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Balusumudi, Bhimavaram-534202

**Summary Report of Number of workshops/seminars/ Research
Methodology/ Intellectual Property Rights (IPR) and Entrepreneurship**

A.Y: 2017-18

Sl. No.	Name of the workshops/seminars/ Research Methodology/ Intellectual Property Rights (IPR) and Entrepreneurship Organized	Date	Number of Participants
1	One day Workshop on Research Paper Writing Using LaTeX tool	8-Feb-17	44
2	A One day Webinar on "Ethical Leadership & Emotional Intelligence	8-Aug-17	42
3	A workshop on drafting using Tekla by V. Bhaskara Rao, Designlabs, Autodesk Authorised Academic Partner, Hyderabad	27-11-2017	40
4	One day National level seminar on "New Frontier-Entrepreneur Development programme" by T Viswanadham Managing Director, Khaspa Enterprises Pvt Ltd, Hyderabad	28-11-2017	46
5	One day workshop on intellectual property rights	6-Dec-17	52

K. S. S.

H. Anjan Kumar

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(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

(Accredited with B⁺⁺ Grade by NAAC)

Ph: 08816-221238 Email: [dnrcet@gmail.com](mailto:dnrctet@gmail.com) website: <https://dnrcet.org>

REPORT ABOUT THE PROGRAMME

Dt: 09-02-2017

Title Of The Programme: One day Workshop on Research Paper Writing Using LaTeX tool

Inauguration Date & Venue: 8th Feb 2017 & DNR CET Seminar Hall

Organized By: Department Of Mechanical Engineering, DNR CET

Resource Person: Dr. Ramalingaswamy Cherukuru, Asst. Prof, NIT Warangal, Telangana.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. U. Ranga Raju

Prinicpal, D.N.R College Of Engineering & Technology


Number of Faculty Attended: 44

Concept:

Many researchers are using Microsoft Word for writing research papers. However, Microsoft Word has several problems or limitations. In this program, discussed about the use of LaTeX as an alternative to Microsoft Word for writing research papers.

LaTeX is a document preparation system, proposed in the 1980s. It is used to create documents such as research papers, books, or even slides for presentations. The key difference between LaTeX and software like Microsoft Word is that Microsoft Word let you directly edit your document and immediately see the result, while using LaTeX is a bit like programming. To write a research paper using LaTeX, you have to write a text file with the .tex extension using a formatting language to roughly indicate how your paper should look like. Then, you can run the LaTeX engine to generate a PDF file of your research paper.


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<https://dncet.org>

One day Workshop on Research Paper Writing Using LaTeX tool 8th Feb 2017

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 08-02-2017	
			FN	AN
1	J. keerthana	CE		
2	M. Lakshmi Kumari	CE		
3	Kopalli Venkannaraidu	ECE		
4	Pecheti Nagaraju	EEE		
5	P. Anjaneyulu	CE		
6	DR. V. Ranga Raju	CE		
7	Mesela Pandu Ranga	ME.		
8	G. Saibaba	EEC		
9	Kodelli posimani	ECE		
10	DR. A. Ranganath	CE		
11	Giduturi Vamsi kishna	ME		
12	MR. D.D.D. Sunibabu	CSE		
13	Jawaharbabu Nethala	BST		
14	Manne Srinu	EEE		
15	Dr. Ippi Kittuiah	MIC.		
16	DR. P. V. S. Narayana	BST		
17	I. Geetha	ECE		
18	DR. Dolabhanu prakash	ME.		


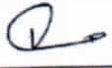


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19	N. Maryleena	ECE	N.M	N.M
20	V. praveen	BSH	P	P
21	A.S.N.V. Blab Quest	CSE	B	B
22	ABDul. AHAD	CSE	A	A
23	E. Rama Lalchemi	CSE	E.Ram	E.Ram
24	Dr. A. Purma Pamesh	ECE	AP	AP
25	Dr. G. G. Kethan	BSSH	G.G.K	G.G.K
26	veeravalli Balaji	ECE	V.B	V.B
27	L. Bujji Babu	CSE	L.B	L.B
28	A. Vanmi Venishana	BSSH	Vanmi	Vanmi
29	V. Sai Kumpa	CE	Kumpa	Kumpa
30	Y. Srinivas	ECE	Y.S	Y.S
31	K. Suryasatish Kumar	ECE	S.K	S.K
32	Dr. B. Venkata Subbar Kumara Vamori	CSE	B	B
33	moshe zadela	BSSH	M.Z	M.Z
34	M. Thambibabu	ME	M.T	M.T
35	G. kotevarao	ECE	G.K	G.K
36	Kaninku Surya Ram Prasad	CSE	K.R.P	K.R.P
37	B. Vamsidhar.	BSSH	B.V	B.V
38	G. suribabu	ECE	G.S	G.S
39	V. Balaji	ECE	V.B	V.B
40	Surisati Patishu	EEE	Suris	Suri
41	M.S.V.V. Pamesh	CSE	M.S.V.V.P	M.S.V.V.P

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42	NSVL Soudarya	ECE	Soudarya	Soudarya
43	Dr. R. Vanithamani	EEG		
44	Dr. D. V. Raju	BS&H		


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Dr. Ramalingaswamy Cheruku

Assistant Professor, NIT Warangal, Telangana

Teaching is a very noble profession that shapes the character, caliber, and future of an individual. If the people remember me as a good teacher, that will be the biggest honour for me.

A. P. J. Abdul Kalam

Education

- 2000–2001 **SSC, Z. P. H. S**, Chandur, Nalgonda, Telangana, 80.00%.
2001–2003 **Intermediate, Sri Aurobindo Jr College**, Hyderabad, 85.50%.
2004–2008 **B.Tech. (CSE), Jawaharlal Nehru Technological University**, Kakinada campus, 65.56%.
2009–2011 **M.Tech. (Advanced Networks), IIIT**, Gwalior, 7.46/10 CGPA.
2015–2018 **Ph.D. (CSE), National Institute of Technology (NIT)**, Goa, 9.25/10 CGPA.

Doctoral thesis

- Title** *Design and Development of Efficient Soft Computing Algorithms for Identification of Type-2 Diabetes Mellitus*
Supervisor Dr. Damodar Reddy Edla, Assistant Prof., Department of CSE, NIT Goa, India
Status Thesis defended in April 2018

Experience (Teaching: 30 yrs, Industry: 2 yrs)

- Jan,2020 **Assistant Professor, NIT Warangal**, Warangal, Telangana, India.
–till-now
Aug,2019 **Assistant Professor, IIIT Naya Raipur**, Naya Raipur, C.G., India.
–Jan, 2020
2017– **Assistant Professor, Mahindra Ecole Centrale College of Engineering**, Hyderabad.
Aug,2019
2013–2015 **Assistant Professor, CVR College of Engineering**, Hyderabad.

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2011-2013 ASE, Tata Consultancy Services, Hyderabad.
During my tenure in TCS I worked as database developer.
Achievements:
o I received best team member award for the year 2013;

Funded Projects (Total Cost: 70 Lakhs)

Co-PI Project entitled "Smart Agriculture for Tribes using Artificial Intelligence and Big Data" funded by Ministry of Electronics and IT (Miety) worth of 70 Lakhs

Journal Publications (Accepted -20, Communicated-1)

- Published **Cheruku Ramalingaswamy**, Damodar Reddy Edla, Venkatanareshbabu Kuppili, Dharavath Ramesh, "RST-BatMiner: A Fuzzy Rule Miner Integrating Rough Set Feature Selection and Bat Optimization for Detection of Diabetes Disease", Applied Soft Computing Journal. DOI: 10.1016/j.asoc.2017.06.032 (Elsevier, IF: 3.909, SCI Indexed)
- Published Damodar Reddy Edla, Amrutha Lipare, **Cheruku Ramalingaswamy**, Venkatanareshbabu Kuppili, "An Efficient Load Balancing of Gateways using Improved Shuffled Frog Leaping Algorithm and Novel Fitness Function for WSNs", IEEE Sensors Journal, 17(20), 6724 - 6733, 2017. (IEEE, IF: 2.617, SCI Indexed)
- Published **Cheruku Ramalingaswamy**, Damodar Reddy Edla, and Venkatanareshbabu Kuppili. "SM-RuleMiner: Spider monkey based rule miner using novel fitness function for diabetes classification." Computers in Biology and Medicine, 81, 79-92, 2017. (Elsevier, IF: 2.115, SCI Indexed)
- Accepted Damodar Reddy Edla, Mahesh Chowdary Kongara, **Cheruku Ramalingaswamy** "SCE-PSO Based Clustering Approach for Gateways Load Balancing in Wireless Sensor Networks", Wireless Networks, (Springer, SCI, I.F. 1.981)
- Accepted Diwakar Tripathi, Damodar Reddy Edla, **Cheruku Ramalingaswamy**, "Hybrid Credit Scoring Model Using Neighborhood Rough Set and Multi-layer Ensemble Classification" Journal of Intelligent and Fuzzy Systems, 2017, (IOS Press, SCI Indexed, I.F. 1.426)
- Published **Cheruku Ramalingaswamy**, Damodar Reddy Edla, and Venkatanareshbabu Kuppili. "Diabetes Classification using Radial Basis Function Network by Combining Cluster Validity Index and BAT Optimization with Novel Fitness Function." International Journal of Computational Intelligence Systems, 10(1), 247-265, 2017. (Taylor & Francis IF: 2.00, SCI Indexed)
- Published Damodar Reddy Edla, Amrutha Lipare, **Cheruku Ramalingaswamy**, "Shuffled Complex Evolution Approach for Load Balancing of Gateways in Wireless Sensor Networks", Wireless Personal Communications, 2017. (Springer, IF: 1.200, SCI Indexed)
- Accepted Damodar Reddy Edla, Mahesh Chowdary Kongara, **Cheruku Ramalingaswamy**, "A PSO-based Routing using Novel Fitness Function for Improving Gateways Lifetime in WSNs", Wireless Personal Communications, (Springer, SCI, I.F. 1.200)

