



LATEX WORKSHOP

IEEE MVSR PES in collaboration with Spoken Tutorial and EESA MVSREC has organized a one-week hands-on workshop on LaTeX software from 26th April 2021 to 2nd May 2021. The main objective behind conducting this workshop is to encourage students to write papers and so this software helps students to write a paper with fewer effort.

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DAY 1: Introduction to LaTeX

The session was commenced by Mr Bharat Mohan, Assistant Professor, EEE Department, MVSR Engineering College. He welcomed the speaker, faculty and participants of the webinar. Abiding by Indian Tradition, the session began with an invocation song sung by Mrs D Sai Prasanna, Assistant Professor, EEE Department. Followed by this Mr Bharat Mohan invited Mr CVGK Rao, Hod, EEE Department to address the meet. Mr CVGK Rao firstly congratulated Mr Bharat Mohan and the team for organizing this workshop. He briefed about the importance of LaTeX and urged 4th years to make optimal utilization of this workshop. He also urged students to follow the workshop regularly and try to prepare their assignments, project reports using LaTeX.

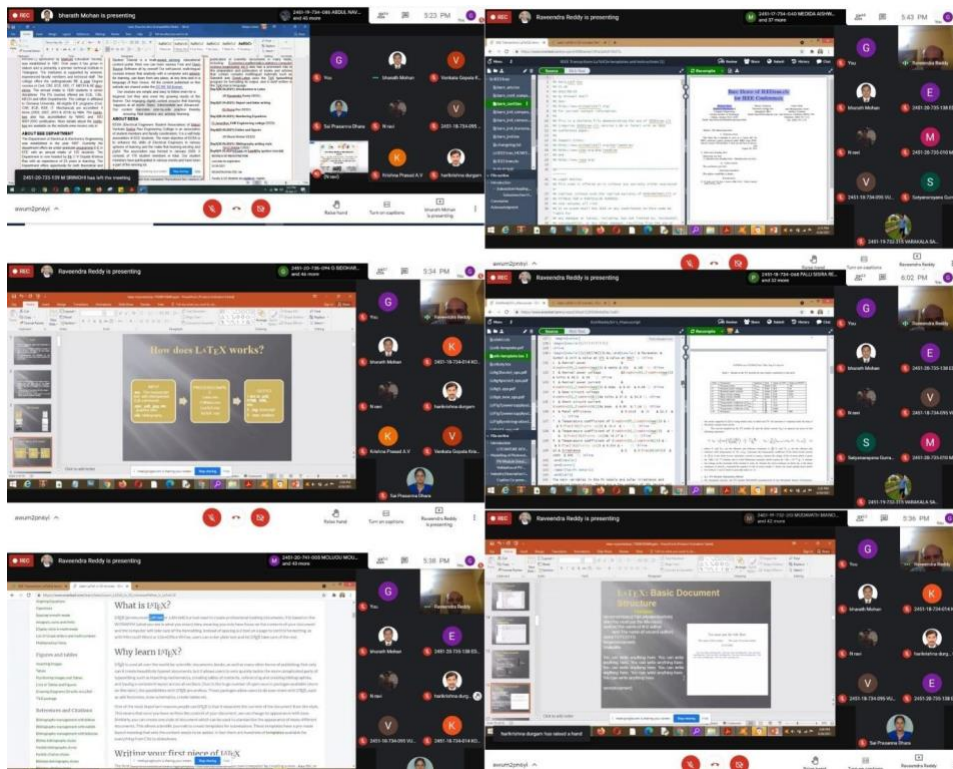
Later on, Dr D. Hari Krishna, Student Branch Counsellor, IEEE MVSR SB has addressed the gathering and then, Dr AV Krishna Prasad, Associate Professor, IT Department, MVSR Engineering College and Spoken Tutorial Coordinator addressed the meet, he asked students to follow the syntaxes, procedures and to attend the sessions without fail. The schedule for the LaTeX workshop was unveiled by Mr Bharat Mohan and he briefed about the certificates. He then introduced the speaker to the audience and handed over the session to him.

Speaker for today's session was Mr Raveendra Reddy, Assistant Professor, EEE Department, MVSR Engineering College.

