DEPARTMENT OF MATHEMATICS, STATISTICS & COMPUTE SCIENCE

Departmental Activities Report – 2019 - 20

Online National Faculty Development Programme

On

"MATHEMATICS FOR COMPUTER SCIENCE"

A two-day online National faculty development programme on **"MATHEMATICS FOR COMPUTER SCIENCE"** was organized by the department of Mathematics, Statistics and Computer Science on 30th and 31st May,2020. The main objective of the FDP was to enhance the knowledge and skills of teachers towards the emerging trends in Computer Science. The importance of Mathematics in the field of Computer Science is rapidly progressing. The courses like Probability, Statistical Inference, Optimization techniques, Linear Algebra, Graph Theory, Combinatorics and Number Theory are used in the field of Computer Science. This FDP mainly focused on applications of mathematics to Computer Science.

The FDP was conducted using the Cisco WebEx application for video conferencing in which a total of 82 participants from all over India attended on both the days with Dr. Shakira Sultana, Lecturer in Mathematics, hosting it.

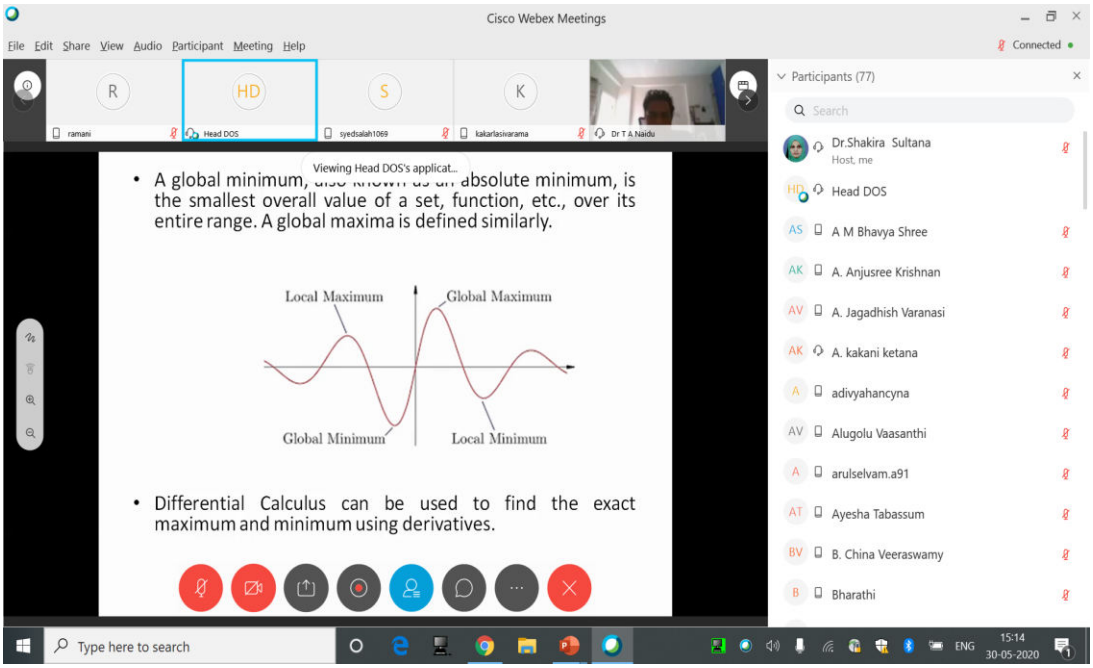
INAUGURAL SESSION:

The FDP was inaugurated graciously by the Convener, Dr. K Vijayalakshmi, Head, Departments of Mathematics Statistics and Computer Science by welcoming the participants and introducing them to the objectives of the programme. Dr. Vijayalakshmi also emphasized the benefits of such kind of resourceful activity.