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- Accepted Ashan Hussain, Keshavamurthy, **Cheruku Ramalingaswamy**, "Dynamic Multi-Layer Ensemble Classification Framework for Social Venues using Binary Particle Swarm Optimization", Wireless Personal Communications, (Springer, SCI Indexed, I.F. 1.200)
- Accepted Damodar Reddy Edla, Diwakar Tripathi and **Cheruku Ramalingaswamy**, Venkatanaresbhabu Kuppili, " An Efficient Ensemble Framework with BPSOGA-based Feature Selection: A Casestudy on Credit Scoring Datasets ", Arabian Journal of Science and Engineering. (Springer, IF: 1.092, SCI Indexed)
- Accepted **Cheruku Ramalingaswamy**, Damodar Reddy Edla, and Venkatanaresbhabu Kuppili. "An Optimized and Efficient Radial Basis Neural Network using Cluster Validity Index for Diabetes Classification", The International Arab Journal of Information Technology, (IAJIT, IF: 0.724, SCI Indexed)
- Published **Cheruku Ramalingaswamy**, Damodar Reddy Edla, Venkatanaresbhabu Kuppili, Dharavath Ramesh and Nareshkumar Reddy Beechu "Automatic Disease Diagnosis using Optimized Weightless Neural Networks for Low-Power Wearable Devices." Healthcare Technology Letters, 4(4), 122-128, (2017) (IET, ESCI & Scopus Indexed)
- Published Damodar Reddy Edla and **Cheruku Ramalingaswamy**, "Diabetes-Finder: A Bat Optimized Classification System for Type-2 Diabetes" Procedia Computer Science, 115, 235-242, 2017, (Elsevier, Scopus Indexed)
- Accepted **Ramalingaswamy Cheruku** and Damodar Reddy Edla, "Selector: PSO as Model Selector for Dual Stage Diabetes Network" in Journal of Intelligent Systems. (De-Gruter, ESCI, Scopus & DBLP Indexed)
- Accepted Annushree Bablani, Damodar Reddy Edla, Diwakar T., **Cheruku Ramalingaswamy**, "Survey on Brain Computer Interface: An Emerging Computational Intelligence Paradigm", ACM Computing Surveys, I.F. 5.55
- Accepted Diwakar Tripathi, Damodar Reddy Edla, **Cheruku Ramalingaswamy**, VNB "A Novel Hybrid Credit Scoring Model based on Ensemble Feature Selection and Multi-layer Ensemble Classification" Journal of Computational Intelligence (Wiley, SCI Indexed, I.F. 1.352)
- Published B. Naresh kumar Reddy, **Cheruku Ramalingaswamy**, R. Nagulapalli, and Dharavath Ramesh, "A Novel 8T SRAM with Improved Cell Density" Journal of Analog Integrated Circuits and Signal Processing (Springer, SCI Indexed, I.F. 0.8)
- Accepted Satyanarayana Nimmala, Ramadevi Y., Sahith R., **Cheruku Ramalingaswamy**, "High Blood Pressure Prediction based on AAA++ using Machine Learning " Journal of Cogent Engineering (T&F, ESCI Indexed and Scopus Indexed)
- Accepted Satyanarayana Nimmala, Ramadevi Y., **Cheruku Ramalingaswamy**, "A Novel Approach to Predict High Blood Pressure using ABF Function" International Journal of Modern Education and Computer Science (Scopus Indexed)

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- Accepted Shubam Dhodla, Damodar Reddy Edla, Anushree Bublani, **Cheruku Ramalingaswamy**, VNB "Lie Detection using Extreme Learning Machine: A Concealed Information Test based on Short-Time Fourier Transform and Binary Bat Optimization using a Novel Fitness Function" Journal of Computational Intelligence (Wiley, SCI Indexed, I.F. 1.352)
- Communicated Damodar Reddy Edla, **Cheruku Ramalingaswamy**, "Disease-Net: A Bi-Level Ensemble Neural Network for Automatic Disease Diagnosis", Journal of Cluster Computing.

Conference Publications (Accepted -12)

- Published Cheruku Ramalingaswamy, Damodar Reddy Edla, Venkatanaresbhabu Kuppli and Ramesh Dharavath. "PSO-RBFNN: A PSO-based Clustering Approach for RBFNN Design to Classify Disease Data", in 26th International Conference on Artificial Neural Networks (ICANN), Italy, LNCS 10614, pp. 411-419, 2017,
- Accepted Naresh Kumar reddy, Srangam, Veeraiha, Ramalingaswamy Cheruku, "SRAM cell with better read and write stability with minimum area", 31st TENCON, 2019, India.
- Accepted Cheruku Ramalingaswamy et al. "A Bi-Level Cascaded Ensemble Framework for Effective Disease Diagnosis", in 31st TENCON, 2019, India.
- Accepted Cheruku Ramalingaswamy, Damodar Reddy Edla, and Venkatanaresbhabu Kuppli. "Intelli-DRM: An Intelligent Computational Model for Forecasting Severity of Diabetes Mellitus" in 8th International Conference on Computing Communication and Networking Technologies (ICCCNT), IEEE, IIT Delhi, 2017
- Accepted Damodar Reddy Edla , Vilas Deshmukh , Ramalingaswamy Cheruku Saheeka SD and Brijesh Yadav, "A Novel Green Stable Evolutionary Routing Algorithm for Energy Efficiency in WSNs" in 7th International Conference on Advances in Computing, Communications and Informatics (ICACCI), IEEE, MIT Manipal, India, 2017
- Accepted Ramalingaswamy Cheruku, Damodar Reddy Edla and Venkatanaresbhabu Kuppli, "Bin-BB: Binning with Branch & Bound feature selection for improved diabetes classification" in 14th INDICON, IEEE, IIT Roorkee, India, 2017
- Accepted Satyanarayana Nimmala, Ramadevi Y., Srinivas Naik, Ramalingaswamy Cheruku "Predicting High Blood Pressure using Decision Tree Based Algorithm" in 1st International Conference Latest Advances in Machine learning and DATA Science, Springer, NIT Goa, India, 2017
- Accepted G Kiran Kumar, Ilaiah Kavati, Koppula Srinivas Rao and Ramalingaswamy Cheruku "Spatial Co-location Pattern Mining using Delaunay Triangulation" in 1st International Conference Latest Advances in Machine learning and DATA Science, Springer, NIT Goa, India, 2017
- Accepted Ramalingaswamy Cheruku, Diwakar Tripathi, Narasimha Reddy Y and Sathya Prakash Racharla "Review on RBFNN Design Approaches: A Case Study on Diabetes Data" in 1st International Conference Latest Advances in Machine learning and DATA Science, Springer, NIT Goa, India, 2017

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- Accepted Diwakar Tripathi, Ramalingaswamy Cheruku and Annushree Bablani "Relative Performance Analysis of Ensemble Frameworks and Dimensionality Reduction Approaches for Credit Scoring Datasets" in 1st International Conference Latest Advances in Machine learning and DATA Science, Springer, NIT Goa, India, 2017
- Accepted Damodar Reddy Edla, Diwakar Tripathi, Venkata Naresh Babu and Ramalingaswamy Cheruku "Survey on Clustering Techniques" in ICICCT-2018, IEEE, India, 2018
- Accepted Amrutha Lipare, Damodar Reddy Edla, Ramalingaswamy Cheruku, Diwakar Tripathi "GWO-GA based Load Balanced and Energy Efficient Clustering Approach for WSN" in SmartCom-2019, IEEE, Bangkok, 2019

Book Publications

- Accepted Ramalingaswamy, Damodar Reddy Edla, Venkatanaresh Kuppli "Soft Computing Techniques for Type-2 Diabetes Data Classification", ISBN-No: 978-0367236540 Taylor & Francis and CRC Press, 2020

Book-Chapter Publications

- Accepted Cheruku Ramalingaswamy, Damodar Reddy Edla, and Venkatanareshbabu Kuppli. "Machine Learning Approaches for Diabetes Classification: A survey", McGrawhill, 2016
- Accepted Damodar Reddy Edla, Padunaik, Tejaswini, Hareesh, Cheruku Ramalingaswamy "Credit Scoring using Birds Swarm Opimization", Taylor & Francis and CRC Press, 2017

Overall Publication Statistics

Publication Type	Accepted		Communicated	Total
	SCI	Non-SCI		
Journals	15	5	1	21
Conferences		12	0	12
Books		1	0	1
Book-chapters		2	0	2
	Total			36

Achievements

- o Secured 1448 rank in EAMCET-2004.
- o Secured 7649 AIR in AIEEE-2004.
- o Received Best Team Member award from TCS in 2013.
- o Secured 4460, 3852 AIR in GATE-2009 and GATE-2015.
- o Cleared UGC-JRF in June 2015, Lecturship in Dec 2015.

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- Machine Learning
- Data Mining
- Wireless Sensor Networks
- Artificial Neural Networks
- Optimization
- Bigdata

References

- Dr. Damodar Reddy, Assistant Professor and Head, Department of CSE, NIT Goa, Ponda-403401, Goa, India dr.reddy@nitgoa.ac.in, 9765127163
- Dr. Venkatanareshbabu Kuppili, Assistant Professor, Department of CSE, NIT Goa, Ponda-403401, Goa, India venkatanaresh@nitgoa.ac.in, 9765127163
- Dr. KK Pattanaik, Associate Professor, Department of CSE, IIITM, Gwalior-474015, MP, India kkpatnaik@iiitm.ac.in, 94065 80064
- Dr. Jaidar CD, Assistant Professor, Department of IT, National Institute of Technology, Suratkal, Karnataka, India jaidharcd@nitk.edu.in, +91-824-2473553
- Dr. Ramesh Dharavath, Assistant Professor, Department of CSE, Indian Institute of Technology, Dhanbad, Jharkand, India ramesh.d.in@ieee.org

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Research Paper Writing Using LaTeX tool

You should start writing your paper *while* you are working on your experiment. Prof. George Whitesides says: "A paper is not just an archival device for storing a completed research program; it is also a structure for planning your research in progress. If you clearly understand the purpose and form of a paper, it can be immensely useful to you in organizing and conducting your research. A good outline for the paper is also a good plan for the research program. You should write and rewrite these plans/outlines throughout the course of the research. At the beginning, you will have mostly plan; at the end, mostly outline. The continuous effort to understand, analyze, summarize, and reformulate hypotheses on paper will be immensely more efficient for you than a process in which you collect data and start to organize them only when their collection is 'complete'." Here are some concrete steps to get started.

