

REPORT

WORKSHOP ON

**“RESEARCH METHODOLOGY
&
SCIENTIFIC WRITING”**

15-17 March, 2017

**Division of Computer Engineering,
Netaji Subhas Institute of Technology**

REPORT: WORKSHOP ON RESEARCH METHODOLOGY AND SCIENTIFIC WRITING

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A . SUMMARY

A three day workshop on “Research methodology and Scientific Writing” was organized by the Division of Computer Engineering, NSIT from 15-17 March 2017. This report was read out to the audience by Ms. Ruchi Sharma on the conclusion of the FDP/workshop.

Participation: Initially, the workshop aimed at 75 participants, but after receiving an overwhelming count of registration requests, organizers increased the participant count to 120. Several persons contributed to the workshop. A team of TRFs and students served as volunteers, Dr. Pinaki Chakraborty and Ms. Vidhi Khanduja were the conveners. Prof. Shampa Chakraverty was the advisor-at-large.

Session 1: “Joys and Challenges of Engineering Research”- The event began with the Keynote address by Dr. Srinivasa K.G.from Chaudhary Brahm Prakash Engineering College. His talk on “Joys and Challenges of Engineering Research” marked a perfect beginning to the workshop. He shared some wonderful experiences and also talked about the challenges he faced during his research so far.

Session 2: “Simple and useful Statistics for researchers” - After getting into the groove with this really informative session, the next talk by Dr. Soumya Sasmal from NSIT, introduced some simple and useful statistics for researchers that might be helpful to present the research findings in a completely new light with stronger conclusions.

Session 3: “Hands on session on SPSS”-After getting an idea of the power that statistics can impart to all kind of research fields, the next session on day one of the workshop was a hands-on session on SPSS (Statistical tool on Social Sciences) conducted by Dr. Prabhat Mittal from Satyawati College. It gave researchers some experience on one of the most popular statistical tool in the field of research. The easy to use interface and the substantial strength that SPSS can offer was discussed in detail with some practical examples from different fields of research. The day one of the workshop ended on a positive note with some post event discussion sessions and interactions among the participants from similar and varied fields.

Session 4: “Plagiarism- How best to avoid it” -Day two began with the much needed informative talk on the ultimate crime of academia; Plagiarism. Ms. Vidhi Khanduja from NSIT gave a very detailed session on the topic and answered some questions that must have floated through every researcher’s mind. She suggested means to avoid this misconduct in research and also shed some light on the ways to rightfully include the existing research in our work. At the same time, she touched upon the possible consequences of plagiarized research to give an idea of the gravity of this issue. As per the participants, this session helped them to define boundaries and at the same time put an end to some of their misconceptions.

Session 5: “How to Find a Suitable Journal for your Paper” -The next session by Dr. Pinaki Chakraborty from NSIT focused on publishing issues. His talk on “How to find a suitable journal for your paper?” discussed the key points one should keep in mind while selecting a journal for their work. He talked about various metric systems of journal ranking while discussing their importance. He also stressed that the presence of a good metric value validates the superiority of a journal but its absence might not be

the right indicator to avoid it. His useful insights gave new hopes to many budding researchers in the event. This joyful session witnessed many queries being resolved and delusions being dissolved.

Session 6: “Researchers’ Experience Sharing Session”-This talk was followed by an open session convened by Prof. Shampa Chakraverty from NSIT where the participants were urged to share their research experiences while discussing the challenges they encountered, their eureka moments and the ongoing issues they are facing in the path of their research. This session substantiated the recurrent issue of dataset availability in the public domain among others. The need of collaborative research was also highlighted. This session established the fact that researchers across varied fields are going through very similar issues.

Session 7: “Hands-on Session on Latex”-The post lunch session on day two of the workshop was a hand-on session on “Preparing a document with LaTeX” conducted by Dr. Anil Singh Parihar from Delhi Technological University. The participants expressed extreme enthusiasm during this session. Dr. Parihar demonstrated very clear and stepwise approach towards document designing using LaTeX. He also suggested useful resources to get more comfortable with the software. The day ended with a detailed post event discussion among various researchers.

Session 8: “Data Collection and Analysis “-The final day of the workshop began with a very interactive and informative session on “Data Collection and Analysis” by Prof. Sonajharia Minz of Jawahar Lal Nehru University. She revived her days as a young researcher and discussed the era when research methodology was introduced as a subject in Indian universities. She discussed the areas of intersection between research in science and non-science disciplines. Prof. Minz defined the concept of research in a completely new light. She gave some useful insights on different types of datasets while briefly touching upon the ethical issues that might prevail during the process of data collection.

Session 9: “Hands-on Session on Data Analytics using R”- The day proceeded with a hands-on session on “Data Analytics using R” conducted by Dr. Sharanjit Kaur of Acharya Narendra Dev College, University of Delhi. She discussed some basics of R and gave an insight into the vast number of possibilities that can be explored using this tool.

Session 10: “Panel discussion-A Perspective on Indian Research”- The last session of the three day workshop “A panel discussion: A perspective on Indian research” witnessed some extremely eminent panelists including Dr. Lakshmisree Bandopadhyaya, a retired professor from University of Delhi, Prof. O.P. Verma, Delhi Technological University and Prof. Prabha Sharma from IIT Kanpur. The session was moderated by Prof. Shampa Chakraverty, Division of Computer Engineering, NSIT.

The discussion brought in some practical challenges that research in India is going through. The issues of competence of researchers in India was discussed. Panelists voiced the topic of low remunerations for the research scholars due to which some really competent researchers are either moving out of the country or opting for alternative careers. The topic of sanctity of various journals and conferences was also discussed in detail. The never ending question of journal versus conferences was also brought up and panelists felt that some conferences should be treated at par with the journals. They also discussed the changes that academic research has gone through over the time. Several participants joined the discussion to bring out some practical problems like grievances in the field of research urging for the formation of a moderating committee or cell to address such issues.

The three day workshop concluded on a progressive note with some post event discussions between budding and experienced researchers possibly towards a new path breaking research. The recommendations from our experience are submitted below.

