



Connecting Thinkers...



Editors' Message



Dear Thinkers,

While talking to experts or faculty members during the course of research, a common thread that emerges is of quality research and the various aspects surrounding it. Though as researchers, we get caught in the more operational aspects of our work, our guides and mentors constantly broaden our perspective and urge us to see more than what meets the eye. This rigorous and continuous search in a specific domain, for a topic or product is what defines us over a period of time. It becomes our identity and other researchers then associate us through our work and publications. As the years go by, this work and research (and the success achieved thereof), consolidates into our lifetime's achievement. What an honour it must feel to be recognised not only as an individual researcher, but as a scholar, as an expert, and above all the lifetime recognition of your career achievements.

With immense pride we note the presence of one such scholar amongst us, Dr. C.G. Krishnadas Nair, the Chacellor of Jain University, has recently been conferred the Lifetime Achievement Award 2017 at the 55th National Metallurgists' Day by the Ministry of Steel, Government of India. The award was conferred for Dr. Nair's pioneering and outstanding contributions through Research and Development in materials and metallurgy of new Alloys for the strategic sectors: design, development and production of high technology systems and products; and as an industry leader and academician.

Thinklet takes this moment to congratulate Dr. Nair on behalf of the Jain University Family of Researchers on this award and would like to convey our gratitude for all his encouragement through the years. With such enlightened mentors and teachers to lead the University, we all can only strive to be motivated and hardworking scholars in our fields and never let the curiosity in us wane. In our last editorial of 2017 we have the honour of saluting a special achievement and this is a wonderful way to end an eventful year and welcome with anticipation, 2018.

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Dr. C.G. Krishnadas Nair receiving the Lifetime Achievement Award 2017 at the 55th National Metallurgists' Day

GUIDE'S COLUMN

Do You Always Get Research Results As Planned?

This is a continuation of the Guide's Column published in August 2017 issue, written by Dr. G. Nagendrappa. Thinklet was supposed to publish the original article in two consecutive issues, but could not do so and we are publishing the second part of the article here.

We apologise to the author and the readers for this oversight, and hope you enjoy reading the article.

The point is that one may find a solution to a scientific problem in a flash and quite accidentally. When a well planned research is expected to yield a certain result, but you end up getting something new that is interesting and important, it is called "serendipitous discovery". The internet defines "serendipity" as "the occurrence and development of events by chance in a happy or beneficial way". The word serendipity is known to have been invented in 1754 by a British nobleman, writer and art historian, Horace Walpole. The word traces its origin to three different etymological routes, namely: (i) Sarandib, (ii) Cherantivu (Tamil: tivu = island belonging to Chera or Sera empire) and (iii) Swarnadweepa, all three referring to Sri Lanka earlier known as Ceylon or Sinhala (abode of lions) or Sinhaldivipa, called Serendip in Persian and used in a Persian fairy-tale, "The Three Princes of Serendip" that inspired Walpole to coin the new word. (There is a lot more to tell about this background, but space does not permit).

Pierre Laszlo, an authority on the history of science, writes, "...serendipitous discoveries are problem-solving at its most uncanny – when the trained scientific mind recognises in a flash an unsought enigma and its handsome, rewarding solution". Nobel Laureate D.H.R. Barton notes, "... the most interesting science is to be found in the unknown world". Sara Snogerup Linse (Chair), Nobel Committee for Chemistry 2017, observes, "The great discoveries are often made by accident, but only by those who are observant and ready to reconsider their views". Such expressions clearly point to the fact that a good number of path-breaking discoveries that open up whole new area of research have been made all through the history of science by lucky accidents. But the key to such discoveries is the ability of the researcher to recognise and rationalise the unusual results through out-of-the-box thinking. On the contrary, if you are a conformist and ignore the abnormal observations, you would miss the lucky opportunity that comes calling to your doorstep. (Discovery is defined as a process or an act of finding something new or something unknown about old).

If you are dreaming to become a Nobel laureate, wish for yourself that your experiment throws up results that are different from what you had planned would occur! I shall illustrate below with examples of just a few, from among thousands, historically important serendipitous discoveries.