1. Read George Whitesides' "How to Write a Paper".
2. Read through *at least* one full paper in your target journal, to get a sense of the content and writing style.
3. To clarify in your own head the purpose of your paper, start by drafting your abstract.
4. Before you tackle the body of the paper, sketch block outlines of the figures. Decide what images and plots you will put in the paper, and how the panels will be arranged.
5. Outline at the paragraph level before you write. Look at how many paragraphs there will be in the style of paper you are trying to write. For example, for a standard 4-page scientific letter, aim for 13 paragraphs (generally, you can estimate about 200 words per paragraph). Figure out how to tell your entire story (not numbers, just story!) in 13 stand-alone sentences.
6. Make each of those sentences into the first sentence of a paragraph, and fill into each paragraph only details that are relevant to that first sentence. If you find yourself writing details about the figures, cut and paste them into the captions.
7. If you can include the minimal identifying information in parentheses to trigger your memory later, e.g. "(WhitesidesAdvMat)", so all of the information is compact.
8. Dig into the existing literature to write the intro paragraphs. A thorough literature search may take a full focused week for each intro paragraph. Use an organized, three-pass approach to keep a good balance between depth and breadth of your search.
9. Rewrite your abstract, taking into account what you have learned from the process of writing the paper. As you fine-tune your abstract, refer again to Nature's instructions for writing an abstract and for clear communication more generally.

Your paper should be fractal:

Somebody with one minute to look at it should be able to get the main idea just from reading the abstract. Somebody with 5 minutes should be able to look at the figures and get more out of it. Somebody with 10 minutes should be able to get the story from the introduction, first sentence of each paragraph, and conclusion.

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LaTeX – A document preparation system

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents. LaTeX is available as free software.

You don't have to pay for using LaTeX, i.e., there are no license fees, etc. But you are, of course, invited to support the maintenance and development efforts through a donation to the TeX Users Group (choose LaTeX Project contribution) if you are satisfied with LaTeX.

You can also sponsor the work of LaTeX team members through the GitHub sponsor program at the moment for Frank, David and Joseph. Your contribution will be matched by GitHub in the first year and goes 100% to the developers.

The volunteer efforts that provide you with LaTeX need financial support, so thanks for any contribution you are willing to make.

Maintain your outline:

It's important not to lose sight of your outline, as you fill in the details of your paper. This L^AT_EX template file allows you to title each paragraph using the `\ptitle{}` command. You should keep these titles in place throughout the entire paper-writing process; they will serve as a constant reminder to keep each paragraph focused on a single point. You should be able to skim through these bold paragraph titles, without reading any of the intervening sentences, and still understand the basic logical flow of the paper. At the final step before submission, comment out the line `ptitletrue` in the header, to hide the paragraph titles. But do not delete the paragraph titles, because they will remain useful to you in the inevitable paper revision process down the road.

Formatting checklist:

Whether you are using a compiler on your computer or online, please use the latest version of REVTeX, and check your formatting carefully.

TABLE I. Formatting mathematical symbols.

Incorrect	Correct
$\cos\theta$	$\cos \theta$
T_{sample}	T_{sample}
$V_{rms}, V (rms)$	V_{rms}
E_x, x direction	E_x, x direction
B_{app}	\mathcal{B}_{app}
Sb_2Te_3, Sb_2Te_3	Sb_2Te_3
Sb_{2-x}	$Sb_{2-x}V_x$
V_xTe	Te_3
	dI/dV

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3	
dI/dV	
$B = 5T, B=5T$	$B = 5 T$
x direction, X	x direction
direction	1 st , 2 nd
1 st , 1 st , 2 nd , 2 nd	

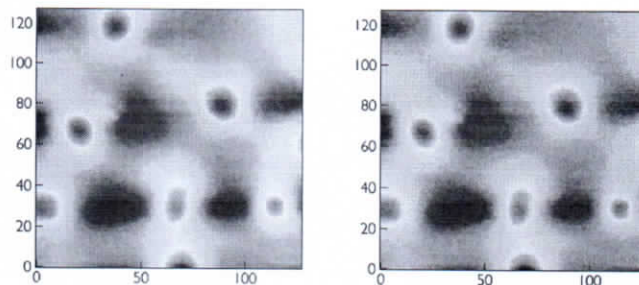
TABLE II. Spacing.

	LATEX	Output
Incorrect	e.g. incorrect	e.g. incorrect
Incorrect	Fig. 2	Fig. 2
Correct	e.g. \ correct	e.g. correct
Correct	Fig.\ 2	Fig. 2
Correct	Fig.\~2	Fig. 2

Use vector format figures:

Figures should typically be made in Python, Adobe Illustrator, or other program that allows vector format export, so that all fonts, arrows, etc. will scale cleanly when zoomed. Most journals prefer to stay away from Microsoft Powerpoint (although it can be exported to eps or pdf) because the fonts are often not transcribed correctly in publication format. A bigger problem with Microsoft is that it does not faithfully reproduce the pixelation of data images. Microscope images are acquired with a specific pixel resolution, and that pixelation should be honestly communicated to the reader without interpolation.

Fig. 1 illustrates this point.



Comparison between blurry pixels (dishonest interpolation occurs when the image is processed in Microsoft Powerpoint) vs. clean pixels (honest representation is preserved when the image is processed in Python and Adobe Illustrator). MFM images of vortices in $NdFeAsO_{1-x}Fx$.

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Vector Graphics

Mendeley also provides an export function to automatically create your bib file. Here are some tips to use Mendeley most effectively.

1. **Import paper:** In the upper left corner of Mendeley Desktop, click the drop-down menu for “Add” and select the bottom option “Add Entry Manually”. In the dialog box that pops up, scroll down until you find the DOI field. Paste the DOI into the field, and click the little magnifying glass icon to the right of the field. This will auto-populate all of the relevant paper information such as author names, title, etc., without risk of typos due to manual copying.

Note 1: Mendeley also allows you to import directly from a PDF file, and it tries to pull all of the meta-data from the PDF, but the process is imperfect. So it's safest to use the DOI for an error-free import.

Note 2: Even if you use the DOI, some journal titles will not import correctly with special characters, so you may need to manually correct.

2. **Add tags:** It's useful to add tags to help sort your imported papers. For example, if you are going to be writing a manuscript in 2019 on superconductivity, you might add the tag “sc19” to all the relevant papers that you will be citing in your manuscript.
3. **Export bib file:** Select all of the references that you want to include, and go to File Export. Name your file, and it will add a citation key to each paper (e.g. Whitesides2004) and automatically export to a bib file.
4. **Resolve redundant citation keys:** At this point, you may have several references with the same citation key, e.g. Huang2016a and Huang2016b. For your future convenience, you should manually change the redundant citation keys to be more informative, e.g. HuangNanoLett2016 and HuangPRB2016. Now re-export the bib file. Open the bib file in your tex file editor. By default, Mendeley exports all fields, including long ones like the abstract. To reduce clutter in your bib file, and make it easier to debug any errors, it's a good idea to remove the abstracts and other unnecessary fields. For example, in WinEdt go to Search Replace, check the regular expressions box, search for “<abstract* * ,>,” and replace it with nothing.

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Ph: 08816-221238 Email: [dnrcet@gmail.com](mailto:dnrctet@gmail.com) website: <https://dnrcet.org>

REPORT ABOUT THE PROGRAMME

Dt: 09-08-2017

Title Of The Programme: A One day Webinar on “Ethical Leadership & Emotional Intelligence”

Inauguration Date & Venue: 8th Aug 2017 & DNR CET Seminar Hall

Organized By: Department Of Computer Science Engineering, DNR CET

Resource Person: Dr. A. S. Narayana, Professor in MBA, BVCITS, Amalapuram.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. U. Ranga Raju

Principial, D.N.R College of Engineering & Technology

Number of Faculty Attended: 42

Concept:

Many of us will have experienced ethical leadership - alternatively, some of us will have experienced a lack of ethical leadership in our professional lives. Having people in place at the very top will determine what kind of leadership style is in place. Ethical leaders give way to employees by inspiring, developing and creating a culture of trust and respect.

Emotional intelligence is defined as the ability to understand and manage your own emotions, as well as recognize and influence the emotions of those around you. The term was first coined in 1990 by researchers John Mayer and Peter Salovey, but was later popularized by psychologist Daniel Goleman. Emotional intelligence is typically broken down into four core competencies:

1. Self-awareness
2. Self-management
3. Social awareness
4. Relationship management


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Ph: 08816-221238 Email: dncet@gmail.com website:

<https://dncet.org>

A One day Webinar on “Ethical Leadership & Emotional Intelligence 8th Aug 2017

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 08-08-2017	
			FN	AN
1	J. Keerthana	ECE		
2	ABDUL AHAD	CSB		
3	Pecheti Nagaraju	EEE		
4	M. Lakshmi Kumar	CE		
5	Y. Srinivasu	ECE		
6	N. Manjuna	ECE		
7	P. Anjanayulu	CE		
8	MORTHALAKSHMI	ME		
9	T.S. Chakravarthi	BS&H		
10	G. Vamsi Krishna	ME		
11	G. Saibaba	EEE		
12	P. Srinivas	EEE		
13	Dr. Ippili Harich	ME		
14	E. Ramalakshmi	CSE		
15	D.D.P. Vanna	BS&H		
16	G. Suresh Babu	ECE		
17	Dr. H. Vasantha	BS&H		
18	Dr. Dolla Bharuprakash	ME		
19	T. Geetha	ECE		

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20	V. Balaji	ECE	Bala	Bala
21	P. Nagaraju	EEE	P	P
22	G. Kotewarao	ECE	Go	Go
23	Dr. D.V. Raju	BS&H	R	R
24	K. Surya Satish Kumar	ECE	So	So
25	M. Brinu	EGE	B	B
26	Dr. R. Vanithamani	EEE	V	V
27	Dr. A. Purna Prasad	ECE	AP	AP
28	Karinki-Surya Pamprasad	CSE	Pam	Pam
29	B. Vamsidhar	BS&H	V	V
30	M. Pandu Ranga Rao	ME	P	P
31	Moslu goddehe	BS&H	ms	ms
32	Dr. B. V. S. Varma	CSE	Varma	Varma
33	L. Bujji Babu	CSE	Bo	Bo
34	Jawaharbabu Nethaji	Bstt	J	J
35	S. Swathi	ECE	S	S
36	Dr. R. Y. V. S. Nanyana	Bstt	N	N
37	V. Praveen	Bstt	P	P
38	V. Balaji	ECE	Balaji	Balaji
39	M. Thambi babu	ME	Thambi	Thambi
40	NSVL Sowjanya	ECE	So	So
41	D.D.P. Varma	BS & H	D.D.P.	D.D.P.
42	K. S. Satish Kumar	ECE	S	S

M. Anjan Kumar
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Dr. ACHANTA SATYANARAYANA

M.Com.,MBA.,M.Phil.,Ph.D.