B. RECOMMENDATIONS

After our experience of organizing this workshop and by the interactive sessions, the key implications that came into light after this workshop are:

- **Datasets for Research:** In today's data-centric world, research initiatives can be made relevant and useful to the society only if realistic datasets are available. Currently, researchers mostly rely on synthetic datasets or datasets available from websites of developed countries. However, it was felt that there is tremendous scope for conducting research in the Indian context for which concerted efforts are needed to make the data readily and timely available to researchers. Thus, it is suggested that more government and public sector organizations systematize the compilation and availability of non-confidential datasets on public domain.
- **Industry-Academia Research:** It was felt that much more collaboration between Industry and Academia is needed to improve the quality of research and boost its practical applicability. It is suggested that initiatives be taken at national, state and institute levels to enable joint industry-academia research.
- **Attract Talent:** In order to attract more talented young people into research, there is a need to set standards of assessments as well as emoluments at par with world standards.

C. ANALYSIS OF THE FEEDBACK FROM AUDIENCE

We conducted a feedback from all participants. The feedback analytics are given in Appendix. An overall feedback reflected a very good learning experience and participant's satisfaction. The analysis of the feedback is given below:

A questionnaire comprising four parts, one each on the theoretical, practical and interactive sessions and one part related to general questions, was distributed among the participants:

- The theoretical part comprises four psychometric questions related to technical content, delivery, interaction and overall usefulness. There is one descriptive question seeking the learning experience of participants.
- The practical part comprises three psychometric questions seeking ratings on coverage, query handling and overall usefulness. For the two interactive sessions, there are three questions each seeking ratings on interaction, audience enthusiasm and inspiring thought.
- The third part comprises six general questions gauging the infrastructure, software and quality of food and refreshments.
- The last part asks participants to describe their overall experience.

An overall analysis of the feedback follows:

Theoretical Sessions: These sessions were very well-received by the participants. *More than 90% participants found these sessions useful and the degree of interaction good or excellent.* More than 70% of the participants rated the technical content and the delivery of these sessions to be very good or excellent.

Some of the learning points given by the participants in their own words are:

1. "The sessions were quite informative and dealt with the relevant issues in research".
2. "There was a lot to learn from experiences and suggestions shared by researchers as well as academicians on Software R, latex, SPSS".
3. "Gained knowledge about how to choose journals, how to avoid plagiarism".

Practical Sessions: The participants were highly satisfied with these sessions. *More than 80% participants found these sessions useful and above 60% participants found the coverage of practical exercises in these sessions to be good or excellent.* More than 70% rated the handling of queries to be good or excellent. In fact, some participants suggested holding a 5-day workshop with more such practicals. Some comments are reproduced below:

1. "It was awesome participating in the workshop. I wish there are more of such workshops in the College. The practical sessions require more time for each of the software introduced in the workshop".
2. "Although the workshop was very informative, however it could have been more useful if more time can be scheduled for practical sessions. Looking forward for more workshops in future with more practical emphasis on Latex software".

Interactive discussions: The responses indicate that the interactive discussions were indeed relevant and beneficial for the participants. *Most of the participants felt the discussions were very thought provoking. The degree of interaction in both the Researchers Experience Sharing Session and Panel Discussion was*

rated by the majority of the participants to be good or excellent. More than 90% participants rated the audience enthusiasm to be good or excellent.

General: On a scale of 1-5, most of the participants rated the effectiveness of the display system to be 3 and found it satisfactory. Majority of the participants were happy with the cleanliness and upkeep of the auditorium. All the participants felt the volunteers were very helpful and the quality of food and refreshments and supporting software provided to them was good.

Overall experience:

Overall, the participants felt that the workshop was quite enriching and well-organized. They enjoyed the experience and hoped that there would be more of such workshops in the future. Few felt that the auditorium arrangements could be improved for more comfort.

Some comments reflecting the overall experience of the participants are listed below:

1. "Great! Was a fun time being there and a learning experience too!!...Enthralling! Enjoyed! Hoping soon for an again exciting learning experience".
2. "Spectacular"
3. "Overall, it was an informative experience. Hand on session of software was very good. Interactive sessions were quite helpful. The whole workshop was very well organized. The arrangements related to technical support, food and refreshments was also very good. One request to keep arranging such type of workshop in future as these are basic problems which the researchers face during their course. Another request to arrange a workshop on advance training on Latex as it is mandatory to be updated with this software for each academician. In addition to this, for hand on session of software, brief information should be provided like which topics will be covered".
4. "It was a well organized and extremely useful workshop....All the arrangements were good. Perhaps you can look into the seats in the auditorium. They do not seem to be ergonomically suited for long hours of sitting and were extremely uncomfortable. Sorry, it is a minor quibble but thought would help you in shifting your venue elsewhere next time. Overall, content wise, it was a great workshop!"

Report Compiled by: Prof. Shampa Chakraverty, Ms. Vidhi Khanduja, Dr. Pinaki Chakraborty,

Ms. Ruchi Sharma , Ms. Srishti Sharma, Ms. Sunny Rai, Ms. Divya Chaudhary

APPENDIX

31 responses

[View all responses](#) [Publish analytics](#)

Summary

Enter your registration-ID(optional):

RMSW48

RMSW63

05

64

RMSW/95

RMSW/09

80

singhjitendraor@gmail.com

dr.mahaveer

RMSW/54

RMSW/67

RMSW115

RMSW/96

RMSW/100

RMSW/111

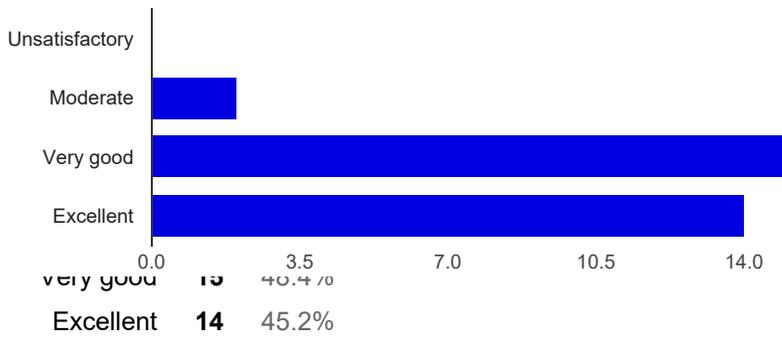
RMSW-94

RMSW/27

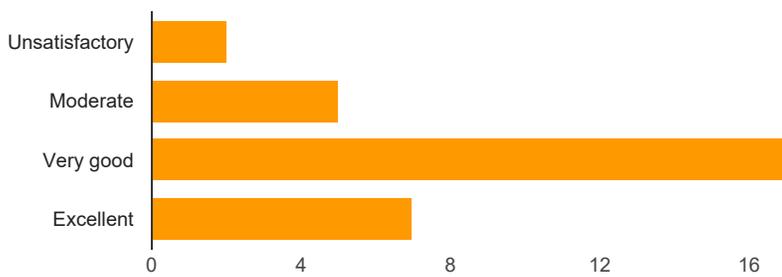
RMSW 52

1. Theoretical Sessions

Joys & Challenges [Technical Content]