1. Synthesis of the purple **dye mauve** in 1856 by William Perkin. He aimed to prepare quinine which is used to treat malaria. It initiated large scale dye industry and mauve caused a minor social revolution.
2. Accidental breaking of a mercury thermometer in the reaction mixture set up for oxidation of naphthalene to phthalic anhydride catalysed the reaction many folds, which paved the way for industrial production of indigo dye. Cheap **indigo** had notable effect on the economic and political history of India at the beginning of the twentieth century.
3. Wilhelm Conrad Röntgen in 1895 while studying cathode rays noticed some fluorescent light emanating from the black paper covered cathode ray tube. On further investigation he was able to identify it as electromagnetic radiation of shorter wavelength than UV and called **X-rays**.
4. Antoine Henri Becquerel in 1896 was working on uranium mineral and found that well wrapped mineral kept in contact with photographic plate had formed an image, indicating that it emitted radiation independent of any external stimulus. Marie Curie gave the name **radioactivity** to the phenomenon.
5. Investigating the alpha particle scattering in 1909, Ernest Rutherford noticed that about 0.01% of the particles rebounded from the target gold foil while the rest passed through it. This unexpected observation led Rutherford to propose the **nuclear model of atom**.
6. **Vulcanisation of rubber** was discovered by Charles Goodyear in early 1840s when he accidentally dropped a mixture of rubber and sulphur on a hot plate. The heated substance had the properties he was looking for, which he improved by further research.
7. Safe detonation of **dynamite** was discovered by Alfred Nobel in 1867 when he observed its explosive component accidentally mixed with diatomaceous earth or kieselguhr. He made huge fortune and used part of it for instituting Nobel Prizes.
8. Think of **Archimedes' principle**! He discovered it long ago when he saw water spilling out of his bath tub when he got into it.

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Climate Change

Climate Change is one major environmental challenge that humanity is facing in this century. The earth's surface temperature has started increasing drastically, and the year 2016 was announced as the warmest since the record keeping began in 1880. The following table lists the global combined land and ocean annually-averaged temperature rank and anomaly for each of the 12 warmest years on record.

| Rank 1 = Warmest Period of Record: 1880–2016 | Year | Anomaly °C | Anomaly °F |
|--|------|---------------|---------------|
| 1 | 2016 | 0.94 | 1.69 |
| 2 | 2015 | 0.90 | 1.62 |
| 3 | 2014 | 0.74 | 1.33 |
| 4 | 2010 | 0.70 | 1.26 |
| 5 | 2013 | 0.67 | 1.21 |
| 6 | 2005 | 0.66 | 1.19 |
| 7 | 2009 | 0.64 | 1.15 |
| 8 | 1998 | 0.63 | 1.13 |
| 9 | 2012 | 0.62 | 1.12 |
| 10 (tie) | 2003 | 0.61 | 1.10 |
| 10 (tie) | 2006 | 0.61 | 1.10 |
| 10 (tie) | 2007 | 0.61 | 1.10 |

According to the Fifth Assessment Report of Intergovernmental Panel on Climate Change (IPCC), there is more than 95 percent probability that human-produced greenhouse gases such as carbon dioxide, methane and nitrous oxide have caused the increase in earth's surface temperatures over the past 50 years. The industrial activities have raised atmospheric carbon dioxide levels from 280 parts per million to 400 parts per million in the last 150 years. All of this evidence points to the increasing influence humans have on the destiny of our planet and also raises questions of whether we are on a sustainable path.

Source: NOAA National Centers for Environmental Information, State of the Climate: Global Climate Report for Annual 2016, published online January 2017, retrieved on November 10, 2017 from <https://www.ncdc.noaa.gov/sotc/global/201613>

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CANCER – A Deadly One

Cancer is one such term that everyone is aware of. It is because we come across very few people who have survived the deadly disease and they too live in fear and agony about its recurrence. I have been doing research on cancer for the past four years and I do hope to come up with an effective treatment. Doctors around the world are making their best efforts to eradicate cancer. The nature of the disease is such that our fight as researchers is to contain it and not cure it, at least in 90% of cases. The research that has been going on for treating cancer is tremendous. Everyday there are new developments that gives cancer patients hope to survive. There are drugs from natural sources such as plants, microorganisms which have remarkable diversity with respect to compounds that are anti-cancer in nature and hence hoping for lesser side effects based on their natural origin.