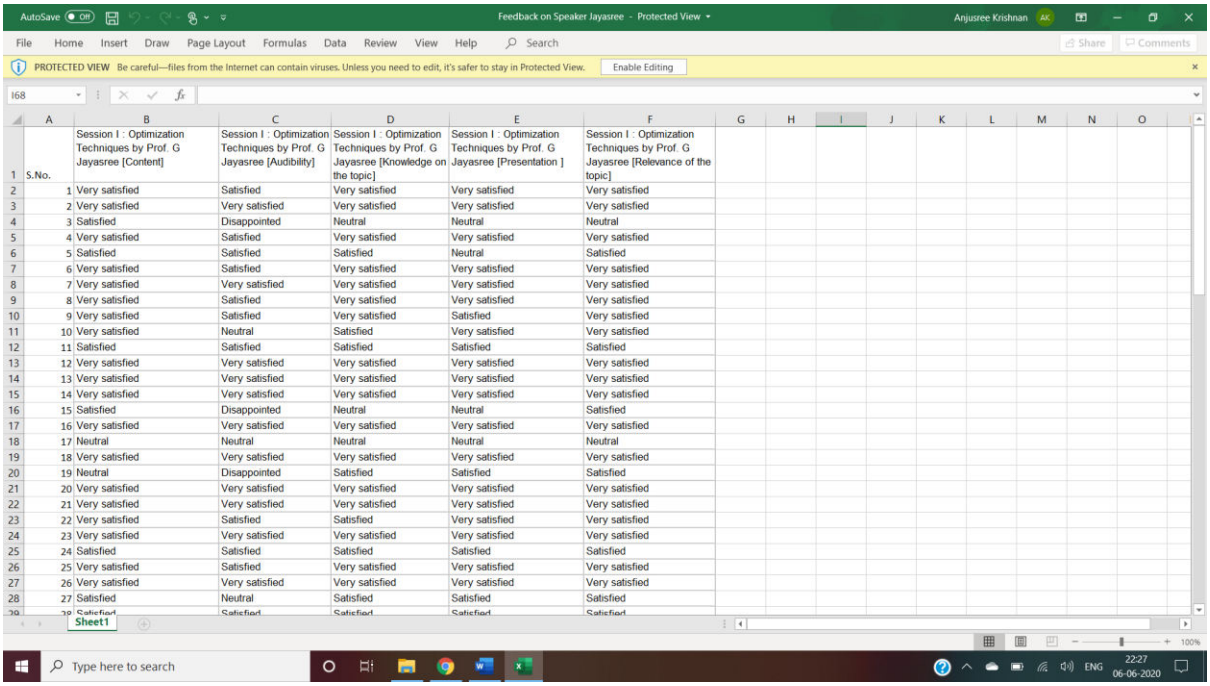
TECHNICAL SESSIONS:

1st Day (30/05/2020) Session I:

Prof. G Jayasree, Head, Department of Statistics, Osmania University has delivered a lecture on **"An overview of Optimization Techniques"**. In this session, Prof. Jayasree discussed about why optimization techniques are to be adopted and the various methods of optimization using easy to understand real life examples. The session commenced at 3:10pm and continued till 3:55pm.



Feedback for session one :