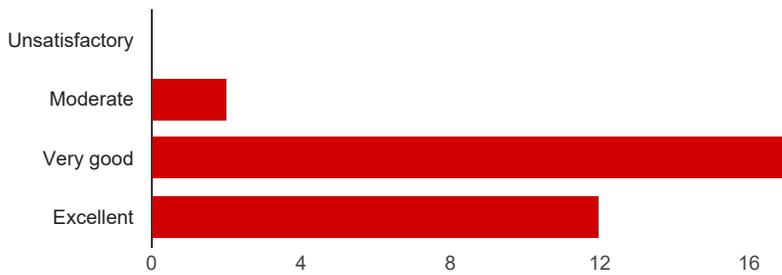


Statistics [Technical Content]



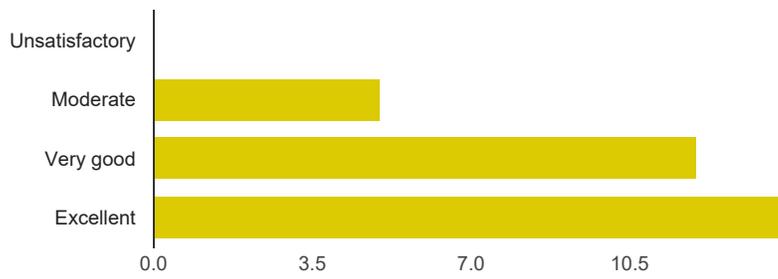
Unsatisfactory	2	6.5%
Moderate	5	16.1%
Very good	17	54.8%
Excellent	7	22.6%

Plagiarism [Technical Content]



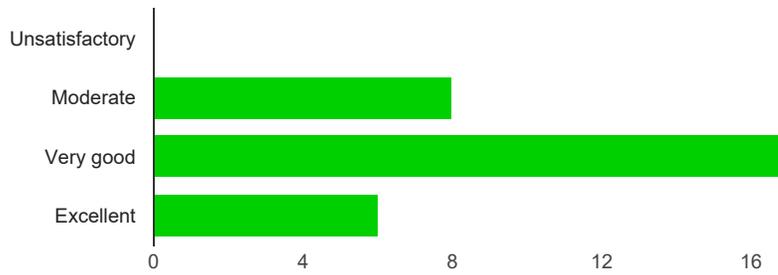
Unsatisfactory	0	0%
Moderate	2	6.5%
Very good	17	54.8%
Excellent	12	38.7%

Suitable Journal [Technical Content]



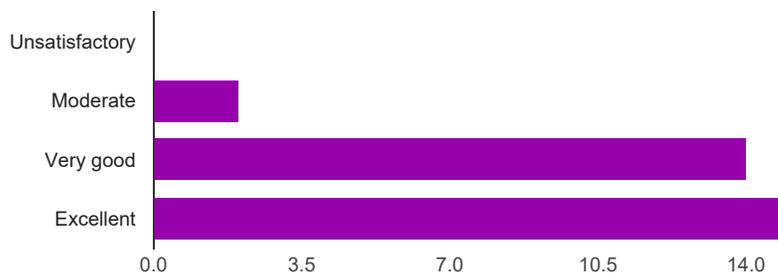
Unsatisfactory	0	0%
Moderate	5	16.1%
Very good	12	38.7%
Excellent	14	45.2%

Data Analysis [Technical Content]



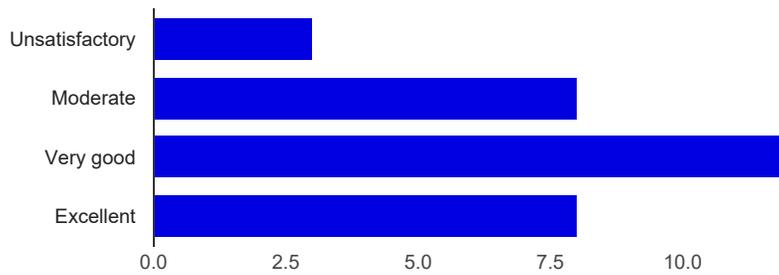
Unsatisfactory	0	0%
Moderate	8	25.8%
Very good	17	54.8%
Excellent	6	19.4%

Joys & Challenges [Delivery of the presentation]



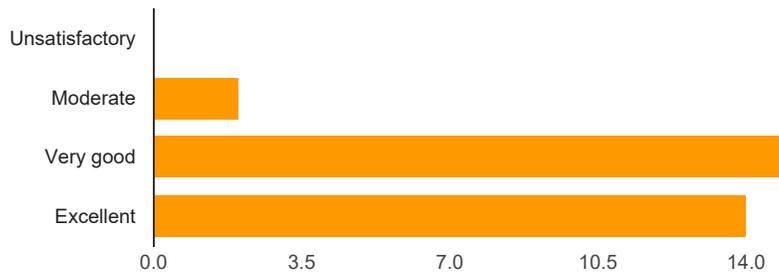
Unsatisfactory	0	0%
Moderate	2	6.5%
Very good	14	45.2%
Excellent	15	48.4%

Statistics [Delivery of the presentation]



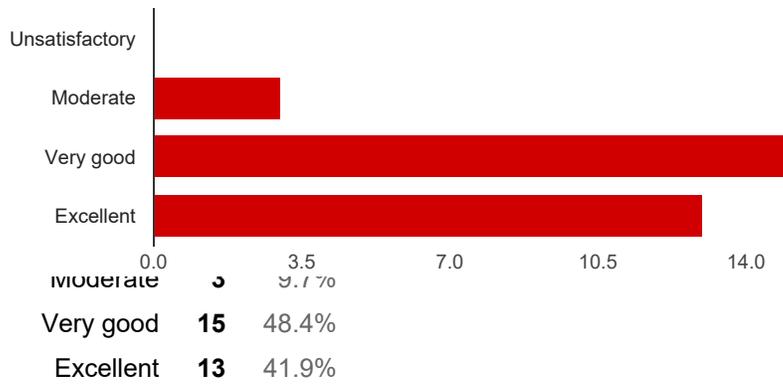
Unsatisfactory	3	9.7%
Moderate	8	25.8%
Very good	12	38.7%
Excellent	8	25.8%

Plagiarism [Delivery of the presentation]