Professor Satyanarayana Achanta has been with us for the last 10 years as a Professor and Head of Department for MBA, who also holds a PhD in Financial Management. He is responsible for the IQAC Committee and College Academic Committee.

He has been instrumental in preparing and handling various courses for the department, such as:

1. Business Research Methodology
2. Risk Management
3. Advanced Management Accounting
4. Business Environment

He has numerous International Journals and projects to his credit, which include:

1. Outsourcing Financial Analysis of Human Resources management based on Decision Making Standards
2. Dynamic Capabilities for Strategy of Human resource management for Management System
3. Financial Performance of State Level Public Enterprises in Andhra Pradesh.
4. Analysing the Supply Chain Model of Small and Medium Enterprises Financing
5. A Study on Comparative Analysis of Assets and Liabilities at Lakkavaram, Andhra Pradesh.

Apart from this, he has been instrumental in guiding MBA students with their research projects in the area of Finance.

H. Achanta

PROF. DR.
D.N.R. College of Engg. & Tech.
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He has completed 12 weeks NPTEL Online Courses on:

1. Financial Statement Analysis & Reporting
2. Working Capital Management
3. Developing Personality & Soft Skills

He has been an active attendee and organiser of multiple Seminars and workshops, such as:

1. Workshop on 'Campus to Corporate' at Swarnandhra Group of Colleges
2. Workshop on 'Demonetization and Digital Economics' at SKBR College, Amalapuram
3. Workshop on 'Research Methodology & Report Drafting - Commerce, Management, and Social Sciences' at Adikavi Nanayya University
4. National Workshop on 'Methodology for Management & Commerce Research'

H. Anandkumar

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DURGAVAHAR

Ethical Leadership and Emotional Intelligence

This chapter will reflect on two themes that have increased in popularity in the past few decades: ethical behavior at work—particularly important when reviewed in light of the corporate scandals of recent years—and emotional intelligence—a growing area of interest in a world of work where there is increased diversity, cultural blend, accelerating ambiguity, and augmenting awareness among workforce members. First, the topic of ethics will be discussed, with specific focus on leadership ethics and organizational ethics. Subsequently, emotional intelligence will be reviewed, with some comments on emotional and intellectual intelligence. In the final part of the chapter, the interplay between ethics and emotional intelligence will be discussed.

Introduction

Two terms have earned increasing interest in the past decades in the business world, and therefore also in higher business education: ethics and emotional intelligence (EI). Though each phenomenon acquired this attention for entirely different reasons, there is an interesting interplay between these ethics and emotional intelligence. They seem to be interdependent, another term that has earned high acclaim in the twenty-first century. This chapter will first look into ethical behavior, inside and outside the corporate environment, and subsequently into emotional intelligence. Specific attention will be given to the applicability of these two topics in contemporary times. Finally, the chapter will discuss the interaction between these two themes.

Ethics: Definitions

Ethics is a very personal, hence very subjective, topic. What is considered unethical to one may be perfectly acceptable to another. Yet, the recent decade of major corporate scandals and unethical behavior, instigated by

H. Arjuna Kumar
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leaders who were supposed to responsibly lead multi-million dollar entities, has made it apparent that there is a higher need to discuss ethics than most people initially thought, especially when preparing business students to become honorable members of the future workplace.

Up until the ethics scandals, ethics was not considered course material in higher education. It was something that employees would select to discuss in voluntary two-day seminars, and not a requirement for top management. Unfortunately, it turned out that the ones exempted from ethics workshops were the ones who needed them most.

In the past years of corporate deception, economic downturn, and global warming, members of the workforce have started to place the theme "ethics" in a broader picture than ever before. It has come to their understanding that unethical behavior can lead to national and international economic disasters, and can cause innocent people to lose all they worked for their entire lives. Increasingly, corporate social responsibility has become a term that was used as an extension of ethics. The role and influence of business has never been more apparent than today.

The link between corporate social responsibility and ethics lies in the last word of the first theme: *responsibility*. Although ethics can be interpreted in multiple ways, there are societal standards that cannot and should not be ignored.

Robin (2009) attempts a generally acceptable definition of business ethics by asserting: "stakeholders should be treated with fairness and respect in their naturally occurring exchanges with business."

Leadership Ethics

The shocking revelations of corporate greed and short-term profit-based behavior of the past decade have prompted an increasing need among today's corporate stakeholders to look for individuals in leadership positions that behave ethically, inside and outside the workplace. This is, in fact, no more than logical, because the actions and decisions of corporate leaders usually set the tone of behavior in their workforce. Sims (2009) stresses the importance of a leader's reputation within an organization's context and asserts that companies can send a strong message into the community when they get rid of unethical CEOs and hire leaders with a reputation of fairness, honesty, and responsibility. He mentions Boeing as an example, as the company let go two CEOs in two years: Phil Condit in 2003, because he was Boeing's main man at a time when the company's name got tainted in a scandal involving a \$23 billion deal, and Harry Stonecipher in 2005, who got involved in an extra-marital affair at work.

Valente, Varca, Gotkin, and Barnett (2010) confirm that ethical or unethical behavior of top managers usually influences employees' ethical decisions, and the seriousness of an ethical issue usually influences



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REPORT ABOUT THE PROGRAMME

Dt: 28-11-2017

Title Of The Programme: A Workshop on Drafting Using Tekla

Inauguration Date & Venue: 27th Nov 2017 & DNBCET Seminar Hall

Organized By: Department Of Civil Engineering, DNBCET

Resource Person: V. Bhaskara Rao, Designlabs, Autodesk Authorised Academic Partner,
Hyderabad.

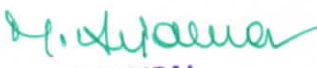
Chief Guest: Sri G. Satyanarayana Raju (Babu)
Secretary & Correspondent, DNR College Association


Inauguration: Dr. U. Ranga Raju
Principial, D.N.R College Of Engineering & Technology

Number of Faculty Attended: 40

Concept:

Tekla Structures is a building information modeling software able to model structures that incorporate different kinds of building materials, including steel, concrete, timber and glass. Tekla allows structural drafters and engineers to design a building structure and its components using 3D modeling, generate 2D drawings and access building information.


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Department of Electronics & Communication Engineering

ONE DAY WORKSHOP ON DRAFTING USING TEKLA (27/11/2017)				
SL NO	NAME OF THE FACULTY	DEPARTMENT	Date 27-11-2017	
			FN	AN
1	D.R. Padmanabham	BSH		
2	N. Tanulu Balu	BSE&H		
3	B. Meshak Reddy	BSE&H		
4	K. Madhuri	BSE&H		
5	K. S. Sanyal	CSE		
6	P. Parthavi	ECE		
7	S. Swathi	ECE	Swathi	Swathi
8	S. Beula Kiran	BSE&H		
9	N. Manjanna	ECE		
10	G. Naga Jothi	EEE		
11	V. Bhavani Praga	ECE		
12	P. Lalitha	CSE		
13	B. Nagamani	ECE		
14	T. Geetha	ECE		
15	J. B. Swathi	GCE	Swathi	Swathi
16	Ch. Sivadurga	CSE	change	change
17	N. L. ...	Civil		
18	Ch. Renukadevi	BSH		

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19	K. Geetha Vineetha	MBA	Geo	Geo
20	U. Gyolli	MBA	U	U
21	A. Naga Satish	CSB	Ans	Ans
22	E. Rafeeq	ECE	E	E
23	A. Raghavaprasad	ECE	AR	AR
24	M. Padu Ravi	Mech	M	M
25	K. Chandela	MBA	K	K
26	E. Yohanes	CBA	E	E
27	K. Venkateswara Naidu	BCB	K	K
28	K. Venkate Chandran	CSE	K	K
29	G. Nithy	SAMP	G	G
30	G. Vamshi Krishna	ME	G	G
31	T. YATINDRAN	MD	T	T
32	M. V. Subrahmanya	CIVIL	M	M
33	A. Raju	civil	A	A
34	N. Bhavathi	CSE	N	N
35	D. Joseph	EEE	D	D
36	P. Nagesh	EEE	P	P
37	N. Pradeep	ME	N	N
38	K. Sahil	ECE	K	K
39	T. Geetha	ECE	T	T
40	N. Sowjanya	ECE	N	N

PROFILE



Dr. M C S MADAN

Ph.D. in Environmental Engineering and Management specialization.

Dr M Chandra Shekhar Madan has been with us for the last 15 years, and he is responsible for the College Academic Committee. He has prepared courses for the Civil Engineering department, such as Environmental Engineering I & II and Waste Water Management, along with handling courses like Industrial Waste and Waste Water Management, Air Pollution Control, Solid Waste and Hazardous Waste Management, Engineering Geology.

In his 25+ years of experience, he has deployed different teaching methodologies such as the traditional White Board & Marker, PowerPoint Presentations, Demonstration based lectures, textbook Assignments, Web References, Video Lectures, Enquire oriented Education, Interactive Learning and Group Discussion.

He is a member of the ISTE professional body, and has published research journals and papers on :

- Effect of Structural Irregularity in Multistoried Effect of Carbon Fibre Reinforced Polymer (CFRP) sticking on Load Carrying Capacity of Columns
- Effect of basalt Fibre reinforced Polymer (BFRP) sticking on Load Carrying Capacity of Columns
- Enhancement and partial Replacement of Cement by Glass Powder based on Concrete
- Utilization of Demolished Concrete Waste for New Construction

He has also mentored and guided research committees on the following projects:

- A Study on drinking Water Quality and Security in Amalapuram Municipality
- A Study on Municipal Solid Waste (MSW) designing of Sanitary Land Filling (SLF) site and management of MSW in Amalapuram
- A Study on Effect of Sea Food Processing Effluent in Coringi River
- A Study about Effects on Compressive Strength of Concrete by Partially Replacing Concrete with Marble Dust Powder and Using Polycarboxylate Ethane as Super Plasticizer
- A Study on Shrimp Processing Industry effluent waste and utilisation of treated waste in East Godavari District, Andhra Pradesh
- A Study on Disposal of Untreated Sewage for Land treatment in Amalapuram
- A Study on Use of Rice Husk Ash in Concrete

He has received the following recognitions and awards by the University:

- Lab External for Environmental Engineering
- E Waste management (NPTEL)
- Paper Evaluation of Environmental Engineering course (JNTUK)
- Paper Evaluation of IWHWM course (JNTUK)
- Paper Evaluation of APC course (JNTUK)
- Paper Evaluation of WWM course (JNTUK)
- Lab External Examiner for EE (JNTUK)
- Project External for viva voce for B.Tech & M.Tech
- Lab External for UG & PG courses (JNTUK)
- Preparation for Scheme of Evaluation for UG subjects (JNTUK)
- Chief Examiner for UG subjects (JNTU)

He has been a vital part in organizing Seminars and Workshops on E Waste Management, Auto CAD 2D, Internship Program Restructuring, ARC GIS amongst a few.