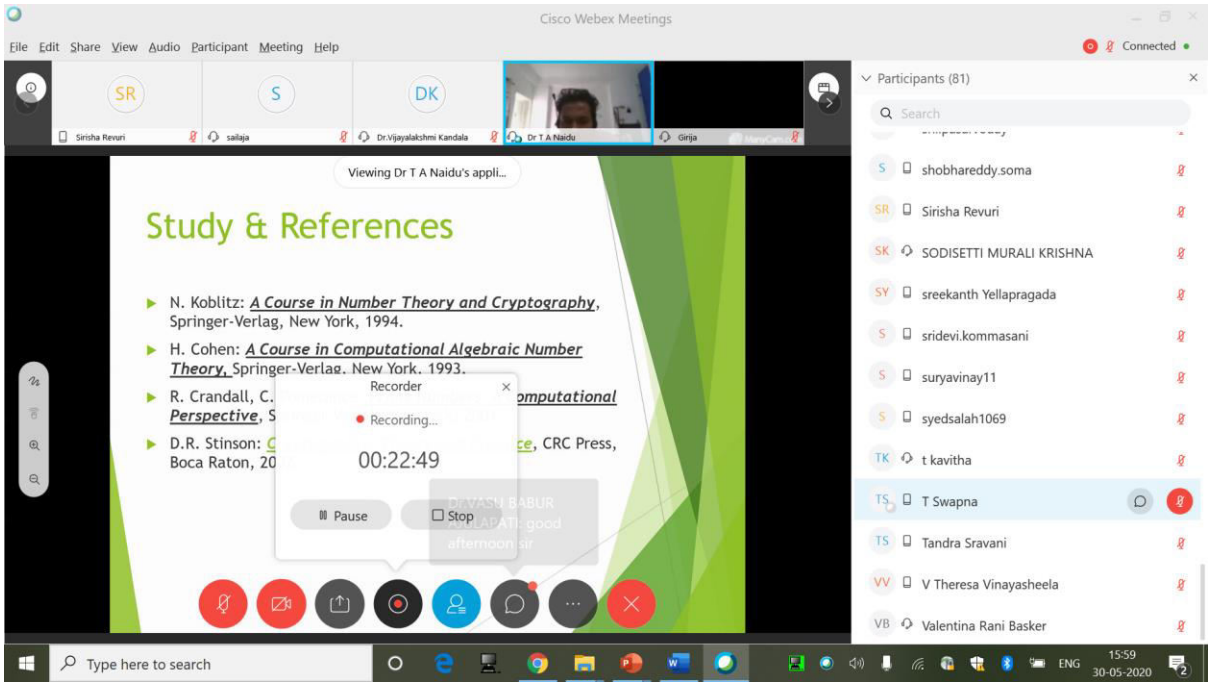


S.No.	Session I : Optimization Techniques by Prof. G Jayasree [Content]	Session I : Optimization Techniques by Prof. G Jayasree [Audibility]	Session I : Optimization Techniques by Prof. G Jayasree [Knowledge on the topic]	Session I : Optimization Techniques by Prof. G Jayasree [Presentation]	Session I : Optimization Techniques by Prof. G Jayasree [Relevance of the topic]
1	Very satisfied	Satisfied	Very satisfied	Very satisfied	Very satisfied
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4	Very satisfied	Satisfied	Very satisfied	Very satisfied	Very satisfied
5	Satisfied	Satisfied	Satisfied	Neutral	Satisfied
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14	Very satisfied	Very satisfied	Very satisfied	Very satisfied	Very satisfied
15	Satisfied	Disappointed	Neutral	Neutral	Satisfied
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17	Neutral	Neutral	Neutral	Neutral	Neutral
18	Very satisfied	Very satisfied	Very satisfied	Very satisfied	Very satisfied
19	Neutral	Disappointed	Satisfied	Satisfied	Satisfied
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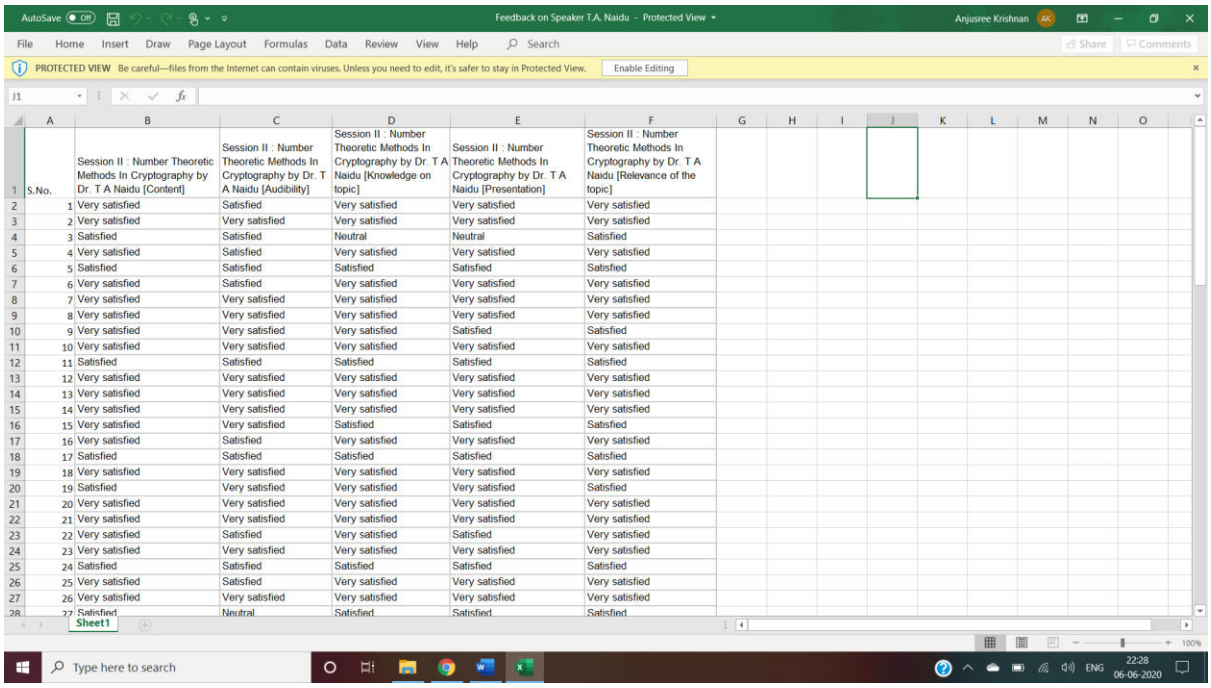
1st Day (30/05/2020) Session II:

The second session started immediately after the first session at 4:00pm and continued till 4:55 pm. Dr. T A Naidu, Assistant Professor, introduced the participants to the field of Cryptography and then continued with the lecture on **"Number Theoretic Methods in Cryptography"**. In this session, the participants learned the basics of cryptography, its importance and the application of the topic of mathematical congruences in cryptography. This session was enlightening for various participants as they were introduced to a new research field.

1st day sessions ended by the host Dr. Shakira Sultana thanking the speakers for the day.



Feedback for Session II :

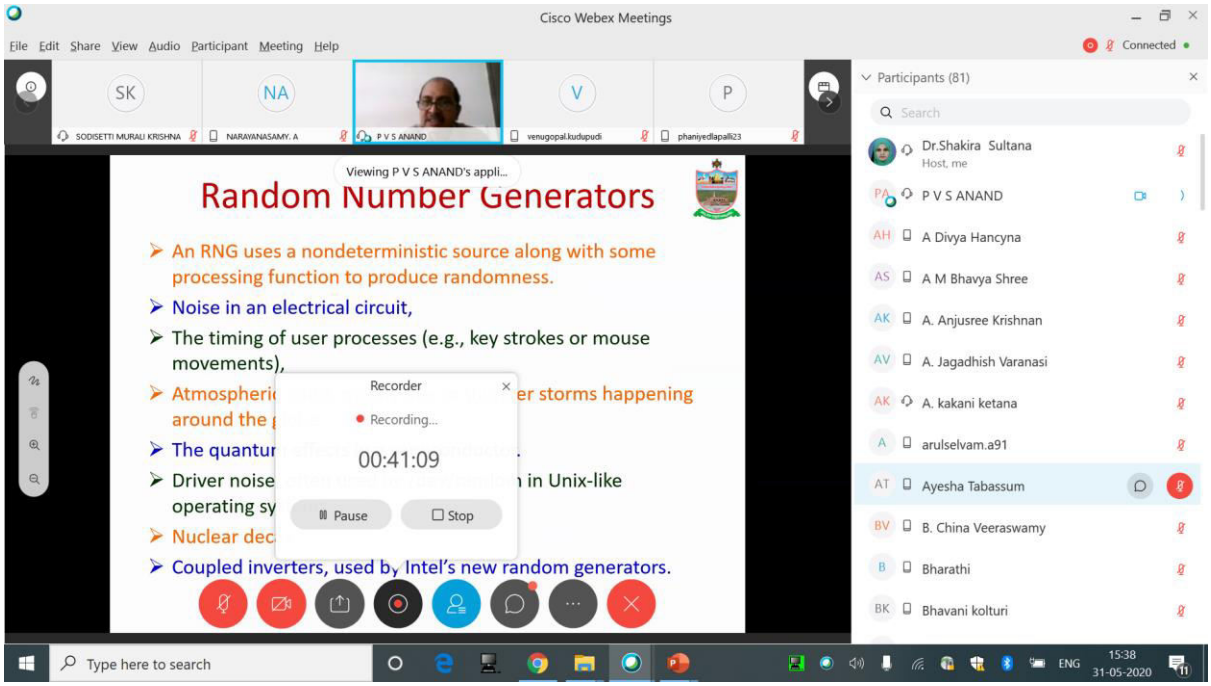


S.No.	Session II : Number Theoretic Methods In Cryptography by Dr. T A Naidu [Content]	Session II : Number Theoretic Methods In Cryptography by Dr. T A Naidu [Audibility]	Session II : Number Theoretic Methods In Cryptography by Dr. T A Naidu [Knowledge