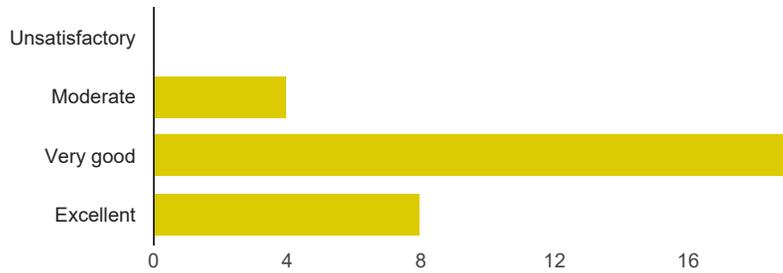


Unsatisfactory	0	0%
Moderate	2	6.5%
Very good	15	48.4%
Excellent	14	45.2%

Suitable Journal [Delivery of the presentation]



Data Analysis [Delivery of the presentation]



Unsatisfactory	0	0%
Moderate	4	12.9%
Very good	19	61.3%
Excellent	8	25.8%

Joys & Challenges [How useful did you find the session?]



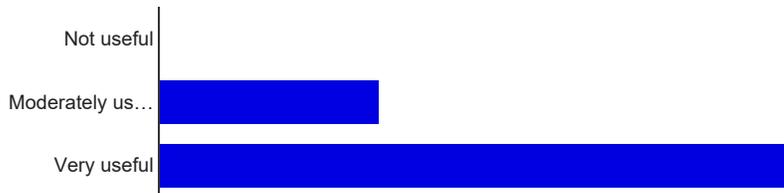
Not useful	0	0%
Moderately useful	8	25.8%
Very useful	23	74.2%

Statistics [How useful did you find the session?]



Not useful	2	6.5%
Moderately useful	15	48.4%
Very useful	14	45.2%

Plagiarism [How useful did you find the session?]



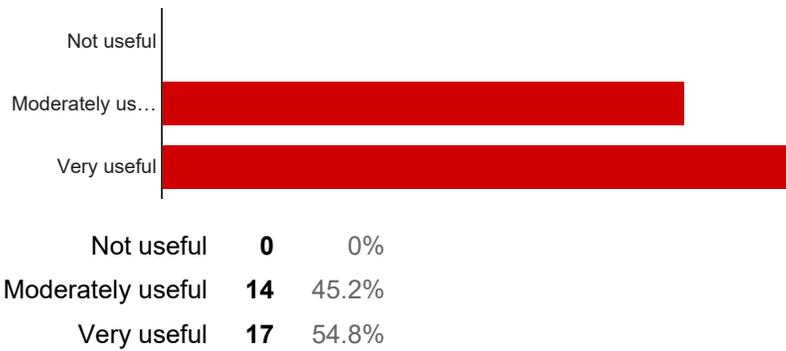
Not useful	0	0%
Moderately useful	8	25.8%
Very useful	23	74.2%

Suitable Journal [How useful did you find the session?]

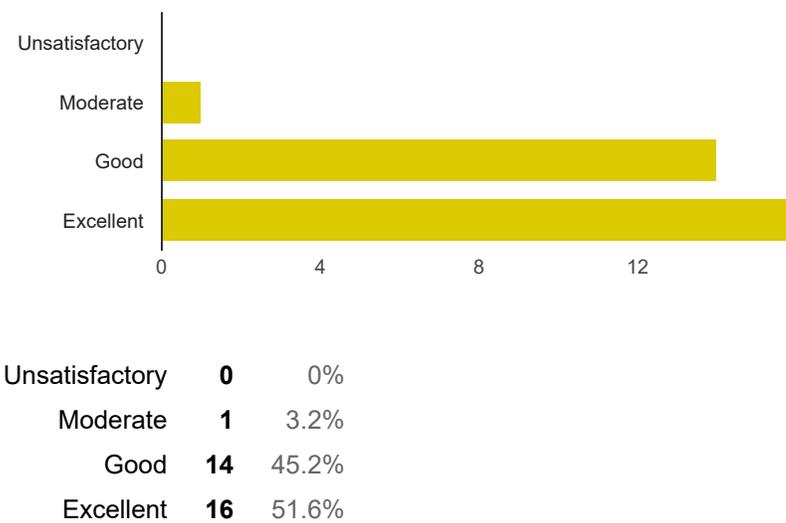


Not useful	0	0%
Moderately useful	6	19.4%
Very useful	25	80.6%

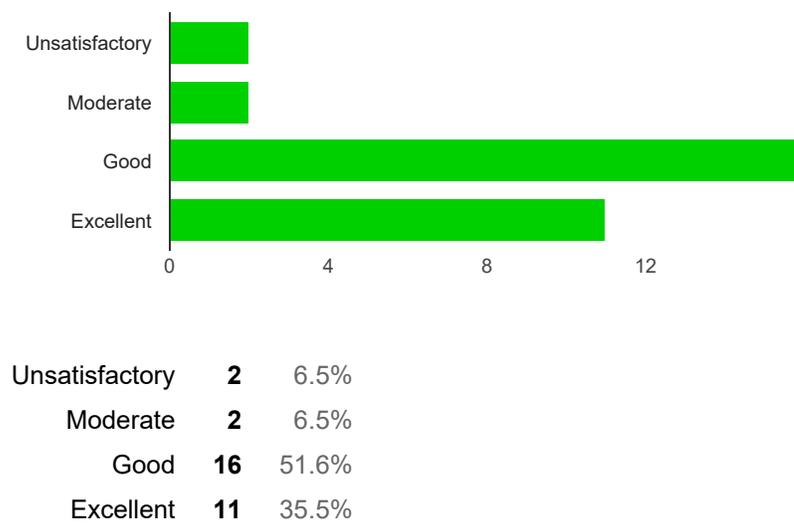
Data Analysis [How useful did you find the session?]