In his previous stint, he was an Assistant Professor at Aditya College (2005-2007) & Founder HoD and Associate Professor at SGCSR College (1994-2005)

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Tekla MATERIAL

Tekla Structures uses ASCII and binary files to manage profile, material, reinforcement, bolt and bolt assembly catalogs.

Each environment has its own folder, where the files related to different catalogs are stored. For example, `..\environments\uk\general\profil\` contains the files for managing catalog files used in the United Kingdom. The exact file location may vary depending on the folder structure of your environment files.

The following table lists files and file types related to catalogs.

File type	File name	Used for	Located in
.inp	profitab.inp	Defines the names that you can use for parametric profiles.	In the \profil folder, under the environment folders, in <code>..\ProgramData\Trimble\Tekla Structures\<version>\environments\<environment>\</code>
	rebar_database.inp	The rebar catalog.	In the \profil folder, under the environment folders, in <code>..\ProgramData\Trimble\Tekla Structures\<version>\environments\<environment>\</code>
	mesh_database.inp	The reinforcement mesh catalog.	In the \profil folder, under the environment folders, in <code>..\ProgramData\Trimble\Tekla Structures\<version>\environments\<environment>\</code>
	You can define the file name while exporting.		Created when you export rebar catalogs. You can define the folder where to export the files.
.mat	matexp_<software>.mat	Contains information to convert material names when transferring model information using links. For example, converts S235JR to FE360B for DSTV.	In the \profil folder, under the environment folders, in <code>..\ProgramData\Trimble\Tekla Structures\<version>\environments\<environment>\</code>
	prfexp_<software>.mat	Contains information to convert profile names when transferring model information using links. For example,	In the \profil folder, under the environment folders, in <code>..\ProgramData\Trimble\Tekla Structures\<version>\environments\<environment>\</code>

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	converts HEA100 to HE100A for DSTV.	
For example, RU_CF.clb	Contains the definitions of parametric profiles used in profitab.inp.	..\ProgramData\Trimble\Tekla Structures\ <version>\environment\common\inp< td=""> </version>\environment\common\inp<>
You can define the file name while exporting.	Created when you export bolt, profiles and material catalogs.	You can define the folder where to export the files.
assdb.db	The bolt assembly catalog.	In the \profil folder, under the environment folders, in ..\ProgramData\Trimble\Tekla Structures\ <version>\environment\s\<environment>\< td=""> </version>\environment\s\<environment>\<>
screwdb.db	The bolt catalog.	In the \profil folder, under the environment folders, in ..\ProgramData\Trimble\Tekla Structures\ <version>\environment\s\<environment>\< td=""> </version>\environment\s\<environment>\<>
profdb.bin	The profile catalog.	In the \profil folder, under the environment folders, in ..\ProgramData\Trimble\Tekla Structures\ <version>\environment\s\<environment>\< td=""> </version>\environment\s\<environment>\<>
matdb.bin	The material catalog.	In the \profil folder, under the environment folders, in ..\ProgramData\Trimble\Tekla Structures\ <version>\environment\s\<environment>\< td=""> </version>\environment\s\<environment>\<>

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REPORT ABOUT THE PROGRAMME

Dt: 29-11-2017

Title Of The Programme: One day National level seminar on “New Frontier-Entrepreneur Development programme”

Inauguration Date & Venue: 28th Nov 2017 & DNR CET Seminar Hall

Organized By: Department Of Electronics & Communication Engineering, DNR CET

Resource Person: T Viswanadham, Managing Director, Khaspa Enterprises Pvt Ltd, Hyderabad.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. U. Ranga Raju

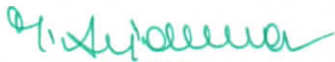
Principial, D.N.R College of Engineering & Technology


Number of Faculty Attended: 46

Concept:

New Frontiers is the national entrepreneurial development programme for ambitious early-stage entrepreneurs with innovative business ideas which have the potential to scale and provide employment. It provides the skills, support, and confidence needed to make the leap to starting a successful business. New Frontiers is a 3-phase programme:

1. Testing business idea - introduction to what is setting up business and opportunity to prepare a business plan.
2. Business planning - weekly training in key business start- up and scaling skills such as research, business models, team development, financials, legal, intellectual property, digital marketing strategy, selling and sales and pitching the business.
3. Business development - support and panel pitches to progress their business.


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Department of Electronics & Communication Engineering

ONE DAY NATIONAL LEVEL SEMINAR ON " NEW FRONTIER-ENTREPRENEUR DEVELOPMENT PROGRAMME"

(28/11/2017)

SL NO	NAME OF THE FACULTY	DEPARTMENT	Date 28-11-2017	
			FN	AN
1	B. Nagamani	ECB		
2	V. Bhavani Durga	ECE		
3	N. L. K.	Civil		
4	N. Mayyana	ECE		
5	CH. Renukadevi	BSH		
6	S. Swathi	ECE	Swathi	Swathi
7	P. Lalitha	CSE		
8	S. Beula Kiran	BSE&H		
9	G. Naga Jyothi	EEE	G. Naga Jyothi	G. Naga Jyothi
10	K. S. Syamala	CSE		
11	P. Paradhavi	ECE		
12	T. Geetha	ECE		
13	P. B. Swathi	BEE	Swathi	Swathi
14	V. Navya Devi	CSE	V. Navya Devi	V. Navya Devi
15	Ch. Siva Durga	CSE	Ch. Siva Durga	Ch. Siva Durga
16	N. L. K.	Civil		
17	B. Meshaka MP	BSE&H		
18				

19	N. Jawahar Babu	BSc Engg	AW	AW
20	P.A. padmanabhan	BSc IT	AW	AW
21	K. Keesari Vinodha	MBA	AW	AW
22	U. Sylew	MBA	AW	AW
23	A. Naga Satish	CSE	AW	AW
24	E. K. K.	CSE	AW	AW
25	A. Raju Prasad	ECE	AW	AW
26	M. Padu Raghav	Mech	AW	AW
27	K. Chandra Reddy	M.A	AW	AW
28	E. Yohanna	CSA	AW	AW
29	D. Venkanna Naidu	ECB	AW	AW
30	K. Venkata Chandan	CSE	AW	AW
31	A. Murthy	SEI	AW	AW
32	G. Vamsi Krishna	ME	AW	AW
33	D. YATINDRA	ME	AW	AW
34	K. V. Subrahmanya	Civil	AW	AW
35	A. Rishi	Civil	AW	AW
36	N. Bharathi	CSE	AW	AW
37	D. Joseph Kumar	EEG	AW	AW
38	P. Naga Raju	EEE	AW	AW
39	N. Pradeep	ME	AW	AW
40	N. V. Sanyasi	ECB	AW	AW

41	P.B. Surali	ECE	PA	PA
42	T. Gresha	ECE	PA	PA
43	Y. Srinivas	ECE	PA	PA
44	K. Sahal	ECE	K. Set	K. Set
45	K. Venkanna Naidu.	ECE	KV	KV
46	G.S. Bebu.	ECE	GS	GS

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MATERIAL

Entrepreneurship Development Programmes:

Meaning:

As the term itself denotes, EDP is a programme meant to develop entrepreneurial abilities among the people. In other words, it refers to inculcation, development, and polishing of entrepreneurial skills into a person needed to establish and successfully run his / her enterprise. Thus, the concept of entrepreneurship development programme involves equipping a person with the required skills and knowledge needed for starting and running the enterprise.

Need for EDPs:

That, entrepreneurs possess certain competencies or traits. These competencies or traits are the underlying characteristics of the entrepreneurs which result in superior performance and which distinguish successful entrepreneurs from the unsuccessful ones.

Then, the important question arises is: where do these traits come from? Or, whether these traits are in born in the entrepreneurs or can be induced and developed? In other words, whether the entrepreneurs are born or made? Behavioural scientists have tried to seek answers to these questions.

H. Arjankumar

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A well-known behavioural scientist David C. McClelland (1961) at Harvard University made an interesting investigation-cum-experiment into why certain societies displayed great creative powers at particular periods of their history? What was the cause of these creative bursts of energy? He found that 'the need for achievement (n' ach factor)' was the answer to this question. It was the need for achievement that motivates people to work hard. According to him, money-making was incidental. It was only a measure of achievement, not its motivation.

In order to answer the next question whether this need for achievement could be induced, he conducted a five-year experimental study in Kakinada, i.e. one of the prosperous districts of Andhra Pradesh in India in collaboration with Small Industries Extension and Training Institute (SIET), Hyderabad.

This experiment is popularly known as 'Kakinada Experiment'. Under this experiment, young persons were selected and put through a three-month training programme and motivated to see fresh goals.

One of the significant conclusions of the experiment was that the traditional beliefs did not seem to inhibit an entrepreneur and that the suitable training can provide the necessary motivation to the entrepreneurs (McClelland & Winter 1969). The achievement motivation had a positive impact on the performance of entrepreneurs.

In fact, the 'Kakinada Experiment' could be treated as a precursor to the present day EDP inputs on behavioural aspects. In a sense, 'Kakinada Experiment' is considered as the seed for the Entrepreneurship Development Programmes (EDPs) in India.

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The fact remains that it was the 'Kakinada Experiment' that made people appreciate the need for and importance of the entrepreneurial training, now popularly known as 'EDPs', to induce motivation and competence among the young prospective entrepreneurs.

Based on this, it was the Gujarat Industrial Investment Corporation (GIIC) which, for the first time, started a three-month training programmes on entrepreneurship development. Impressed by the results of GIIC's this training programme, the Government of India embarked, in 1971, on a massive programme on entrepreneurship development. Since then, there is no looking back in this front. By now, there are some 686 all-India and State level institutions engaged in conducting EDPs in hundreds imparting training to the candidates in thousands.