on topic]	Session II : Number Theoretic Methods In Cryptography by Dr. T A Naidu [Presentation]	Session II : Number Theoretic Methods In Cryptography by Dr. T A Naidu [Relevance of the topic]
1	Very satisfied	Satisfied	Very satisfied	Very satisfied	Very satisfied
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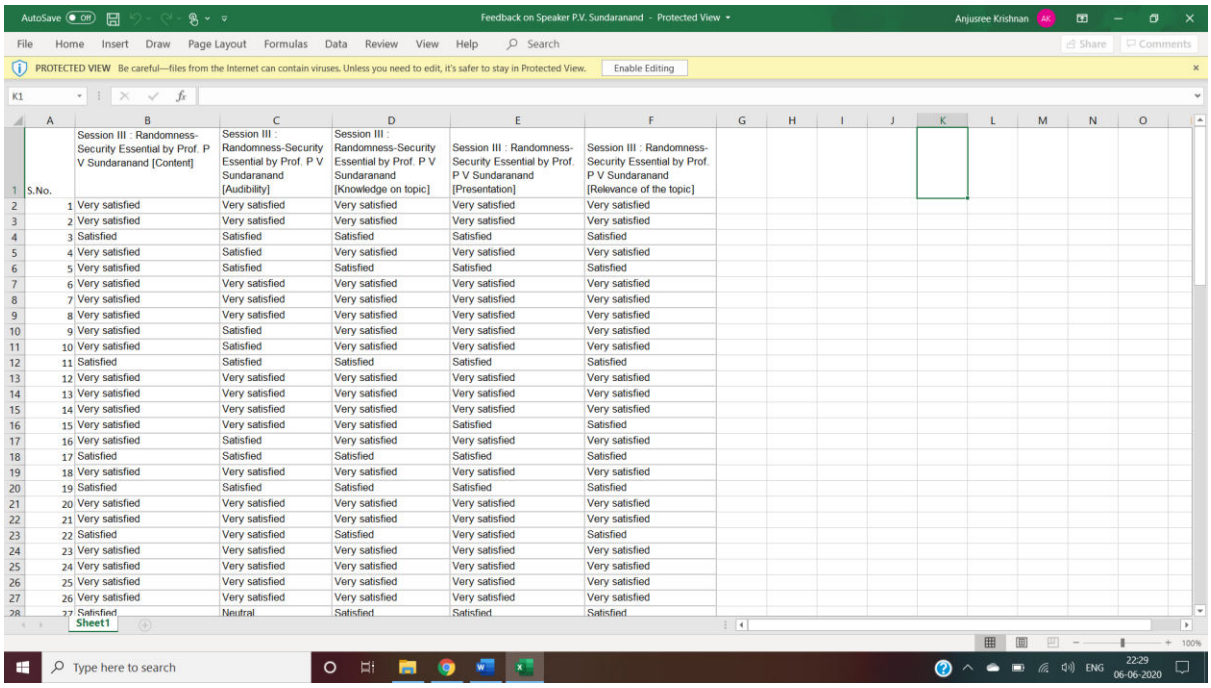
2nd Day (31/05/2020) Session I:

An enlightening lecture on **"Randomness: Security Essential"** was discussed by Prof. P V Sundaranand, Registrar, Rayalaseema University, Kurnool. He The session commenced at 3:10pm and continued till 4:20pm. In this session, the participants were introduced to the concept of randomness and how it is useful in the field of cryptography in

generating security pins and passwords. Sir also briefly discussed the various statistical tests that are to be applied in this field. The participant's queries were also answered on this topic.



Feedback for Session I :