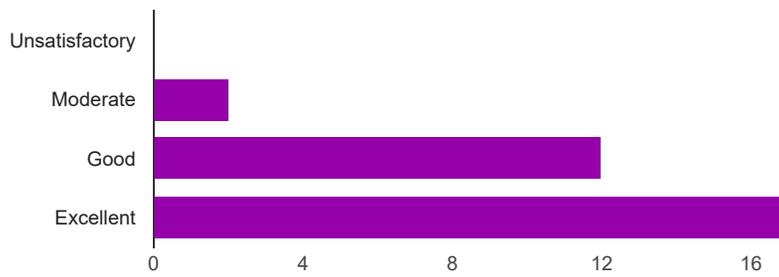
Joys & Challenges [Degree of interaction]



Statistics [Degree of interaction]

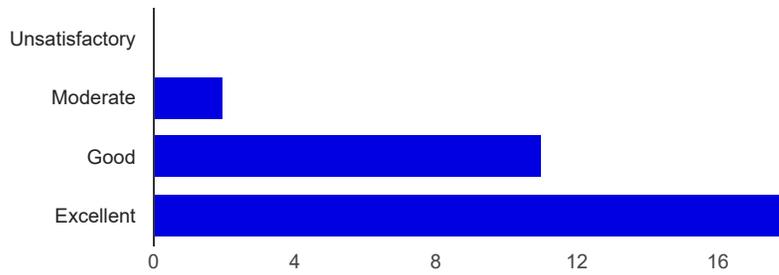


Plagiarism [Degree of interaction]



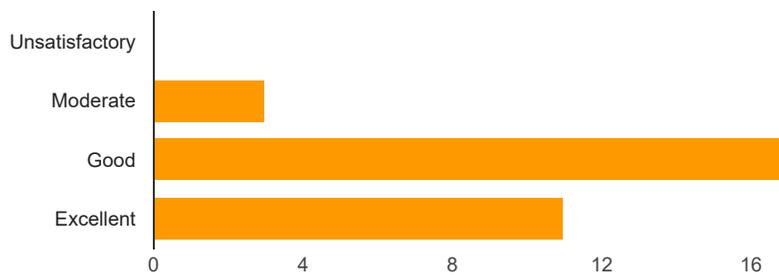
Unsatisfactory	0	0%
Moderate	2	6.5%
Good	12	38.7%
Excellent	17	54.8%

Suitable Journal [Degree of interaction]



Unsatisfactory	0	0%
Moderate	2	6.5%
Good	11	35.5%
Excellent	18	58.1%

Data Analysis [Degree of interaction]



Unsatisfactory	0	0%
Moderate	3	9.7%
Good	17	54.8%
Excellent	11	35.5%

Please describe the learning points that you have gained.

Learned to use Latex and R

1. get knowledge about how to do research and there is no restrictions on publishing research papers. 2. The work we publish should be attractive and original. 3. Avoid plagiarism on our research work.

The sessions were quite informative and dealt with the relevant issues in research.

Learnt SPSS, LATEX and R programming.

SPSS

need to be for 5 day at least

all Topics pertaining to Resarch Methodology & Scientific Writing

great overview

Knowledge of data statistics and how to write papers and find avenues for publishing

1. Practical Sessions were really good. I wish more time was given to each one of them. 2. Session given by Srinivasa Sir needs more time as he could not complete all the slides in his presentation. 3. Separate sessions on SPSS, LATEX and R programming is recommended.

many useful links

it was very interactive and helpful for our research purpose

Gained knowledge about how to chose journals, hpw to avoid plagiarism.

I like Gupta's theorm very much and shared with my friends. Another important point that I have gained is how to avoid plaquirism by giving the proper attribution to original work.

All

I have gain some useful knowledge that helpful in teaching learning process.

There was a lot to learn from experiences and suggestions shared by researchers as well as academicians Software R, latex, SPSS

Actually i just registered in the month of January..soo i learnt more much from this seminar..now i am very confident in all software. Nd can use in an essay manner....i am very thankful to all..to give us opportunity to attend this...

learned how to deliver for a workshop

over all it was a good event, improvement chances are always there

I learnt some new concepts from the plagiarism and best journal selection session.
approach for quality research

This workshop is really beneficial for me ,I am chemistry student so little bit found it boring when it comes to statistics but plagiarism, and knowledge about suitable journals is very good.

No Comment

Learned basics of Latex, SPSS.

It was quite good, but, could have been better if the duration was more ,specially for the clarity of Practical Sessions.

data analysis using SPSS, and a bit using R. LaTeX struggled to learn all by ourself, as the presentation wasn't helpful enough by every means. How to avoid plagiarism and a bit of liveliness, chirpiness and love for art from the vivacious Shampa Ma'am :-)).

workshop was quite useful in gaining knowledge about the research methodology and softwares

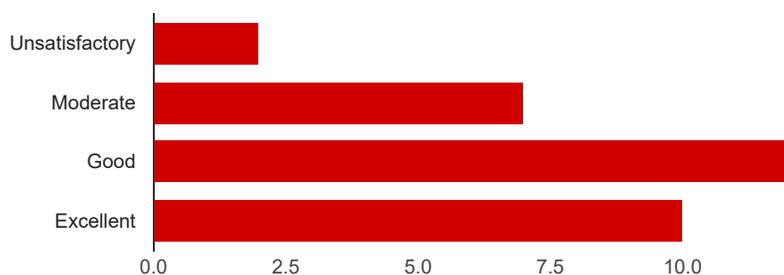
How to publish in a journal,predator journal, data analysis tools

Various aspects of plagiarism, how we can avoid it in a suitable manner. Information related to selection of suitable journal was quite helpful.

So many things I learnt there esp all the softwares u covered. Thanks to all the teachers esp NSIT.

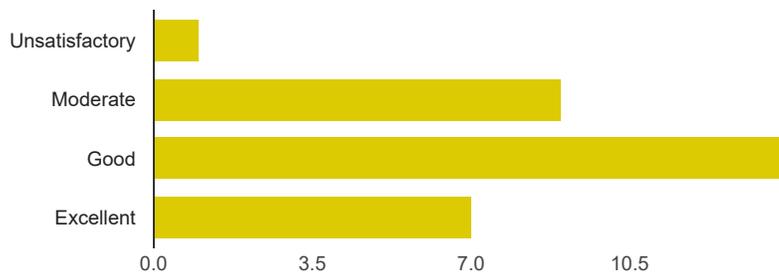
2. Practical Session

SPSS [Coverage of practical exercises]



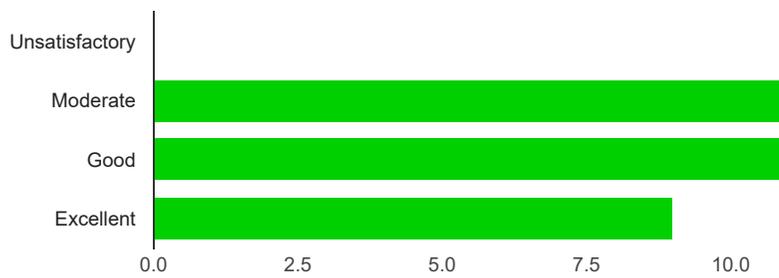
Unsatisfactory	2	6.5%
Moderate	7	22.6%
Good	12	38.7%
Excellent	10	32.3%