Till now, 12 State Governments have established state-level Centre for Entrepreneurship Development (CED) or Institute of Entrepreneurship Development (IED) to develop entrepreneurship by conducting EDPs. Today, the EDP in India has proliferated to such a magnitude that it has emerged as a national movement. It is worth mentioning that India operates the oldest and largest programmes for entrepreneurship development in any developing country.

The impact of India's EDP movement is borne by the fact that the Indian model of entrepreneurship development is being adopted by some of the developing countries of Asia and Africa. Programmes similar to India's EDPs are conducted in

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other countries also, for example, 'Junior Achievement Programme' based on the principle of 'catch them young' in USA and 'Young Enterprises' in the U. K.

Objectives of EDP:

The major objectives of the Entrepreneurship Development Programmes (EDPs) are to:

- a. Develop and strengthen the entrepreneurial quality, i.e. motivation or need for achievement.
- b. Analyse environmental set up relating to small industry and small business.
- c. Select the product.
- d. Formulate proposal for the product.
- e. Understand the process and procedure involved in setting up a small enterprise.
- f. Know the sources of help and support available for starting a small scale industry.
- g. Acquire the necessary managerial skills required to run a small-scale industry.
- h. Know the pros and cons in becoming an entrepreneur.
- i. Appreciate the needed entrepreneurial discipline.
- j. Besides, some of the other important objectives of the EDPs are to:

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k. Let the entrepreneur himself / herself set or reset objectives for his / her enterprise and strive for their realization.

l. Prepare him / her to accept the uncertainty in running a business.

m. Enable him / her to take decisions.

n. Enable to communicate clearly and effectively.

o. Develop a broad vision about the business.

The entrepreneurship development programme (EDP) normally runs through three important phases followed by EDP evaluation:

Phases of Entrepreneurial Development Programme An entrepreneurial development programme consists of three broad phases: 1. Pre-training Phase 2. Training Phase 3. Post-training Phase

1. Initial Phase : This phase includes the activities and the preparations required to launch the training programme. The main activities of this phase are: (a) Arrangement of Infrastructure for training (b) Preparation of training syllabus and application form (c) Tie up of guest faculty (d) Designing tools and techniques for selecting the trainees (e) Formation of selection committee (f) Publicity campaign for the programme Thus, initial stage involves the identification and selection of potential entrepreneurs and providing initial motivation to them.

Training Phase : In this phase the training programme is implemented to develop motivation and skills among the participants. The objective of this phase is to bring desirable changes in the behaviour of the trainees.

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(Accredited with B⁺⁺ Grade by NAAC)

Ph: 08816-221238 Email: dncet@gmail.com website: <https://dncet.org>

REPORT ABOUT THE PROGRAMME

Dt: 07-12-2017

Title Of The Programme: One Day Workshop on “INTELLECTUAL PROPERTY RIGHTS”

Inauguration Date & Venue: 6th Dec 2017 & DNCET Seminar Hall

Organized By: Department of Electrical & Electronics Engineering, DNCET

Resource Person: Dr. M. N Rao, Professor in KL University.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. U. Ranga Raju


Prinicipal, D.N.R College Of Engineering & Technology

Number of Faculty Attended: 52

Concept:

Intellectual property rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time. Intellectual property rights are legal rights that provide creators protection for original works, inventions, or the appearance of products, artistic works, scientific developments, and so on. Basically speaking, intellectual property rights are a common type of legal IP protection for those who invent.


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<https://dncrcet.org>

one day workshop on INTELLECTUAL PROPERTY RIGHTS 6th Dec 2017				
Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 06/12/17	
			FN	AN
1	N. Maryleena	ECE	<i>N.M.</i>	<i>N.M.</i>
2	M. Lakshmi Kumari	CE	<i>L.K.</i>	<i>L.K.</i>
3	P. Anjaneyulu ID.	CE	<i>A.A.</i>	<i>A.A.</i>
4	G. Saibaba	EEE	<i>S.G.</i>	<i>S.G.</i>
5	E. Ramalakshmi	CSE	<i>E.R.</i>	<i>E.R.</i>
6	Dr. G. Satyanarayana	CSE	<i>G.S.</i>	<i>G.S.</i>
7	P. Viswanath Raju	BSE	<i>P.V.</i>	<i>P.V.</i>
8	S. Lakshmana Rao	C&E	<i>S.L.</i>	<i>S.L.</i>
9	Y. Srinivas	ECE	<i>Y.S.</i>	<i>Y.S.</i>
10	Dr. ippili Harish.	ME	<i>H.I.</i>	<i>H.I.</i>
11	Dr. P.Y.V. Sathyanarayana	BSE	<i>P.Y.V.S.</i>	<i>P.Y.V.S.</i>
12	Srinivasa Rajesh	EEE	<i>S.R.</i>	<i>S.R.</i>
13	A.S.N.V. Bhogesh	CSE	<i>A.S.N.V.</i>	<i>A.S.N.V.</i>
14	G. Suresh Babu	ECE	<i>G.S.</i>	<i>G.S.</i>
15	Dr. Datta Bhama Prakash	ME	<i>D.B.P.</i>	<i>D.B.P.</i>
16	Abdul Anad	CSE	<i>A.A.</i>	<i>A.A.</i>
17	Dr. M. Vasanthi	BSE & H	<i>M.V.</i>	<i>M.V.</i>
18	P.D.P. Varma	BSE & H	<i>P.D.P.V.</i>	<i>P.D.P.V.</i>
19	NSVL Sowjanya	ECE	<i>S.S.</i>	<i>S.S.</i>
20	Nathi-Sarath Babu	CSE	<i>N.S.</i>	<i>N.S.</i>
21	T.S. Chakravarthy	BSE & H	<i>T.S.</i>	<i>T.S.</i>
22	M. Jagannathan	BSE & H	<i>M.J.</i>	<i>M.J.</i>
23	NSVL Sowjanya	ECE	<i>S.S.</i>	<i>S.S.</i>
24	Ms. Madhu. MDP.	BSE & H	<i>M.M.</i>	<i>M.M.</i>
25	T.V.S. Suresh	BSE & H	<i>T.V.S.</i>	<i>T.V.S.</i>

26	J. Keerthana	ECE	Ke	Ke
27	V. Balaji	ECE	Bala	Bala
28	A. Vamsi Krishna	BS&H	AK	AK
29	V. Sailkrupa	EEE	SK	SK
30	S. Rajesh	CCE	SR	SR
31	Pecheti Nagaraju	EEE	PN	PN
32	G. Koteswara Rao	ECC	Ko	Ko
33	A. Abdul Ahad	AA	AA	AA
34	M.S.V.V. Ramesh	CSE	M.S.V.V. Ramesh	M.S.V.V. Ramesh
35	M. Pandu Rang Rao	ME	PR	PR
36	K. Surya Satish Kumar	ECE	SK	SK
37	A.S.N.V. Bhogesh	CSE	A.S.N.V. Bhogesh	A.S.N.V. Bhogesh
38	M. Thambi Babu	ME	MB	MB
39	G. Vamsi Krishna	ME	GV	GV
40	Dr. A. Purna Ramesh	ECE	AP	AP
41	S. Lakshman Rao	CSE	SL	SL
42	S. Lakshman Rao	CSE	S.L	S.L
43	M. Srinu	EEE	MS	MS
44	L. Bujji Babu	CCE	LB	LB
45	Dr. M. Vasantha	BS&H	DR. MV	DR. MV
46	N. Sathya Babu	CSE	N. Sathya	N. Sathya
47	I. Geetha	ECE	IG	IG
48	V. Praveen	BSH	VP	VP
49	MS. M.M.D. Devi	BSH	MM	MM
50	Dr. Venkatapathi Raju	BSH	VR	VR
51	B. Vasudha	BSH	BV	BV
52	K.A.S.V. Sai Pranita	BSH	KS	KS

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PROFILE

Name : Dr. M .Nagabhushana Rao

Father's Name: M. L.Narayana

DOB : 23/04/1969



Academic Qualifications

Course	University	Year of Passing	Division
B.E(CSE)	Amaravathi University, India	1992	1 st Class
M.S-Software	B.I.T.S-PILANI	1996	6.7 CGPA
M.Tech (CSE)	JNTU, Kakinada, India	2012	Distinction
Ph.D—Computer Science(Faculty of science)	Sri Venkateswara. University , India	2006	-----

Teaching Experience: 22 Years

S. No	Institute Name	Designation	From	To
1	Y.N.College, P.G.Course, Narsapur	Lecturer	May-1992	Nov-1996
2	N.B.K.R.I.S.T.Engineering College , Vakadu, Nellore	Asst. Professor- Ratified	Nov-1996	April-1998
3	Sree Vidyanikethan Engineering College, Tirupathi	Assoc. Professor- Ratified	April-1998	June-2006
4	C. R. Engineering College, Tirupathi	Professor	June-2006	May-2007
5	Godhavari Institute of Engineering & Technology , Rajahmandry	Professor	June-2007	May- 2008
6	Narayana Engineering College, Nellore	Professor	May-2008	May- 2010

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College, Narsapur	Ratified(JNTUK)		
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Publications List(Few latest Papers listed):

S.No.	Title of Paper /Report/Book	Author(s)	Name, Vol. & number of Journal, and Year of Publication.	Page No.	
				From	To
21	Data Stream Association Rule Mining Based on Sliding Window Model	Dr. M. Nagabhushana Rao,S.Uma Maheswar Rao,N.Tulasi Raju	International Conference on Recent Advances in Computer Sciences,June-July,2012	509	513
22	Spatial Auto Regression for Traffic Control	Dr. M. N. Rao, Dr. M. Muralidhara Rao, Mr. P. Ramesh Babu	International Conference on Computing and Information Technology, TIRUPATI ,13-14,July,2012	56	59
23	Spatial Mining System for Disaster Management	Dr. M. N. Rao, N K Kameswara Rao, Dr. G. P. Saradhi Varma	International Journal of Innovative technology and Research, Volume No. 1, Issue No. 1, December-January,2013	32	36
24	Disaster Prediction System Using IBM SPSS Data Mining Tool for Cholera	Dr. M. N. Rao, Dr. M. Muralidhara Rao, Vedavathi P	International Journal of Computer Science and Technology, Volume 4, Issue 2, April-June 2013	136	140
25	Spatio-Temporal Representation of Disaster System	Dr. M. N Rao, Ms. P. Vedavathi	International Journal of Scientific & Engineering Research, Vol. 4, Issue 9, September-2013.	93	98
26	A Secure Friend Finder Navigation System Using GPS & GPRS/CDMA	Dr. M. N Rao, Y.L.N.Swami Papalu	International Journal of Computer Engineering & Applications, Vol. 4, Issue 3, Dec.-2013.	76	82
27	Text Clustering Using Reference Centred Similarity Measure	Dr. M. Nagabhushana Rao,Mr. P. Ramesh Babu	Advances in Intelligent Systems & Computing,249, ICT: Proceedings of 48th CSI, SPRINGER, Dec-2014.	27	35
28	Effect Self Loop Avoidance Weighted NDFA Method Using Cahe Counter Classifier Algorithm for efficient and fastest reachable path in travelling networks.	Dr. M. Nagabhushana Rao, Kartheek V.L , Srinivas Rao . M.	IJRCCT Computer and Communication Technology, Vol 4, Issue 8, August 2015. ISSN ONLINE: 2278-5841	524	529
29	A Novel Key Generation Technique Used In Tablets and Smart Phones	Dr. M. Nagabhushana Rao, Kartheek V.L , Srinivas Rao . M.	IJERA ; International Journal of Engineering and Applications, Vol 5, Issue 8, Part-5, August 2015, ISSN : 2248-9622	127	132

Professional Memberships

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- IEEE MEMBER NO: 41482851
- ISTE MEMBER NO: GM 48209

Skill Set

- Good at **Books Authoring**, Research Projects, Organizing Conferences , Good at Database, Dataware house, Data Mining, Cloud Computing subjects, **Bigdata- Hadoop** Software trained.