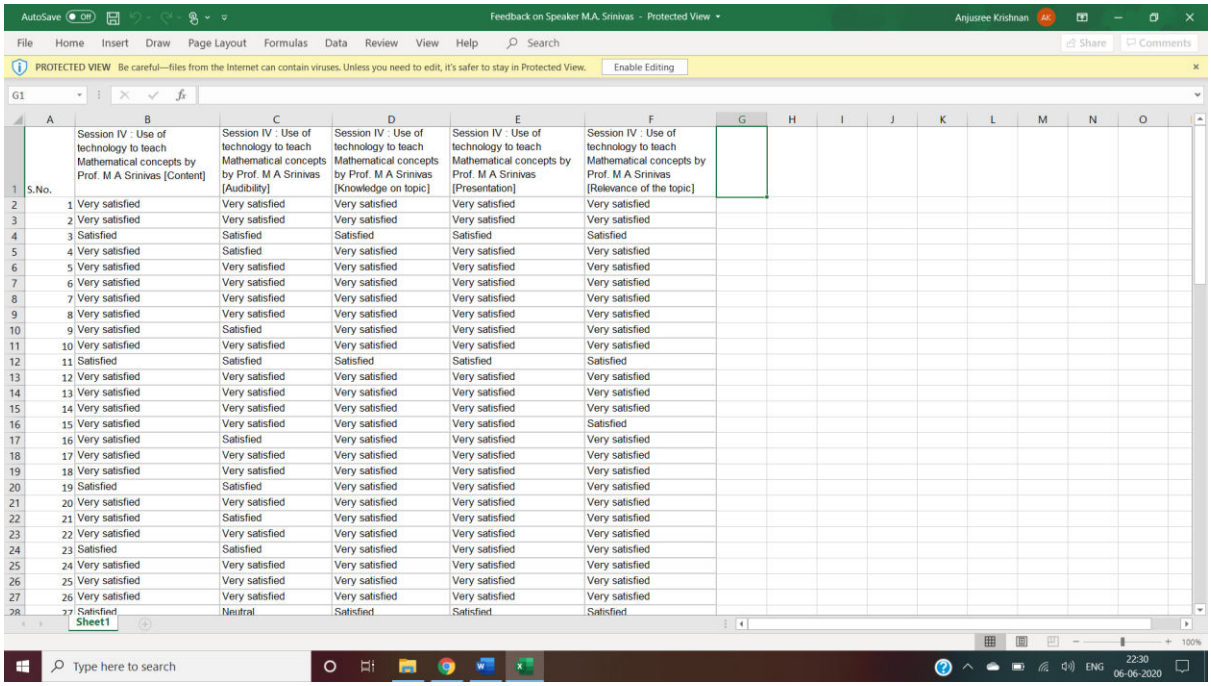


S.No.	Session III : Randomness-Security Essential by Prof. P V Sundaranand [Content]	Session III : Randomness-Security Essential by Prof. P V Sundaranand [Audibility]	Session III : Randomness-Security Essential by Prof. P V Sundaranand [Knowledge on topic]	Session III : Randomness-Security Essential by Prof. P V Sundaranand [Presentation]	Session III : Randomness-Security Essential by Prof. P V Sundaranand [Relevance of the topic]
1	Very satisfied	Very satisfied	Very satisfied	Very satisfied	Very satisfied
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26	Very satisfied	Very satisfied	Very satisfied	Very satisfied	Very satisfied
27	Satisfied	Neutral	Satisfied	Satisfied	Satisfied

2nd Day (31/05/2020) Session II:

An informative lecture on **"Use of Technology to teach Mathematical Concepts"** was discussed by Prof. M A Srinivas, Head, Department of Mathematics, JNTU, Hyderabad. The participants gained an immense knowledge on how to use animations and creativity in clearly explaining certain mathematical concepts such as limits and continuity, integration, differentiation, Eigen values and vectors, etc., to students. This session commenced at 4:30pm and continued till 6:20pm. The various questions and queries of the participants have also been attended by Prof. Srinivas.

Feedback for Session II :



S.No.	Session IV : Use of technology to teach Mathematical concepts by Prof. M A Srinivas [Content]	Session IV : Use of technology to teach Mathematical concepts by Prof. M A Srinivas [Audibility]	Session IV : Use of technology to teach Mathematical concepts by Prof. M A Srinivas [Knowledge on topic]	Session IV : Use of technology to teach Mathematical concepts by Prof. M A Srinivas [Presentation]	Session IV : Use of technology to teach Mathematical concepts by Prof. M A Srinivas [Relevance of the topic]
1	Very satisfied	Very satisfied	Very satisfied	Very satisfied	Very satisfied
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27	Satisfied	Neutral	Satisfied	Satisfied	Satisfied

The Faculty Development Programme ended with a vote of thanks proposed by Dr. Shakira Sultana and Dr. Vijayalakshmi which was followed by the National Anthem. The participants' feedback has also been collected. The participants have given excellent feedback for the overall FDP conducted. Also their valuable suggestions have been noted for future programmes.