LaTeX [Coverage of practical exercises]



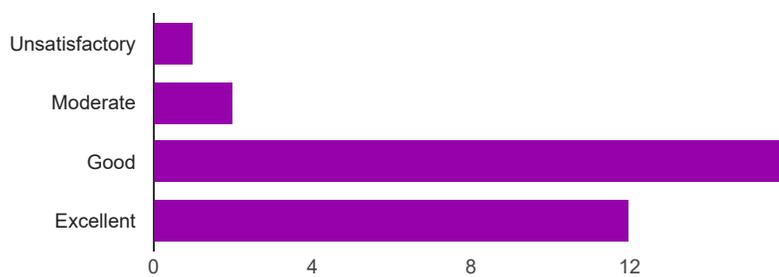
Unsatisfactory	1	3.2%
Moderate	9	29%
Good	14	45.2%
Excellent	7	22.6%

R [Coverage of practical exercises]



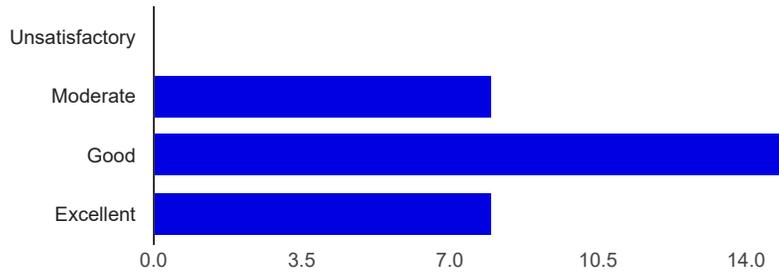
Unsatisfactory	0	0%
Moderate	11	35.5%
Good	11	35.5%
Excellent	9	29%

SPSS [Handling queries]



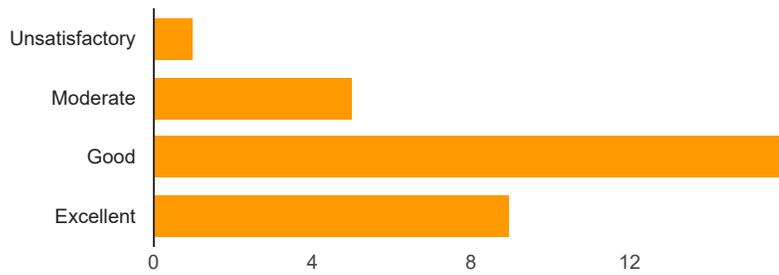
Unsatisfactory	1	3.2%
Moderate	2	6.5%
Good	16	51.6%
Excellent	12	38.7%

LaTex [Handling queries]



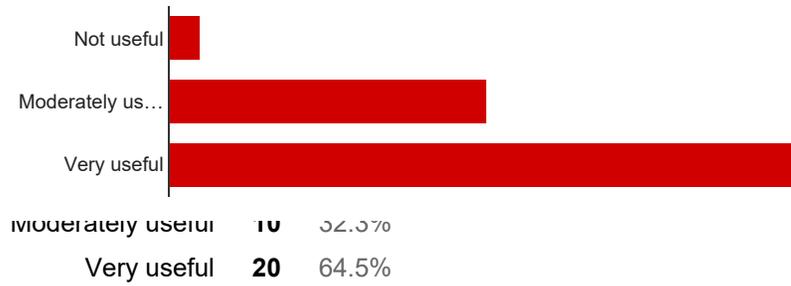
Unsatisfactory	0	0%
Moderate	8	25.8%
Good	15	48.4%
Excellent	8	25.8%

R [Handling queries]

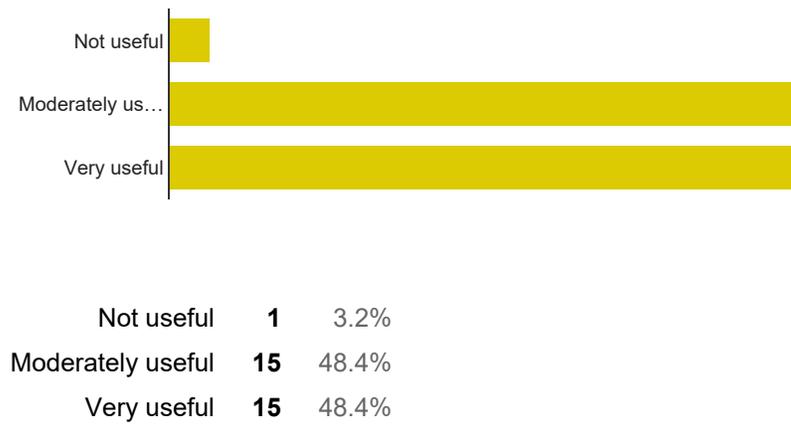


Unsatisfactory	1	3.2%
Moderate	5	16.1%
Good	16	51.6%
Excellent	9	29%

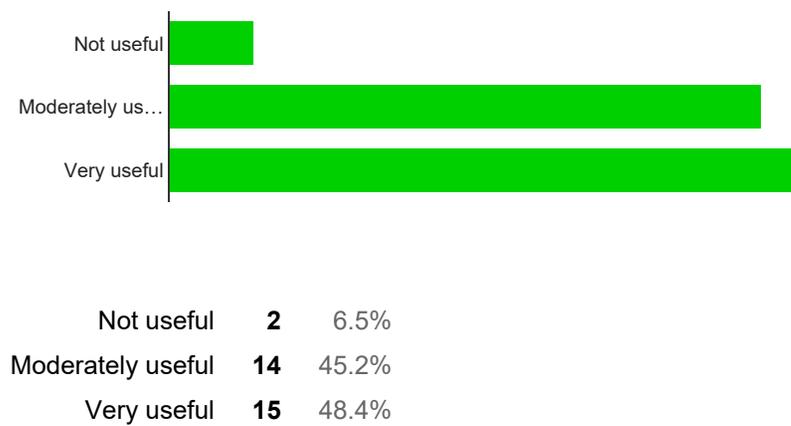
SPSS [How useful did you find the session?]



LaTex [How useful did you find the session?]

