N. V. Varghese, Vice Chancellor, NIEPA University; Dr Geetha Bali, Former Vice Chancellor, Karnataka Women's University; Dr Peter Reiji, Professor, IIM, Bangalore; Dr. S Y Kulkarni, Vice Chancellor REVA University and Dr Cheriyan Alexander, Professor, St. Joseph's College.**
A detailed Report on the Retreat will be carried in the next issue

ALUMNI PAGE



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"I strive for two things in design: simplicity and clarity. Great design is born of those two things."

- Lindon Leader

Responses to Thinklet Issues

Professor Dwarakadasa

Thank you very much for sending me the October Issue of Thinklet. I thoroughly enjoyed reading the same. Responses from new research scholars was very thought provoking. It is interesting to see as to how many ideas emerge and how thought process of each person is so different.. I would like to see some similar reactions from those who have completed Ph.D. recently. I wish to congratulate the editors for bringing out THINKLET issue after issue with very interesting articles. I do eagerly keep looking for future issues of the THINKLET.

Soumya Ravikumar

I was deeply saddened and shocked to hear the passing of Ms. Tracy. She was a research scholar in Psychology who I first met at the research methodology classes. She was very bubbly, extremely enthusiastic and a warm person. We instantly clicked, continued to maintain a special bond and always made it a point to catch up during the Research Retreats. I remember even travelling back to our home together one time.

Hearing about her passing definitely upset me and in a way I was grateful to have at least had the opportunity to meet her and get to know her. This unfortunate event just put into perspective, how fleeting life can be and how anyone can leave a lasting impression on you. I will definitely miss her smiling face, everlasting positivity and warm hugs.

My condolences and prayers to her family. May her soul rest in peace. Tracy, you will definitely be missed.

Er.V Jagannatha, RS C

A lot of achievements by JU Community of Research Scholars and many societal convergence and I feel proud to be one of the community.

Team Thinklet

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ARTICLES FOR NEXT ISSUE SHOULD BE SENT BY
20th NOVEMBER 2018 OF NOT MORE THAN **250**
WORDS

PLEASE INCLUDE YOUR NAME, E-MAIL ADDRESS
AND THE KNOWLEDGE DOMAIN OF YOUR INTER-
EST.