STAFF ACHIEVEMENTS

1. Mrs. M. Sailaja is a member of organising committee for a two day online national Faculty development programme on "Mathematics for Computer Science' conducted by the department of Mathematics, Statistics and Computer Science, Loyola Academy, Secunderabad on 30th & 31st May 2020.
2. Mrs. P. Naga Durga is a member of organising committee for a two day online national Faculty development programme on "Mathematics for Computer Science' conducted by the department of Mathematics, Statistics and Computer Science, Loyola Academy, Secunderabad on 30th & 31st May 2020.
3. Mrs. M. Sailaja participated in a national webinar on "Recent Trends in online Teaching & Data in Technology" organised by the department of Electronic Technology, Loyola Academy, Secunderabad, on 29th May 2020.
4. Mrs. P. Naga Durga participated in a two – day national level FDP on "Art of writing & publishing research paper and application of statistical tools" organised by Aurora's Degree & PG College, Hyderabad on 27th & 28th May 2020.
5. Mrs. M. Sailaja attended national webinar on "Applications of Mathematics" on 27th May 2020 organised by the department of Mathematics, St. Pious X Degree & PG College for Women, Hyderabad.
6. Mrs. M. Sailaja participated in the International Webinar on "Covid Pandemic, Media and Social Distancing" organised by the department of History & Sociology, Auxilium College, Tamil Nadu, on 27th May 2020.
7. Mrs. M. Sailaja participated in the National Webinar on "Applications of Mathematics" on 27th May 2020 organised by the department of Mathematics, St. Pious X College for Women, Hyderabad.
8. Dr. K. Vijayalakshmi participated in a webinar on "Applications of Linear Algebra in Computer Science" organized by the department of Mathematics & Statistics, Bhavan's Vivekananda College, Secunderabad on 23rd May 2020.
9. Mrs. M. Sailaja participated in a webinar on "Responsible use of Medicines" held on 23rd May 2020 organised by St. Francis Institute of Technology (Engineering College), Mumbai.
10. Mrs. M. Sailaja participated in an one day national webinar on "Post Covid - 19 Environmental Sustainability challenge and Opportunity" organised by Green Corps, Loyola Academy, Secunderabad, held on 23rd May 2020.
11. Ms. Parothidil Anjusree Krishnan participated in an one day national webinar on "Post Covid - 19 Environmental Sustainability challenge and Opportunity" organised by Green Corps, Loyola Academy, Secunderabad, held on 23rd May 2020.
12. Dr. K. Vijayalakshmi participated in a National Webinar on "Fuzzy sets and its applications" organised by the department of Mathematics, Little Flower Degree College, Secunderabad on 22nd May 2020.
13. Dr. K. Vijayalakshmi participated in a one-week online Faculty Development Programme on "Big Data Tools" organised by the Departments of Computer Science & Engineering & Information Technology, St. Martin's Engineering, Secunderabad in association with Computer Society of India during 18th to 23rd May 2020.
14. Ms. Parothidil Anjusree Krishnan participated in a one-week online Faculty Development Programme on "Big Data Tools" organised by the Departments of Computer Science & Engineering & Information Technology, St. Martin's

Engineering, Secunderabad in association with Computer Society of India during 18th to 23rd May 2020.

15. Mrs. P. Naga Durga attended a webinar on "Applications of Linear Algebra in Computer Science", organised by the department of Mathematics & Statistics, Bhavan's Vivekananda College, Secunderabad, on 23rd May 2020.
16. Ms. Parothidil Anjusree Krishnan attended a webinar on "Applications of Linear Algebra in Computer Science", organised by the department of Mathematics & Statistics, Bhavan's Vivekananda College, Secunderabad, on 23rd May 2020.
17. Ms. Parothidil Anjusree Krishnan participated and performed excellent on a Quiz on Excel Basics Quiz (Level 1) conducted by St. Joseph's Degree College, Kurnool on 22nd May 2020.
18. Mrs. P. Naga Durga attended two-day national webinar on "Artificial Intelligence & Machine Learning" organised by the department of M.C.A, Loyola Academy, Secunderabad during 20th – 21st May 2021.
19. Dr. K. Vijayalakshmi participated in a National Webinar on "Online Software Tools for remote Teaching & Learning" organised by Aurora's Degree & PG College, Hyderabad on 18th May 2020.
20. Mrs. P. Naga Durga participated in the international webinar on "Impact of Covid – 19 on Indian Economy" conducted by St. Pious X Degree & PG College for Women, Hyderabad, on 16th May 2020.
21. Mrs. P. Naga Durga participated in the international webinar on "Responding to changing Business – The covid – 19 effects" organised by the department of Commerce and BBA, Loyola Academy in collaboration with Wiley and Miles Education on 11 May 2020.
22. Mrs. P. Naga Durga participated in a three-day national online FDP on "Quality Enhancement in Higher Education Institutions – Future Vision' organised by IQAC, St. Ann's College for Women, during 4th – 6th May 2020.
23. Ms. Parothidil Anjusree Krishnan participated in a three-day national online FDP on "Quality Enhancement in Higher Education Institutions – Future Vision' organised by IQAC, St. Ann's College for Women, during 4th – 6th May 2020.
24. Ms. M. Sailaja participated in the faculty development programme on "MOODLE" held on 14th and 15th February 2020 at Loyola Academy, Secunderabad.
25. Ms. M. Sailaja participated in the Prof. C. R. Rao Birth Centenary conference on "Statistics and Applications" organised by AIMSCs & sponsored by DST – SERB during 6th – 7th Feb 2020, Hyderabad.
26. Ms. M. Sailaja participated in a faculty development programme on "Research Methodology" held on 28th January 2020 at Loyola Academy, Secunderabad.
27. Ms. M. Sailaja participated in a two – day national conference on "Data Science – A Statistical Perspective" held on 27th and 28th December 2019 by the department of Statistics, Osmania University, Hyderabad.
28. Ms. M. Sailaja participated in the Golden Jubilee national seminar on "Indian Higher education: Current Status and Leadership Challenges" organised by the centre for Education Beyond Curriculum (CEDBEC), Christ, Bangalore held on 11 – 13 June 2019.