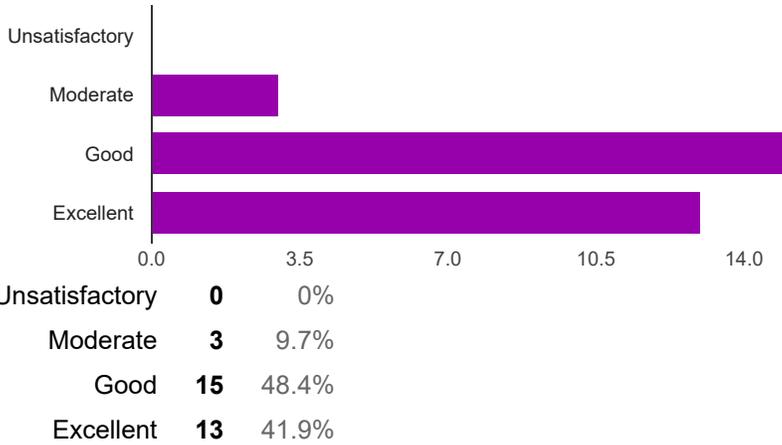


R [How useful did you find the session?]

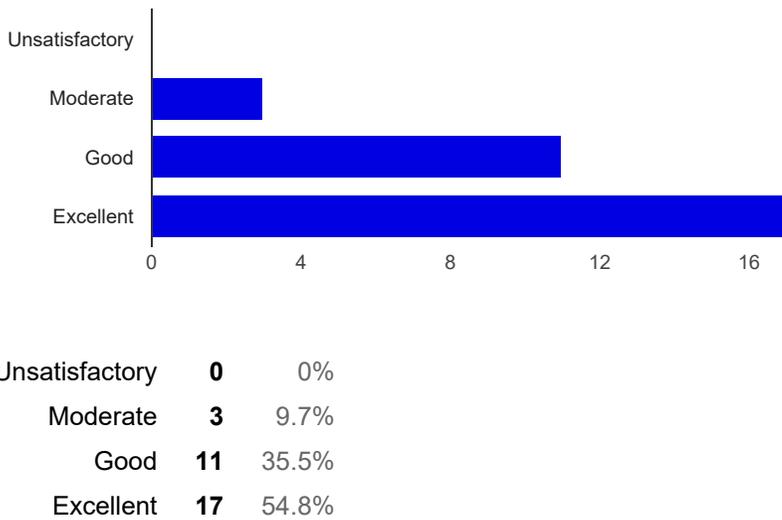


3. Interactive Discussions

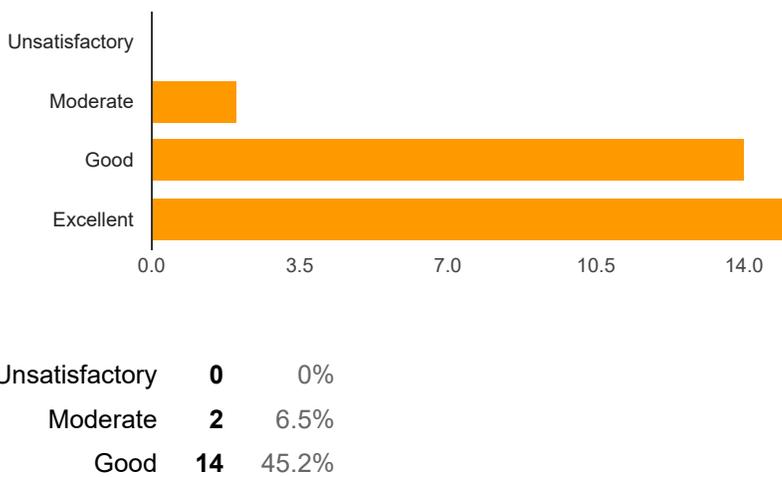
Experience Sharing [Degree of interaction]



Panel Discussion [Degree of interaction]

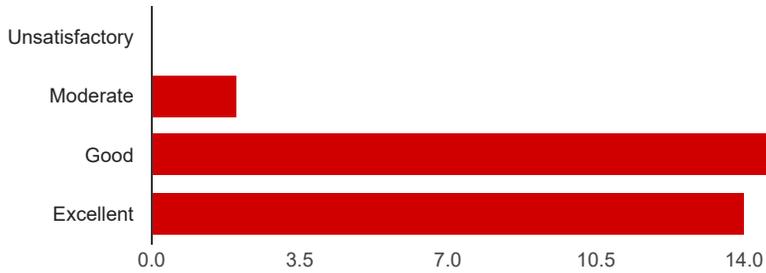


Experience Sharing [Audience Enthusiasm]



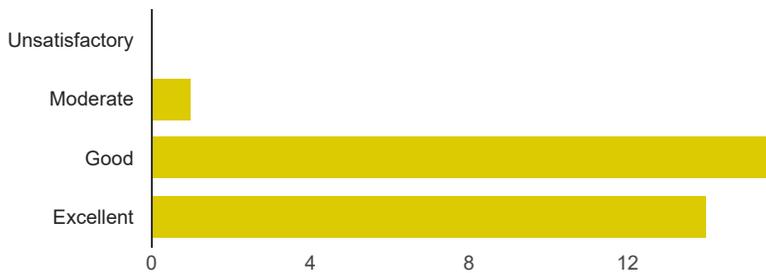
Excellent **15** 48.4%

Panel Discussion [Audience Enthusiasm]



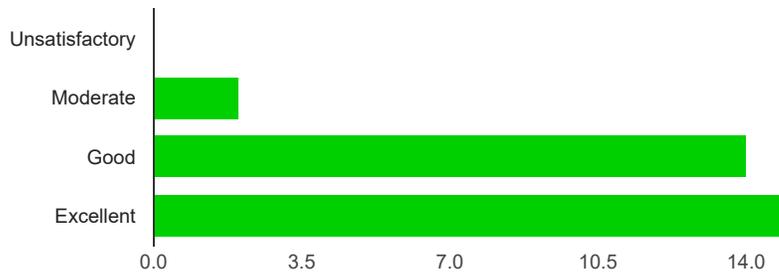
Unsatisfactory **0** 0%
Moderate **2** 6.5%
Good **15** 48.4%
Excellent **14** 45.2%

Experience Sharing [How thought provoking were the discussions?]



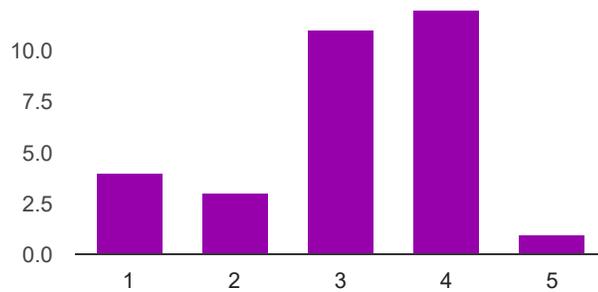
Unsatisfactory **0** 0%
Moderate **1** 3.2%
Good **16** 51.6%
Excellent **14** 45.2%

Panel Discussion [How thought provoking were the discussions?]



