Report on the Online National Workshop on of Documentation using LaTeX

The Online National Workshop on Basics of Documentation using LaTeX was organised by the department of Mathematics, Stella Maris College on 24, 25, 29 and 30 of April 2020. The sessions were handled by the resource persons Dr. V. Dhanalakshmi, Dr. A. S. Shanthi and Dr. S. Sarah Surya, Assistant Professors, Department of Mathematics, Stella Maris College. The programme was convened by Dr. V. Jude Annie Cynthia, Head, Department of Mathematics and organised along with Dr. V. Dhanalakshmi, Ms. V.F. Fancy and Ms. Benazir Obilia, Assistant Professors, department of Mathematics.

The Online National Workshop on the Basics of Documentation using LaTeX kick-started with a prayer by Dr. Felbin C Kennedy, Vice-Principal, Stella Maris College & Associate Professor of the Department, followed by Dr. V. Jude Annie Cynthia welcoming the participants and introducing the speakers.

1748 participants belonging to **24 States & Union Territories** of India namely, Andhra Pradesh, Assam, Bihar, Chattishgarh, Gujarat, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Nagaland, New Delhi, Odisha, Punjab, Puducherry, Rajasthan, Tamil Nadu, Telangana, , Uttar Pradesh, Uttrakhand, West Bengal, as well as from Sur College of Applied Sciences, Oman, Tongji University, Shanghai, China, Nizwa College of Technology, Nizwa, Oman registered for the Workshop. Due to the overwhelming response from the participants all over India, the workshop was held in two batches (FN batch and EN batch). There were a total of **1223** participants belonging to around **410 institutions** like IITs, IISC, NIT, JNU, BITS and various other Universities and colleges from India and abroad, who were able to log in for the sessions of the workshop. The online platform that was used to conduct this workshop was offered by the private software company Impartus.

The first three days of the online workshop was shared by two resource persons - Dr. A. S. Shanthi and Dr. S. Sarah Surya. They started with an Introduction to research and gave a clear demo on the Installation procedure. Both Dr. Sarah and Dr. Shanthi simultaneously covered the topics such as Simple typesetting, Typesetting - Font & Page Style, Parts of a document, Dividing the document, Typesetting Mathematics, Typesetting – Bullets, Matrices & Tables, Typesetting Equations, Typesetting & Customising Theorems, Inserting Figures and concluded with Typesetting References & Bibliography.

The resource person for the fourth day was Dr. V. Dhanalakshmi, who explained how to draw and plot using the TikZ/PGF plot package. The session started with the basic understanding of cartesian coordinate system, then proceeded to drawing basic shapes and adding text in the figure. Some of the components needed for documentation like drawing network diagram, block diagram, flow chart and graphs were discussed. The highlighting part of the discussion is automating the figure using foreach command, when there is a pattern in the structure. To demonstrate this, complete bipartite graph was used. Finally, the feature of plotting in Latex using PGF plots was discussed. Some of the 2D, 3D functions were plotted and also a curve was plotted for the data set that is available in .csv file.

The participants were given assignments on the first two days and were asked to submit before 28 April'20. It was corrected by the organizers and the Ph. D. Scholars of the Department and feedback was given to the participants from the 29 of April 2020, which were highly appreciated by the participants.

The workshop concluded with the Vote of Thanks by Ms. V. F. Fancy, Assistant Professor of the Department. e- Certificates were provided to the participants who attended at least three sessions. 951 participants received their e-certificates at the end of the workshop.

Overall, the workshop was a great success which was evident from the feedback collected from participants and the Department was happy and contented to offer such a programme to cater to the needs of researchers during this pandemic, as one such programme would certainly motivate as well as help the academicians to promote research in this period of lockdown.