NPTEL Courses:

1. Ms. Parothidil Anjusree Krishnan is awarded NPTEL online certification for the course "Python for Data Science" with a score of 97% during Jan – Feb 2020.

Research Publications:

1. Mrs. M. Sailaja published an article on "Critical Comparison of various methods for calculating seasonal effects for the number of train passengers and income of south-central railway zone' at Adalya Journal, Volume 8, issue 12, December 2019. ISSN: 1301 - 2746.
2. Mrs. M. Sailaja published an article on 'Identification of seasonal effects through ratio to moving average method for the number of train passengers and income of South-Central Railway Zone' at International Journal of Mathematics trends and Technology (IJMTT) – volume 65, Issue 11 – Nov 2019, ISSN: 2231- 5373.
3. Mrs. M. Sailaja published an article on 'Determination of seasonal effects through ration to trend method for the number of passengers and income in South Central Railway Zone' at Journal of Information and Computational Science, Volume 9, issue 10, October 2019. ISSN: 1548 – 7741.
4. Mrs. M. Sailaja published an article on "Determination of seasonal effects on the number of train passengers and income in south central railway zone", at Compliance Engineering Journal, volume 10, issue 10, October 2019. ISSN: 0898 -3577
5. Mrs. M. Sailaja published an article on 'Preliminary Statistical Analysis of south-Central Railway Zone Income and Passengers – A case Study' at international Journal of Scientific Research in Mathematical and Statistical Sciences, vol. 6, issue 4, pp . 49 – 57, August 2019. E ISSN: 2348 – 4519.

STUDENT ACTIVITIES & ACHIEVEMENTS

INTRA-COLLEGE PARTICIPATIONS:

1. Ms. Gunda Varsha from AMSCS bearing the UID Number 111719024009 participated in the "National Science Day" event organized by Department of Science at Loyola Academy Alwal, Secunderabad on 28th and 29th February 2020.
2. Ms. G.V.N.L. Vyshnavi from AMSCS bearing the UID Number 111719024008 participated in the "National Science Day" event organized by Department of Science at Loyola Academy Alwal, Secunderabad on 28th and 29th February 2020.
3. Ms. Gunda Varsha from AMSCS bearing the UID 111719024009 participated in the event titled "NUMBER PUZZLE" and got rank "17" during "Virtual Bout 2020" organized by Department of Computer Science and Engineering in association with "CYBER SAPIENS" held on 28th May 2020
4. Ms. G.V.N.L. Vyshnavi from AMSCS bearing the UID 111719024008 participated in the event titled "NUMBER PUZZLE" and got rank "17" during "Virtual Bout 2020" organized by Department of Computer Science and Engineering in association with "CYBER SAPIENS" held on 28th May 2020.
5. Mr. Vedantam Sai Kasyap from AMSCS bearing the UID 111719024051participated in the "Swatchta Pakhwada" event organized by Loyola Academy held in the year 2020.
6. Mr. Sakilam Sai Shiva from AMSCS bearing the UID 111719024045 participated in the "Swatchta Pakhwada" event organized by Loyola Academy held in the year 2020.

NPTEL COURSE COMPLETION CERIFICATES:

1. Mr. Kaushal Sambrani from AMSCS bearing UID Number 111719024041 successfully completed NPTEL online certification course in 'Speaking Effectively' during Jan-Apr 2020(8-week course)
2. Mr. Abhijit George from AMSCS bearing UID Number 111719024035 successfully completed NPTEL online certification course in 'Speaking Effectively' during Jan-Mar 2020(8-week course)