Patents

- Patent applied for "Finger Print Image Retrieval System".

Trade Mark

- Attained a trade mark for the device "I know you"- **FICS 143**.

Research Project

- **Govt project- AICTE – RPS Scheme- Project on "Epidemic Identification System of Dengue"** costs Rs. 7 lakhs, was completed between 2011-2013 and report was submitted.

Publications

- Untill now 27 articles were published.

Books Published

2 books from **Prentice Hall India Limited**, available in Amazon, flipkart, phiindia.com webportals

- **Free Open Source Software – Prentice Hall India Ltd, May-2014.**
- **Cloud Computing - Prentice Hall India Ltd, May- 2015.**
- **BigData- book in Review stage, exptd in Sept-2016.**

Achievements

- Team Member of Android Apps Designing, R&D Cell, www.scetrnd.in.
- Established Research laboratory for AICTE-RPS.
- Established Research & Development Cell in CSE department, SCET.
- Chair a session of "Int. conf- ICRACS2K12" on March 30th & 31st of 2012 at Godavari Institute of Engineering & Technology, Rajahmundry, A.P.
- Worked in department for NBA, NACC, AUTONOMOUS accreditation work.
- Visted IBM Hyderabad Development center for giving demo on our R&D center developed e-survey App.

Journal Reviews

- Reviewer for IJET-International Journal of Engineering & Technology, Singapore.

Workshops Conducted& Attended(Recently)

- Conducted and acted as a resource person for a workshop on Android Apps Development at Swarnandhra Engineering College on 22nd, December, 2012.
- Conducted a FDP on IBM SPSS MODULER- Data Mining, by Mr Rakesh Mohan Das from IBM, Delhi, Dt:12th&13th Dec 2012.
- Attended "CORE JAVA PROGRAM" from 12/11/14 to 17/11/14 conducted by Council of technical education and training of Falcon Systems & Services.
- Attended "Big Data & Hadoop " from 15/12/2015 to 15/1/2016 conducted by Brain4ce Education Solutions.

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- Participated in “ Why Entrepreneurship” workshop conducted on 7/1/16 at Scet, Narsapur by Vizag Information Technology Association(Software Park).

(Dr. M. Nagabhushana Rao)

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Intellectual Property Right

Intellectual property rights (IPR) have been defined as ideas, inventions, and creative expressions based on which there is a public willingness to bestow the status of property. IPR provide certain exclusive rights to the inventors or creators of that property, in order to enable them to reap commercial benefits from their creative efforts or reputation. There are several types of intellectual property protection like patent, copyright, trademark, etc. Patent is a recognition for an invention, which satisfies the criteria of global novelty, non-obviousness, and industrial application. IPR is prerequisite for better identification, planning, commercialization, rendering, and thereby protection of invention or creativity. Each industry should evolve its own IPR policies, management style, strategies, and so on depending on its area of specialty. Pharmaceutical industry currently has an evolving IPR strategy requiring a better focus and approach in the coming era.

Intellectual property (IP) pertains to any original creation of the human intellect such as artistic, literary, technical, or scientific creation. Intellectual property rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of time. These legal rights confer an exclusive right to the inventor/creator or his assignee to fully utilize his invention/creation for a given period of time. It is very well settled that IP play a vital role in the modern economy. It has also been conclusively established that the intellectual labor associated with the innovation should be given due importance so that public good emanates from it. There has been a quantum jump in research and development (R&D) costs with an associated jump in investments required for putting a new technology in the market place.

The stakes of the developers of technology have become very high, and hence, the need to protect the knowledge from unlawful use has become expedient, at least for a period, that would ensure recovery of the R&D and other associated costs and adequate profits for continuous investments in R&D.[3] IPR is a strong tool, to protect investments, time, money, effort invested by the inventor/creator of an IP, since it grants the inventor/creator an exclusive right for a certain period of time for use of his invention/creation. Thus IPR, in this way aids the economic development of a country by promoting healthy competition and encouraging industrial development and economic growth. Present review furnishes a brief overview of IPR with special emphasis on pharmaceuticals.

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The laws and administrative procedures relating to IPR have their roots in Europe. The trend of granting patents started in the fourteenth century. In comparison to other European countries, in some matters England was technologically advanced and used to attract artisans from elsewhere, on special terms. The first known copyrights appeared in Italy. Venice can be considered the cradle of IP system as most legal thinking in this area was done here; laws and systems were made here for the first time in the world, and other countries followed in due course. Patent act in India is more than 150 years old. The inaugural one is the 1856 Act, which is based on the British patent system and it has provided the patent term of 14 years followed by numerous acts and amendments.

- it provides a mechanism of handling infringement, piracy, and unauthorized use
- it provides a pool of information to the general public since all forms of IP are published except in case of trade secrets.

IP protection can be sought for a variety of intellectual efforts including

(i) Patents

(ii) Industrial designs relates to features of any shape, configuration, surface pattern, composition of lines and colors applied to an article whether 2-D, e.g., textile, or 3-D, e.g., toothbrush

(iii) Trademarks relate to any mark, name, or logo under which trade is conducted for any product or service and by which the manufacturer or the service provider is identified. Trademarks can be bought, sold, and licensed. Trademark has no existence apart from the goodwill of the product or service it symbolizes

(iv) Copyright relates to expression of ideas in material form and includes literary, musical, dramatic, artistic, cinematography work, audio tapes, and computer software

(v) Geographical indications are indications, which identify as good as originating in the territory of a country or a region or locality in that territory where a given quality, reputation, or other characteristic of the goods is essentially attributable to its geographical origin

A patent is awarded for an invention, which satisfies the criteria of global novelty, non-obviousness, and industrial or commercial application. Patents can be granted for products and processes. As per the Indian Patent Act 1970, the term of a patent was 14 years from the date of filing except for processes for preparing drugs and food items for which the term was 7 years from the date of the filing or 5 years from the date of the patent, whichever is earlier. No product patents were granted for drugs and food items.

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A copyright generated in a member country of the Berne Convention is automatically protected in all the member countries, without any need for registration. India is a signatory to the Berne Convention and has a very good copyright legislation comparable to that of any country. However, the copyright will not be automatically available in countries that are not the members of the Berne Convention. Therefore, copyright may not be considered a territorial right in the strict sense. Like any other property IPR can be transferred, sold, or gifted

Role of Undisclosed Information in Intellectual Property

Protection of undisclosed information is least known to players of IPR and also least talked about, although it is perhaps the most important form of protection for industries, R&D institutions and other agencies dealing with IPR. Undisclosed information, generally known as trade secret or confidential information, includes formula, pattern, compilation, programme, device, method, technique, or process. Protection of undisclosed information or trade secret is not really new to humanity; at every stage of development people have evolved methods to keep important information secret, commonly by restricting the knowledge to their family members. Laws relating to all forms of IPR are at different stages of implementation in India, but there is no separate and exclusive law for protecting undisclosed information/trade secret or confidential information. Pressures of globalisation or internationalisation were not intense during 1950s to 1980s, and many countries, including India, were able to manage without practising a strong system of IPR. Globalization driven by chemical, pharmaceutical, electronic, and IT industries has resulted into large investment in R&D. This process is characterized by shortening of product cycle, time and high risk of reverse engineering by competitors. Industries came to realize that trade secrets were not adequate to guard a technology. It was difficult to reap the benefits of innovations unless uniform laws and rules of patents, trademarks, copyright, etc. existed. That is how IPR became an important constituent of the World Trade Organization (WTO).

Rationale of Patent

Patent is recognition to the form of IP manifested in invention. Patents are granted for patentable inventions, which satisfy the requirements of *novelty* and *utility* under the stringent

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examination and opposition procedures prescribed in the Indian Patents Act, 1970, but there is not even a *prima-facie* presumption as to the validity of the patent granted.

Most countries have established national regimes to provide protection to the IPR within its jurisdiction. Except in the case of copyrights, the protection granted to the inventor/creator in a country (such as India) or a region (such as European Union) is restricted to that territory where protection is sought and is not valid in other countries or regions. For example, a patent granted in India is valid only for India and not in the USA. The basic reason for patenting an invention is to make money through exclusivity, i.e., the inventor or his assignee would have a monopoly if,

- the inventor has made an important invention after taking into account the modifications that the customer, and
- if the patent agent has described and claimed the invention correctly in the patent specification drafted, then the resultant patent would give the patent owner an exclusive market.

The patentee can exercise his exclusivity either by marketing the patented invention himself or by licensing it to a third party.

The following would not qualify as patents:

- An invention, which is frivolous or which claims anything obvious or contrary to the well established natural law. An invention, the primary or intended use of which would be contrary to law or morality or injurious to public health
- (ii) A discovery, scientific theory, or mathematical method
- (iii) A mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine, or apparatus unless such known process results in a new product or employs at least one new reactant
- (iv) A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance
- (v) A mere arrangement or re-arrangement or duplication of a known device each functioning independently of one another in its own way
- (vi) A method of agriculture or horticulture
- (vii) Any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products


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- (viii) An invention relating to atomic energy
- (ix) An invention, which is in effect, is traditional knowledge

Rationale of License

A license is a contract by which the licensor authorizes the licensee to perform certain activities, which would otherwise have been unlawful. For example, in a patent license, the patentee (licensor) authorizes the licensee to exercise defined rights over the patent. The effect is to give to the licensee a right to do what he/she would otherwise be prohibited from doing, i.e., a license makes lawful what otherwise would be unlawful.