A combination of treatments such as chemotherapy, radiotherapy along with immunotherapy, have given positive results.

There is immunotherapy where an individual's immune system is boosted to fight cancer. A combination of treatments such as chemotherapy, radiotherapy along with immunotherapy, have given positive results. Also the use of infrared light along with immunotherapy, called photoimmunotherapy, is gaining importance. Nanotherapy is one such treatment that has proven to be effective in penetrating into the nucleus of cancer cells to ensure damage. Scientists are trying to identify novel drug combinations that will overcome the problem of treatment resistance that occurs over time. There are various improvements in the field of diagnosis wherein efforts are more to use a simple blood sample to detect the presence of cancer cells as an alternate to tumor biopsy. Use of a device that can monitor the treatment progress is one of the latest developments in cancer research. These are only a few examples of ongoing cancer research but day and night, scientists around the world are trying to come up with more effective treatment options which will help in increasing the life expectancy of a cancer patient.

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First Year of Ph.D Program: 'Building Blocks' of Formal Research

We know what we are, but know not what we may be – William Shakespeare

This is exactly the transformation one intends to realize through formal research. Milestone of receiving a PhD degree is done as a project but formal research is a lifetime commitment and requires sustained enthusiasm to unravel the unknown and question the known. When we talk of formal research, three important questions arise.

1. What makes a person ready to attempt formal research?
2. How can someone attempt formal research?
3. What makes a person successful in the pursuit of formal research?

While the first and third questions have so many variables and factors that make the comprehension not only complicated but also elaborate, the second question is where we can hope to get simple answers. This article attempts to explore in finding at least some simple answers for the second question. For scope of this article, let us assume the first step of enrolment into a formal Ph.D program is completed.

Sooner than later a time will come when the term 'interdisciplinary' is no longer emphasized and becomes default.

First year in a Ph.D program is crucial is preparing one with the skillset, commitment and motivation required for engaging in a lifetime of formal research. Globally, any formal Ph.D program involves course work and review of literature (ROL) in the first year. As an outcome, the scholar is expected to defend the chosen research question with a finalized topic and synopsis to secure an approval for continuing research on the topic. This is a crucial step in formal research.

While there is access to professional guidance on completing this crucial step, the onus is on the scholar to make every ounce of effort expensed in completing the course work and ROL count. These two activities are interestingly paired together in the first year. While course work is completed in a classroom environment with fellow scholars, the ROL is wholly an individual activity.

In an era of diminished boundaries and globally connected people, it is no wonder that many of the contemporary research questions involve more than one discipline of knowledge domain – often referred to as interdisciplinary research. Sooner than later a time will come when the term 'interdisciplinary' is no longer emphasized and becomes default. This is where the course work learning in a classroom environment with fellow scholars is immensely important in finding simple answer to the question on 'how can someone attempt formal research'.

The DNA is designed during the course work where one strand of the double helix comes from subjects learnt in the course-work and other strand comes from the access to perspectives and views of fellow scholars. Network is as crucial to the formal research as much as it is for success in a corporate career. Double strand DNA of the coursework expresses itself into single strand RNA during the ROL. If DNA and RNA are building blocks for life, Coursework and ROL are the building blocks for formal research Thus, the first year of PhD program forms the basis of protein synthesis – the platform for unique life in the form of a formal research to blossom. How this flower of formal research matures through an earned PhD degree, bears fruits through continuous research and yield seeds for next generation will determine the success in the pursuit of formal research.

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***To do successful research, you don't need to know everything;
You just need to know of one thing that isn't known.***

Arthur Schawlow

Fate of Secondary Data in Government Offices

In this article, I would like to share my own experience during the data collection process. My research work is based on both primary and secondary data collection with respondents and Government offices respectively. Earlier, I had an illusion that, the primary data collection will be cumbersome and tough to manage with the local stakeholders as compared to the secondary data collection through published/cited works and Government offices with its easy access and availability. But this was not true and did not work for me. It went to the extent of putting my interest off the secondary sources, from government offices.