He firstly thanked the event coordinators for giving him this opportunity and began by giving an introduction about LaTeX pronounced as "Lay-tek". TeX is a typesetting system that incorporates a microprocessor. It is developed by scientific enthusiasts and is widely used for Compiling Reports, Journals, Books, Research Papers, Bibliography etc. It is easier to incorporate equations, formulae, tables in LaTeX than in other text editors. He then went on to explain how LaTeX works, it can be explained in three steps, in the first step the user has to give input. In the second Step LaTeX processes the data, if there are any errors it displays them and in the third step, if there aren't any errors it displays the output. LaTeX follows a principle which is what you type is what you get, unlike in other text editors where you have to take care of margins, text alignment, inserting images and tables, in LaTeX it does all the above-mentioned tasks by itself. Mr Raveendra then presented a list of installation packages and also mentioned the instructions. He used overleaf, an online LaTeX editor to give a live demonstration about LaTeX. With the help of documentation provided in Overleaf, one can learn how to use it effortlessly. Speaker opined that LaTeX is analogous to web development. He advised participants that they should take care of tags while writing text. Overleaf also contains some inbuilt themes which users can utilize as per their requirement. There are also templates for books, reports, calendars, assignments, resume/cv.

Later on, he showcased how to change text parameters and asked students to do it simultaneously. Speaker then explained how to insert images step by step, first, the user has to upload the image to the local folder and then have to mention the name of the image along with the command to use it in the document. He presented how to add lists to documents, how to include equations along with their syntaxes. He concluded by expounding about presentations in LaTeX.

Mr Bharat Mohan thanked Mr Raveendra Reddy for sparing his time and delivering an enthralling session on LaTeX. He asked participants to practice and notified them about Day 2's schedule.

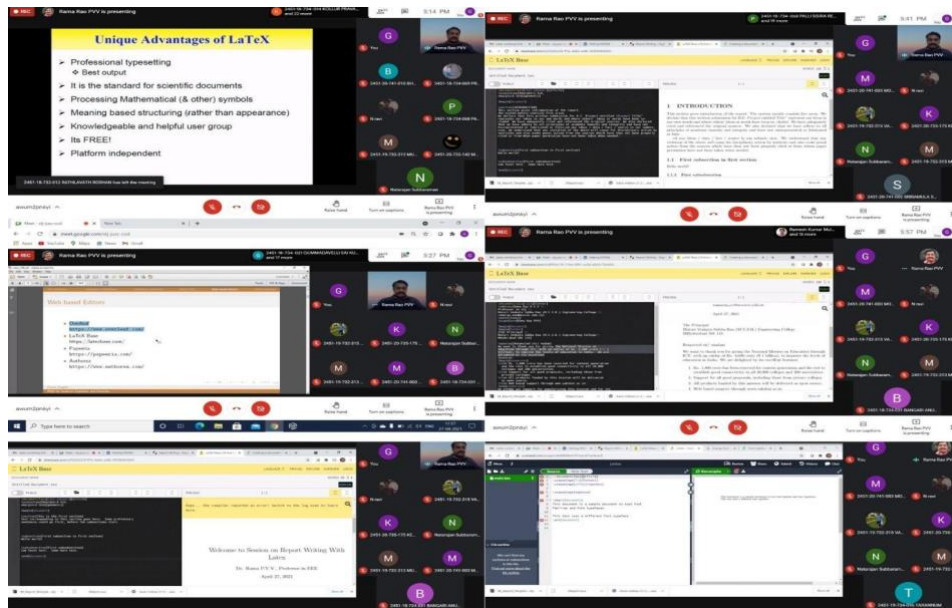


Snapshots from Day 1 of Workshop

DAY 2: Letter and Report Writing

The session was initiated by Mr Bharat Mohan, who introduced Speaker for today's session Dr PVV Rama Rao, Professor, EEE Department MVSRR Engineering College and handed over the session to him. Dr Rama Rao gave a brief recap of the contents which were explained in yesterday's session. He also presented a list of advantages and disadvantages of LaTeX. Advantages are it is free and is an independent platform, has meaning based structure, Standard for scientific documents. Disadvantages are, it requires constant practice and learning and it is hard to write an unorganized document in LaTeX. Speaker then briefed about the importance of parenthesis and also the parts of a document in LaTeX. He asked students to follow spoken tutorial lectures if they were having any problems. Steps for installation of TeX and links of online TeX editors were also provided in the session. Dr Rama Rao went onto explain how to create a document step by step. He used LaTeX Base for this demonstration. He urged the participants to follow the steps he was doing and asked them to imitate them on their own. Later on, he discussed report writing and how to compose letters using LaTeX.