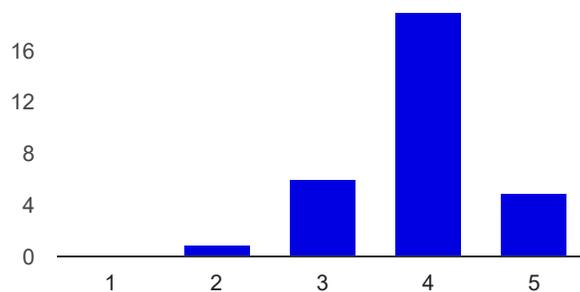
4. General

Effectiveness of display system (projector, LCD screens)



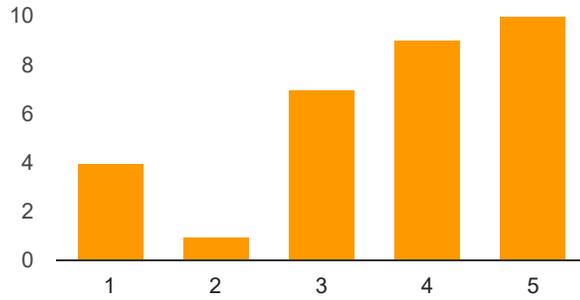
very poor: 1	4	12.9%
2	3	9.7%
3	11	35.5%
4	12	38.7%
Excellent: 5	1	3.2%

Effectiveness of audio system



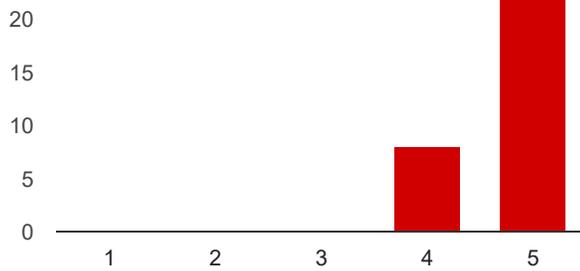
very poor: 1	0	0%
2	1	3.2%
3	6	19.4%
4	19	61.3%
Excellent: 5	5	16.1%

Cleanliness and maintenance of auditorium



very poor: 1	4	12.9%
2	1	3.2%
3	7	22.6%
4	9	29%
Excellent: 5	10	32.3%

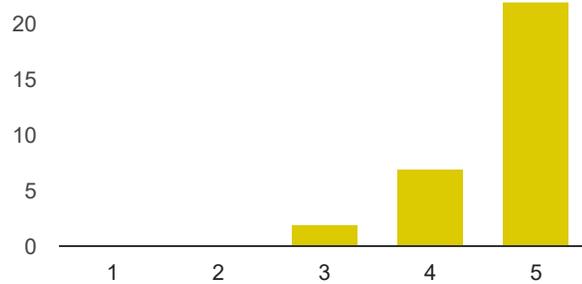
Helpfulness of volunteers



very poor: 1	0	0%
2	0	0%
3	0	0%

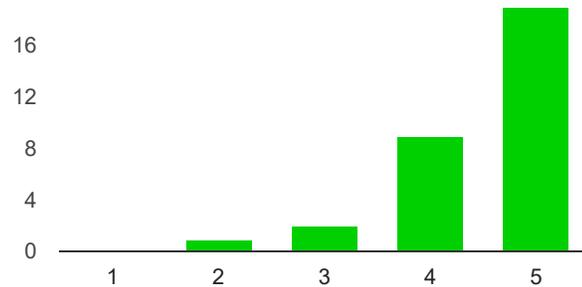
4 **8** 25.8%
Excellent: 5 **23** 74.2%

Quality of food and refreshments



Very poor: 1 **0** 0%
 2 **0** 0%
 3 **2** 6.5%
 4 **7** 22.6%
Excellent: 5 **22** 71%

Supporting material such as softwares



Very poor: 1 **0** 0%
 2 **1** 3.2%
 3 **2** 6.5%
 4 **9** 29%
Excellent: 5 **19** 61.3%

Please describe your overall experience of attending the workshop.

good

excellent

It was really a good experience for me. please arrange more such workshops as soon as possible.

It was an eye opener.

spectacular

Satisfactory

Very Good

learn many positive side of this kind of holding a workshop

It was awesome participating in the workshop. I wish there are more of such workshops in the College. The practical sessions require more time for each of the software introduced in the workshop.

Good, BUT pls provide us all the slides and material.

it ws wonderfull

Although the workshop was very informative, however it could have be more useful if more time can be scheduled for practical sessions. Looking forward for more workshops in future with more practical emphasis on Latex software.

It was nice.

Good to have these kind of workshops as a common platform

VERY GOOD

Very usefull

It was a very very great experience..i learnt soo much from this workshop

Excellent

it was nice experience

It was indeed a learning experience. I actually learnt something new that would be useful for ever. Hoping for the next workshop soon.

could listen different views and suggestion for quality research

overall it is satisfactory and I gained many knowledgeable points

will surely see you next time

no comment

Quite enriching

Great! Was a fun time being there and a learning experience too!!...Enthralling!

Enjoyed! Hoping soon for an again exciting learning experience.

It was really good. I wish we would have more such conferences in our college.

It was a well organised and extremely useful workshop. Could you please share the presentation of Dr.Srinivasa (key note) over email: sruthi.samuel@ignou.ac.in. All the arrangements were good.Perhaps you can look into the seats in the auditorium. They do not seem to be ergonomically suited for long hours of sitting and were extremely uncomfortable.Sorry,it is a minor quibble but thought would help you in shifting your venue elsewhere next time.Overall,content wise,it was a great workshop!

Overall, it was an informative experience. Hand on session of software was very good. Interactive sessions were quite helpful. The whole workshop was very well organized. The arrangements related to technical support, food and refreshments was also very good. One request to keep arranging such type of workshop in future as these are basic problems which the researcher face during their course. Another request to arrange a workshop on advance training on Latex as it is mandatory to be updated with this software for each academicians. In addition to this, for hand on session of software, a brief information should be provided like which topics will be covered.

I liked the workshop. It was very useful for all the researchers. Thanks once again for organizing such amazing workshop.

Number of daily responses