The licensor may also license 'know-how' pertaining to the execution of the licensed patent right such as information, process, or device occurring or utilized in a business activity can also be included along with the patent right in a license agreement. Some examples of know-how are:

- (i) technical information such as formulae, techniques, and operating procedures and
- (ii) commercial information such as customer lists and sales data, marketing, professional and management procedures.

Indeed, any technical, trade, commercial, or other information, may be capable of being the subject of protection.

Benefits to the licensor:

- (i) Opens new markets
- (ii) Creates new areas for revenue generation
- (iii) Helps overcome the challenge of establishing the technology in different markets especially in foreign countries – lower costs and risk and savings on distribution and marketing expenses

Benefits to the licensee are:

- (i) Savings on R&D and elimination of risks associated with R&D
- (ii) Quick exploitation of market requirements before the market interest wanes
- (iii) Ensures that products are the latest

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The Role of Patent Cooperation Treaty

The patent cooperation treaty (PCT) is a multilateral treaty entered into force in 1978. Through PCT, an inventor of a member country contracting state of PCT can simultaneously obtain priority for his/her invention in all or any of the member countries, without having to file a separate application in the countries of interest, by designating them in the PCT application. All activities related to PCT are coordinated by the world intellectual property organization (WIPO) situated in Geneva

In order to protect invention in other countries, it is required to file an independent patent application in each country of interest; in some cases, within a stipulated time to obtain priority in these countries. This would entail a large investment, within a short time, to meet costs towards filing fees, translation, attorney charges, etc. In addition, it is assumed that due to the short time available for making the decision on whether to file a patent application in a country or not, may not be well founded

Inventors of contracting states of PCT on the other hand can simultaneously obtain priority for their inventions without having to file separate application in the countries of interest; thus, saving the initial investments towards filing fees, translation, etc. In addition, the system provides much longer time for filing patent application in the member countries

The time available under Paris convention for securing priority in other countries is 12 months from the date of initial filing. Under the PCT, the time available could be as much as minimum 20 and maximum 31 months. Further, an inventor is also benefited by the search report prepared under the PCT system to be sure that the claimed invention is novel. The inventor could also opt for preliminary examination before filing in other countries to be doubly sure about the patentability of the invention.

Management of Intellectual Property in Pharmaceutical Industries

More than any other technological area, drugs and pharmaceuticals match the description of globalization and need to have a strong IP system most closely. Knowing that the cost of introducing a new drug into the market may cost a company anywhere between \$ 300 million to \$1000 million along with all the associated risks at the developmental stage, no company will like to risk its IP becoming a public property without adequate returns. Creating, obtaining, protecting, and managing IP must become a corporate activity in the same manner as the raising of resources and funds. The knowledge revolution, which we are sure to witness, will demand a special pedestal for IP and treatment in the overall decision-making process.

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Competition in the global pharmaceutical industry is driven by scientific knowledge rather than manufacturing know-how and a company's success will be largely dependent on its R&D efforts. Therefore, investments in R&D in the drug industry are very high as a percentage of total sales; reports suggest that it could be as much as 15% of the sale. One of the key issues in this industry is the management of innovative risks while one strives to gain a competitive advantage over rival organizations. There is high cost attached to the risk of failure in pharmaceutical R&D with the development of potential medicines that are unable to meet the stringent safety standards, being terminated, sometimes after many years of investment. For those medicines that do clear development hurdles, it takes about 8-10 years from the date when the compound was first synthesized. As product patents emerge as the main tools for protecting IP, the drug companies will have to shift their focus of R&D from development of new processes for producing known drugs towards development of a new drug molecule and new chemical entity (NCE). During the 1980s, after a period of successfully treating many diseases of short-term duration, the R&D focus shifted to long duration (chronic) diseases. While looking for the global market, one has to ensure that requirements different regulatory authorities must be satisfied.

It is understood that the documents to be submitted to regulatory authorities have almost tripled in the last ten years. In addition, regulatory authorities now take much longer to approve a new drug. Consequently, the period of patent protection is reduced, resulting in the need of putting in extra efforts to earn enough profits. The situation may be more severe in the case of drugs developed through the biotechnology route especially those involving utilization of genes. It is likely that the industrialized world would soon start canvassing for longer protection for drugs. It is also possible that many governments would exercise more and more price control to meet public goals. This would on one hand emphasize the need for reduced cost of drug development, production, and marketing, and on the other hand, necessitate planning for lower profit margins so as to recover costs over a longer period. It is thus obvious that the drug industry has to wade through many conflicting requirements. Many different strategies have been evolved during the last 10 to 15 years for cost containment and trade advantage. Some of these are out sourcing of R&D activity, forming R&D partnerships and establishing strategic alliances.[19]

Nature of Pharmaceutical Industry

The race to unlock the secrets of human genome has produced an explosion of scientific knowledge and spurred the development of new technologies that are altering the economics of drug development. Biopharmaceuticals are likely to enjoy a special place and the ultimate goal will be to have personalized medicines, as everyone will have their own genome mapped and stored in a chip.

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Doctors will look at the information in the chip(s) and prescribe accordingly. The important IP issue associated would be the protection of such databases of personal information. Biotechnologically developed drugs will find more and more entry into the market. The protection procedure for such drug will be a little different from those conventional drugs, which are not biotechnologically developed. Microbial strains used for developing a drug or vaccine needs to be specified in the patent document. If the strain is already known and reported in the literature usually consulted by scientists, then the situation is simple. However, many new strains are discovered and developed continuously and these are deposited with International depository authorities under the Budapest Treaty. While doing a novelty search, the databases of these depositories should also be consulted. Companies do not usually go for publishing their work, but it is good to make it a practice not to disclose the invention through publications or seminars until a patent application has been filed. While dealing with microbiological inventions, it is essential to deposit the strain in one of the recognized depositories who would give a registration number to the strain which should be quoted in the patent specification.

This obviates the need of describing a life form on paper. Depositing a strain also costs money, but this is not much if one is not dealing with, for example cell lines. Further, for inventions involving genes, gene expression, DNA, and RNA, the sequences also have to be described in the patent specification as has been seen in the past. The alliances could be for many different objectives such as for sharing R&D expertise and facilities, utilizing marketing networks and sharing production facilities. While entering into an R&D alliance, it is always advisable to enter into a formal agreement covering issues like ownership of IP in different countries, sharing of costs of obtaining and maintaining IP and revenue accruing from it, methods of keeping trade secrets, accounting for IP of each company before the alliance and IP created during the project but not addressed in the plan, dispute settlements. It must be remembered that an alliance would be favorable if the IP portfolio is stronger than that of concerned partner. There could be many other elements of this agreement. Many drug companies will soon use the services of academic institutions, private R&D agencies, R&D institutions under government in India and abroad by way of contract research. All the above aspects mentioned above will be useful. Special attention will have to be paid towards maintaining confidentiality of research. The current state of the pharmaceutical industry indicates that IPR are being unjustifiably strengthened and abused at the expense of competition and consumer welfare.

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The lack of risk and innovation on the part of the drug industry underscores the inequity that is occurring at the expense of public good. It is an unfairness that cannot be cured by legislative reform alone. While congressional efforts to close loopholes in current statutes, along with new legislation to curtail additionally unfavorable business practices of the pharmaceutical industry, may provide some mitigation, antitrust law must appropriately step in. While antitrust laws have appropriately scrutinized certain business practices employed by the pharmaceutical industry, such as mergers and acquisitions and agreements not to compete, there are several other practices that need to be addressed. The grant of patents on minor elements of an old drug, reformulations of old drugs to secure new patents, and the use of advertising and brand name development to increase the barriers for generic market entrants are all areas in which antitrust law can help stabilize the balance between rewarding innovation and preserving competition.

Traditional medicine dealing with natural botanical products is an important part of human health care in many developing countries and also in developed countries, increasing their commercial value. The world market for such medicines has reached US \$ 60 billion, with annual growth rates of between 5% and 15%. Although purely traditional knowledge based medicines do not qualify for patent, people often claim so. Researchers or companies may also claim IPR over biological resources and/or traditional knowledge, after slightly modifying them. The fast growth of patent applications related to herbal medicine shows this trend clearly. The patent applications in the field of natural products, traditional herbal medicine and herbal medicinal products are dealt with own IPR policies of each country as food, pharmaceutical and cosmetics purview, whichever appropriate. Medicinal plants and related plant products are important targets of patent claims since they have become of great interest to the global organized herbal drug and cosmetic industries

Some Special Aspects of Drug Patent Specification

Writing patent specification is a highly professional skill, which is acquired over a period of time and needs a good combination of scientific, technological, and legal knowledge. Claims in any patent specification constitute the soul of the patent over which legal proprietary is sought. Discovery of a new property in a known material is not patentable. If one can put the property to a practical use one has made an invention which may be patentable. A discovery that a known substance is able to withstand mechanical shock would not be patentable but a railway sleeper made from the material could well be patented. A substance may not be new but has been found to have a new property. It may be possible to patent it in combination with some other known substances if in combination they exhibit some new result.

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The reason is that no one has earlier used that combination for producing an insecticide or fertilizer or drug. It is quite possible that an inventor has created a new molecule but its precise structure is not known. In such a case, description of the substance along with its properties and the method of producing the same will play an important role.

Combination of known substances into useful products may be a subject matter of a patent if the substances have some working relationship when combined together. In this case, no chemical reaction takes place. It confers only a limited protection. Any use by others of individual parts of the combination is beyond the scope of the patent. For example, a patent on *aqua regia* will not prohibit any one from mixing the two acids in different proportions and obtaining new patents. Methods of treatment for humans and animals are not patentable in most of the countries (one exception is USA) as they are not considered capable of industrial application. In case of new pharmaceutical use of a known substance, one should be careful in writing claims as the claim should not give an impression of a method of treatment. Most of the applications relate to drugs and pharmaceuticals including herbal drugs. A limited number of applications relate to engineering, electronics, and chemicals. About 62% of the applications are related to drugs and pharmaceuticals.

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