As part of my study, it was essential to get the *taluk* wise data of area and yield of major crops for particular districts. Since, it was not uploaded on the department website; I had to visit the office (not revealing the department name). I walked in and met all the officials with the authorized requisition letter for the necessary database. I had thought that the concerned department will be the greatest data treasury for the researchers, and so much could be revealed to scholars by interpreting the socio-economic data of the society.

But it was all a mirage, as even after many visits, I did not get the sought information. The responses were varied and annoying and the number of visits and time spent kept increasing. The higher authorities defended themselves by blaming other sources and departments for delayed submission and inconsistency/ unreliability of the compiled data. Though they admitted that this inconsistency lead to broader governance problems; they were quick to wash their hands off by citing an alternate data source. The authorities also suggested approaching the department through an RTI. I lost a valuable month in this conundrum. Friends, we need to re-think the existence and utility of our system here. Whether it is research, public use or governance, if the required information cannot be provided in time, and with reliability then what should be our next step as citizens?

Though they admitted that this inconsistency lead to broader governance problems; they were quick to wash their hands off by citing an alternate data source.

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Electrifying Bugs that Generate Electricity through Microbial Nanowires

Electricity is one of the most important scientific inventions that revolutionized the entire world. It has a significant impact on modern day life and one cannot think of a world without it. There are several conventional methods for the generation of electricity from renewable and non-renewable sources. Microbes do generate electricity through microbial nanowires by actively catabolizing its substrates. Electromicrobiology has gained momentum in the last 10 years with advances in microbial fuel cells and the discovery of microbial nanowires. Microbial nanowires have been implicated in extracellular electron transfer in many organisms but studied extensively in *Geobactersulfurreducens* and *Shewanella oneidensis*. Both of these belong to proteobacteria group. However, members of *Geobacter* are identified as gram negative obligative anaerobes while members of *Shewanella* were found to be facultative anaerobes.

The nanowires of *G. sulfurreducens* are type-IV pili. They are mainly identified as metal reducers. The metal like conductivity is because of electron delocalization due to overlapping of pi-pi orbitals of aromatic amino acids. *G. sulfurreducens* pili are the first biological protein filaments found to have this property. *S. oneidensis* nanowires are electron hopping between cytochromes. The biological composition of this electrifying filament is incompletely studied. These biological, long conductive filaments have applications in the development of nanoelectronic devices, sensors, and microbial fuel cells. These fuel cells could be used as power generators in biosensors. Microbial nanowires provide a model for how similar materials might be sustainably produced from inexpensive, renewable feedstock. Several microbial communities are unexplored that might exchange electrons via nanowires. Extremophiles growing in anoxygenic environments gut and rumen microflora could be the potential source to explore for unique microbial nanowires with potential applications.

Biological, long conductive filaments have applications in the development of nanoelectronic devices, sensors, and microbial fuel cells and could be used as power generators in biosensors.

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Award of Ph.D to the following Scholars– April to June 2017