He concluded by clearing the queries raised by participants. Mr Bharat Mohan Acknowledged Dr Rama Rao for the insightful session and called it a day.



Snapshots from Day 2 of Workshop

DAY 3: Equations in LaTeX

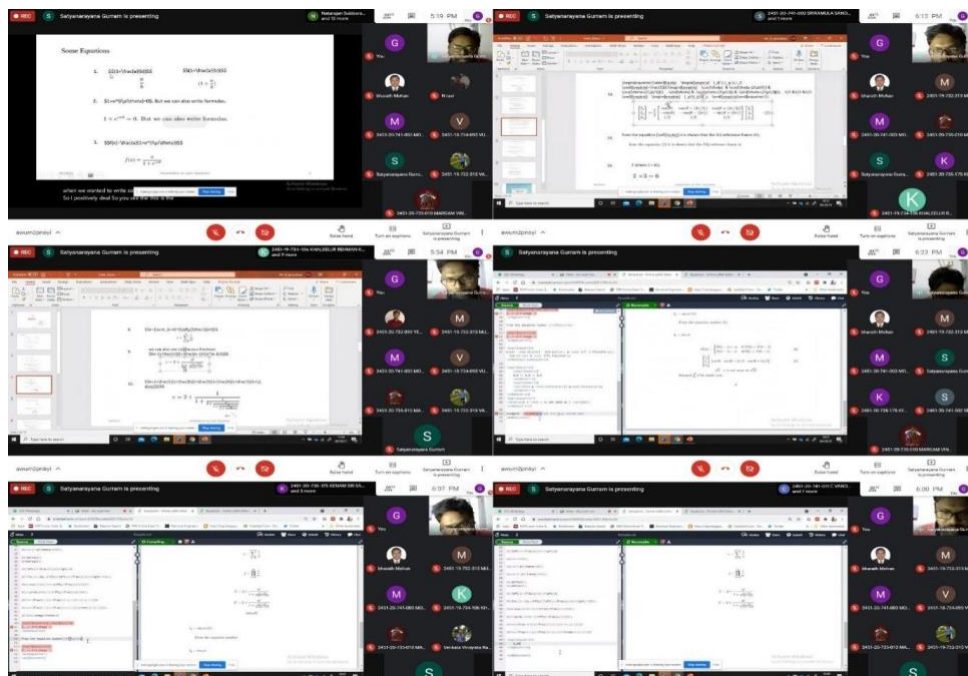
Mr Bharat Mohan started the session by welcoming all participants and called upon Mr N Ravi, Assistant Professor, EEE Department MVSR Engineering College to introduce today's speaker and hand over the session to him. Today's Speaker was Mr G Janardhan, Assistant Professor, CVR Engineering College. Today's session was on Equations. Mr Janardhan opined that LaTeX can not be learnt in weeks or days; it requires constant practice. He began by displaying some equations, later on with aid of overleaf he explained step by step how to write them in LaTeX. Firstly, he discussed Inline equations, why is an equation placed between dollars (\$ equation \$). Unlike in other word editors where you have to search for symbols to use them, in LaTeX each symbol has its own mnemonic. By mentioning that mnemonic, the required symbol can be used in the document. Speaker the differentiated between forward-slash (\) and double forward-slash (\\) where later is used to start a new line while forward slash is used to include something from inbuilt Library.

Followed by this Mr Janardhan demonstrated how to write separate equations. There are two different methods to do this. In the first one, the equation can be written between double dollars (\$\$ equation \$\$) in the second method one has to mention the equation to be included in the document between `\begin {equation}` Write equation `\end {equation}`. Use of braces inequation was also demonstrated. Speaker then showcased some equation examples in which powers were involved. He also made participants aware of the difference between “\delta and \Delta” and “\theta and \Theta”. He recommended participants practice by themselves rather than referring to videos and also suggested starting with a sample document that is already written in LaTeX.

Mr Janardhan also demonstrated how to write complex equations in LaTeX and how to use summation. In case of errors, he asked participants to take the help of the internet or LaTeX forums. He then went onto explain trigonometric equations, writing matrices in the document

and also how to include functions. He ended the session by showcasing how to use integrals in LaTeX.

Mr Bharat Mohan thanked the speaker for delivering a wonderful session and notified participants about tomorrow's session.



Snapshots from Day 3 of Workshop

DAY 4: How to insert Tables, Figures and Graphs in LaTeX.