1. C.K Suresh in Management, for the thesis titled A Study on Consumer Behaviour Amongst Youth Shopping in Malls on Branded Clothing, under the guidance of Dr. Vijaya G.S.
2. Santosh Naik in Computer Science and Engineering, for the thesis titled Classification and Decipherment of Document Images: Approaches Based on Document Layout Analysis under the guidance of Dr. Dinesh.
3. Ranjini R, Microbiology, for the thesis titled Mycorestoration and Mycoremediation by *Hypsizygos Ulmarius*, under the guidance of Dr T Padmavathi
4. Parashuram Baraki, Computer Science And Engineering, for the thesis titled Bio-Metric Authentication System : Innovative Approaches Using Dynamic Gestures, under the guidance of Dr. V Ramaswamy
5. Jayasudha Sriram in Physics, for the thesis titled Synthesis and Characterization of Pani based Nanocomposites, under the guidance of Dr. K T Vasudevan
6. Saumya Suresh Vasudev in Psychology, for the thesis titled Effect of Reiki on perceived Stress, Coping and Subjective wellbeing of Software professionals in Bangalore, under the guidance of Dr. Shailaja Shastri
7. Mushimiyimana Isaie in Microbiology, for the thesis titled Studies on the Production of bioethanol using potential isolates from agro wastes under the guidance of Dr T Padmavathi
8. Ramamani B S in Sanskrit, for the thesis titled Mahabharathadalli rajadharma- ondu vishleshanaatmaka adhyayana, under the guidance of Dr. Rajani Jairam
9. Vineetha M S in Biotechnology, for the thesis titled Isolation and purification of herbal bioactive compound as an antidote for snake bite, under the guidance of Dr. Sunil S More
10. Jonalee Das in Management, for the thesis titled Impact of social compliance certification on work place environment of garment manufacturing units in Bengaluru: an assessment of its implications on women sewing operators, under the guidance of Dr. Sandeep Shastri
11. Narendranath Alluri in Biotechnology, for the thesis titled Phytochemical analysis and in vitro bioactivity studies of *drimia nagarjunae* (*Urginea nagarjunae*), under the guidance of Dr. Mala Majumdar
12. Manjunatha R C in Electronics Engineering, for the thesis titled Detection and alleviation of clone attacks in Wireless Sensor Networks, under the guidance of Dr. Rekha K R
13. S Rohit Raj in Management, for the thesis titled A Systematic Study And Analysis Of The Performance Of Selected Indian Equity Mutual Funds And Analysis Of Investor Attitude Towards Equity Mutual Fund Investments Using Left- Right Brain Concept, under the guidance of Dr. D H Rao
14. Anni Arnav in Management, for the thesis titled Personal Effectiveness Competency among Information Technology (I T) Sector Employees, under the guidance of Dr. Venkatesha H
15. Shivaputra in Electronics Engineering, for the thesis titled Design and Development of Efficient Algorithms for Lossless Image Compression under the guidance of Dr. H S Sheshadri and Dr. V Lokesha
16. H R Ranganatha in Electronics and Communication Engineering, for the thesis titled Design and Development of Scalable Routing Protocol in Wireless Mesh Network Considering Different Traffic Loads and Network Scenarios, under the guidance of Dr. T.G. Basavaraj
17. Suhan in Management, for the thesis titled Cause Related Marketing in Creation of Trust through Corporate Social Responsibility - An Empirical Study, under the guidance of Dr. Ananthapadmanabha Achar
18. Vidya Kumari S in Cultural Studies for the thesis titled Kinetics and kinesthetics of Indian Classical Dance with special reference to the desi tradition under the guidance of Dr. Choodamani Nandagopal
19. Prashanth S in Mechanical Engineering for the thesis titled Mechanical and tribological characterization of alloy steel and tungsten carbide checking probe / finger of an indigenously developed six window checking gauge under the guidance of Dr K Gopalkrishna
20. Basavaraj N Itnal in for the thesis titled Optimisation model for sustainable management of Municipal solid waste, under the guidance of Dr S M Prakash
21. Lakshminarayana Subramaniam in Music, for the thesis titled Raga Harmony: Creating Symphonic Orchestral compositions using implied harmony from the raga system under the guidance of Dr. Meera Rajaram Pranesh
22. Girish B V in Chemistry for the thesis titled Development of ultra performance liquid chromatography methods for the pharmaceutical formulations by quality by design principles under the guidance of Dr. N Kathyayini
23. Ushmben Chandrakantbhai Dave in Biotechnology for the thesis titled Studies on the Alanine dehydrogenase of *streptomyces anulatus* for the development of biosensor under the guidance of Dr. Ravi Kumar Kadeppagari
24. Jagadeesh Kumar M in Chemistry, for the thesis titled Studies on tribological properties of vegetable oils, under the guidance of Dr. Krishna Venkatesh and Dr. H Kathyayini

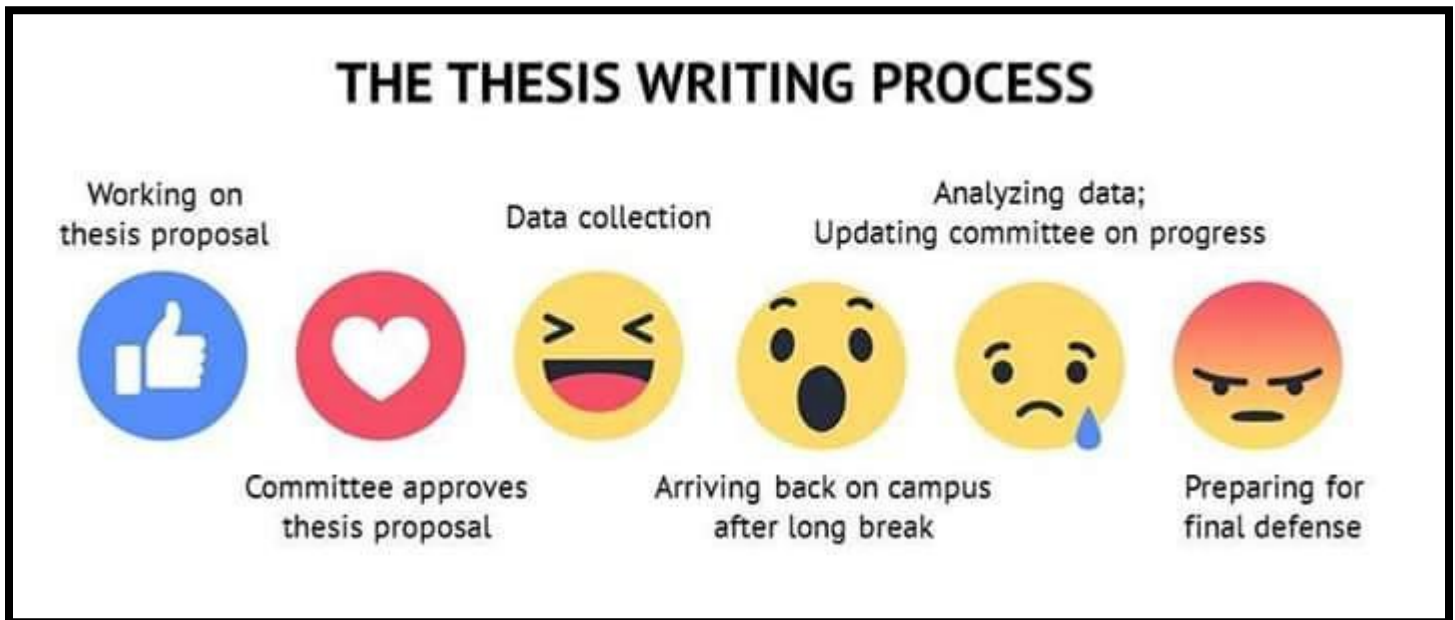
Award of Ph.D to the following Scholars– July to October 2017