On day 4, the agenda for the day was to make students learn how to add tables, figures and graphs. The session was kicked off by M. Bharat Mohan by welcoming the faculty and attendees and gave a brief introduction about the session's speaker Dr D. Sirisha, CSE department, MVSR Engineering college and handed over the session to her. Firstly, she thanked the EEE department for giving her the opportunity and later discussed what she was going to share knowledge about LaTeX.

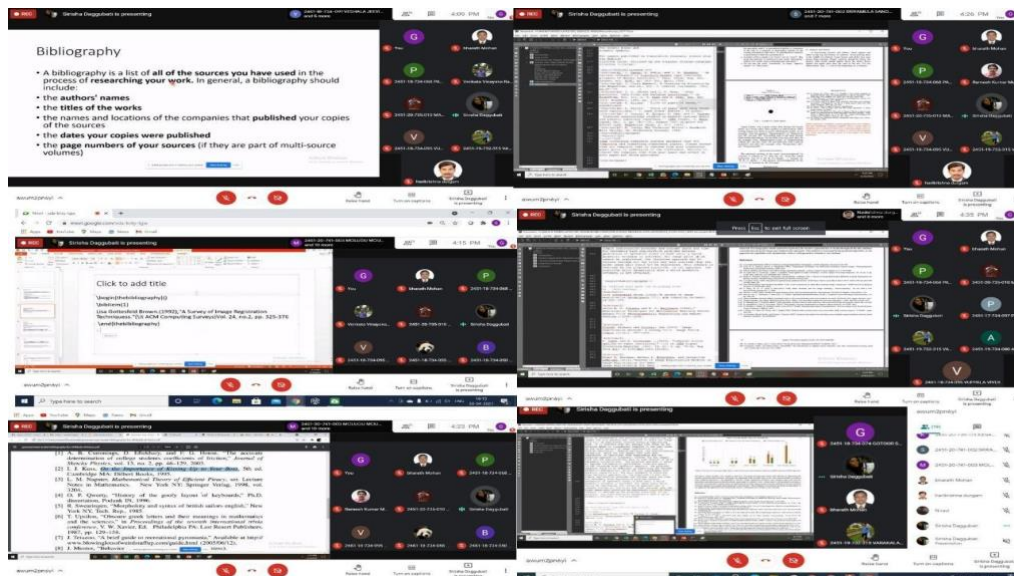
She showed how the code must be written to add points in subdivisions in a document. She pointed that the font style depends upon the publisher who publishes it. She also demonstrated how tables are added in the LaTeX code. She presented how to add rows and columns depending upon their number and also the alignment of the table. She has also shown how to draw horizontal and vertical lines for tables and also how to give captions and labels to them.

She also displayed the code of how to add knots that is a table of single row and single column. She also gave us an idea of how to add graphs and other figures in a LaTeX document wherever required. She urged participants to practise the same on LaTeX and concluded the session.

DAY 5: Bibliography in LaTeX

On day 5, the agenda of the session was to make attendees learn about how to cite references in a report in LaTeX. Mr Bharat Mohan welcomed all the participants and handed over the

session to Dr D. Sirisha. Firstly she pointed out that the art of writing a bibliography varies based upon the publisher. She has shown the syntax for Springer publications.



Snapshots from Day 5 of Workshop

Later, she demonstrated the style of bibliography for all kinds of items related to IEEE that is books, journals, Conference papers etc. and insisted to follow the same using the syntax she has presented. She has displayed the syntax for Taylor and Francis Group Publication. She also shared the syntax which is used to refer to the unpublished paper which is on the internet.



Virtual mementoes presented to speakers.

Later, the Valedictory Ceremony was commenced by Mr Bharat Mohan and he gave instructions to attendees on how to write an exam and avail certificate from the Spoken tutorial. Mr Vivek, student coordinator, IEEE MVSRS SB proposed a Vote of Thanks and requested Mr C.V.G.K. Rao, HOD EEE department to address the audience. Mr C.V.G.K. Rao congratulated event coordinators, faculty and student, for their enormous efforts and thanked speakers who

have spared their valuable time to share their knowledge about LaTeX. Then, Dr D. Hari Krishna told about the importance and suggested everyone make use of Latex. Mr Vivek reported the one week workshop and presented the virtual mementoes to all the speakers and this marked the end of the one week workshop.

REPORTED BY-

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