1. Anupama S B, English, for the thesis titled Communicative Competence in (Spoken) English - An Employability Factor for Management Aspirants, under the guidance of Dr. S Thrayambak, Ma Ph.D
2. Vijay Goudappa Padaguri in Management, for the thesis titled Bridging Employability Gaps in the Higher Education Space related to Management Sciences, under the guidance of Dr. M.M. Bagali
3. Ngenzi Alexander in Computer Science and Engineering for the thesis titled Efficient Resource Management in Cloud Datacenters for Server Consolidation, under the guidance of Dr. Selvarani R and Dr. Suchithra R
4. Abaho G Gershome in Civil Engineering for the thesis titled Assessment of Corrosion in Steel Reinforced Concrete Structures Using Non-Destructive Testing Techniques (NDT), under the guidance of Dr M R Pranesh
5. Mala Muralidhar in Psychology for the thesis titled Aggressive Behaviour In Elementary School Children: A Study Of The Influence Of Parenting Styles And Supervision, Marital Conflict Tactics, TV Watching And Gaming Habits, under the guidance of Dr Shailaja Shastri
6. Rachappa in Computer Science for the thesis titled A Novel Encryption Technique Using Biometric Approach for Security and Privacy in Pervasive Computing Environments under the guidance of Dr. D. H. Rao
7. Kabandana Innocent in Computer Science and Engineering for the thesis titled Application of System Engineering in Election System under the guidance of Dr. A N Nanda Kumar
8. Madhavi R in Commerce for the thesis titled Relationship between Spirituality, Emotional Intelligence and Productivity among Academicians - An Exploratory Study, under the guidance of Dr Easwaran Iyer and Dr. Shailaja Shastri
9. H R Ranganatha in Electronics and Communication Engineering for the thesis titled Design and Development of Scalable Routing Protocol in Wireless Mesh Network Considering Different Traffic Loads and Network Scenarios under the guidance of Dr. T.G. Basavaraj
10. Suhan in Management for the thesis titled Cause Related Marketing in Creation of Trust through Corporate Social Responsibility - An Empirical Study under the guidance of Dr. Ananthpadmanabha Achar
11. Smitha Sarma Ranganathan in Management for the thesis titled Brand Choice Framework for Drugs: Assessing Prescription Behaviour Among Physicians For Anti - Hypertensive Brands under the guidance of Dr. Vivekanand
12. Uma Hattikal in Management for the thesis titled Employee Productivity and Revenue - Based Model in Human Resource Accounting: An Empirical Study In Service Based Industries under the guidance of Dr. M Prakash
13. Kirankumar Y Bendigeri in Electronics Engineering for the thesis titled Energy efficient node connectivity management and fault tolerance with e-agriculture in wireless sensor networks under the guidance of Dr. Jayashree D Malapur
14. Sugant R in Management for the thesis titled Service Quality and Its Impact on Customer Satisfaction: With Reference to Digital Learning Solutions in Private Schools in Karnataka under the guidance of Dr. Sandhya Anvekar
15. K Aparna in Mechanical Engineering for the thesis titled Heat Transfer in Porous Media of Trapezoidal Section under the guidance of Dr. K N Seetharamu
16. Sharadha S in Management, for the thesis titled A Critical Analysis of Protégé's View on Efficacy of Mentoring Programs: A Study on IT Employees at Bangalore under the guidance of Dr. M.M. Bagali
17. Jagadeesh C B in Civil Engineering, for the thesis titled Urban Flooding: Problem and Feasible Solution For Flooding at Gali Anjaneya Temple Bangalore City under the guidance of Dr. Nagaraj Sitaram
18. Preveena N in Chemistry, for the thesis titled Synthesis and Biological Applications of Novel Quinoline Derivatives, under the guidance of Dr. G Nagendrappa
19. Pramod K B in Electronics Engineering, for the thesis titled Hybrid Mic Design Optimization Techniques of Noise Figure, Gain and VSWR in Wideband Filtered Low Noise Amplifier for L and S Band Applications, under the guidance of Dr H V Kumaraswamy
20. Basavaraj V Hiremath in Electronics Engineering, for the thesis titled Development of an Efficient Algorithm for the Detection of Breast Cancer Using Image Processing Techniques, under the guidance of Dr S C Prasanna Kumar
21. Divyajyothi M G in Computer Science, for the thesis titled Optimized Authentication Protocols for Hand Held and Identification Devices in Pervasive Computing Environments, , under the guidance of Dr D H Rao
22. S K Rajendra in Mechanical Engineering, for the thesis titled Studies on Aluminium Based Metal Matrix Composites Using Beryl as Reinforcing Particle, under the guidance of Dr. C.M. Ramesha
23. Umesh Chandra in Management, for the thesis titled Product Positioning Strategies of Indian Pharmaceutical Companies in India: A Case Study of Bangalore, under the guidance of Dr. Sridharan S.

Response to Thinklet Issues

Kiran P., Research Scholar in Management, Jain University

My heartfelt thanks for another edition of Thinklet. It always brings a relief when you read about the research experiences of fellow scholars. Feels good to know that you are not alone and the journey is worthwhile. Variety is what makes Thinklet interesting. From forensic sciences, the safety tips for the LPG cylinder and snippets from the world of engineering and social sciences this issue (November 2017) was indeed very informative. Was good to read about the Happiness Index, a long forgotten but vital dimension for a healthy living. Also glad to share and is a sheer coincidence that this month I am fortunate to be visiting Bhutan, a country that pioneered the concept of the National Happiness Index, earning the epithet World's Happiest Nation. On a lighter note seems like the royal family itself came to India to beckon travellers like me to visit their nation!!!. Will share the experiences of my travel with Thinklet for the coming issues.



Team Thinklet

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ARTICLES FOR NEXT ISSUE SHOULD BE SENT BY
December 20, 2017 WITH **NOT MORE THAN**
250 WORDS
PLEASE INCLUDE YOUR NAME, E-MAIL ADDRESS AND THE KNOWLEDGE DOMAIN OF YOUR INTEREST