

PG & RESEARCH DEPARTMENT OF MATHEMATICS

ASSOCIATION ACTIVITY 2020-2021(DECEMBER)

1	17 <sup>th</sup> June 2020	Webinar on “Topology and its applications”	Dr. Loksha, Professor and Chairman, Department of studies in Mathematics, vijayanagara Sri Krishnadevaraya University, Karnataka.
2	18 <sup>th</sup> June 2020	Webinar on Fuzzy Modelling & Decision Making	Dr. Sunny Joseph Kalayathankal, Professor & Dean(Research), Jyothi Engineering College, Thirichur, Kerala Dr.A.Manimaran, Assistant Professor, Department of Mathematics, School of Advanced Sciences, Vellore.
3	17 <sup>th</sup> march 2021	Webinar on Proof Techniques in Mathematics	Dr.R.Lakshmi, Assistant Professor, Department of Mathematics , D.G Govt Arts College Womem, Mayiladuthurai.
4	24 <sup>th</sup> march 2021	Webinar on Vector Spaces – A Geometrical Approach	Mr.L.Vikraman, Assistant Professor, Department of Mathematics, Government Thirumagal Mills Coolege Gudiyatham.
5	31 <sup>st</sup> march 2021	Webinar on Fuzzy set Theory	Dr.L.Sujatha , Assistant Professor and Head, PG and Research Department of Mathematics, Auxilium College, Vellore
6	7 <sup>th</sup> Apr 2021	Webinar on Linear Transformation and its Applications	Dr.A.Felix, Assistant Professor, Department of Mathematics, School of Advanced Sciences, VIT, Chennai.
7	15 <sup>th</sup> Apr 2021	Webinar on Application of Generalized Difference Equation	Dr.V.Chandrasekar, Associate Professor and Head, Department of Mathematics , Govt. Arts and Science College , Thennangur, Vandavasi
9	22 <sup>nd</sup> Apr 2021	Webinar on application of Fuzzy subsets	Dr.S.Sethuraman, Associate Professor, PG and Research Department of Mathematics, Periyar E.V.R College (Autonomous) Thrichy.
10	31 <sup>st</sup> Aug 2021	Webinar on Recent Trends in Graph Theory and their Applications	Dr. S. Ganesamurthy, Asst.Professor, KanchiMamunivar Government Institute for Post Graduate Studies and Research, Pondicherry

11	10 <sup>th</sup> November 2021	Workshop on “Labelling of Graphs and its Applications	Dr. S. Meena, Associate Professor and Head PG & Research Department of Mathematics, Government Arts College, Chidambaram.
12	27 <sup>th</sup> September 2021	Skill Development Orientation Programme	Mr. Harikrishna, founder of the Infomine software solutions, Chennai.
13	02 <sup>nd</sup> December 2021	Skill Development Program on “Significance of Functional English to develop communication skill	Dr. L. George Stephen Assistant Professor, Department of Pedagogical Sciences, Tamil Nadu Teachers Education University, Chennai

## **National Webinar on Topology and its applications**

PG and Research Department of Mathematics Organized one day National webinar held on 17<sup>th</sup> June from 10 AM to 11.30 AM through google meet on the topic “Topological Indices – worms eye view”.

The session was started by prayer hosted by Mrs.A.Savitha Mary, Assistant professor of Mathematics with the blessings of chief patron Rev.Fr.G.PeterRajendiram,Secretary. The Convener Dr.J.JonArockiaraj ,Vice Principal and Head, Department of Mathematics, delivered the welcome address followed the felicitations by the principal Dr.M.ArumaiSelvam ,the controller of examinations Rev. Fr.Dr.Xaviour ,Dean of studies Rev.Fr.Alex .

The chief guest was introduced by the organizing secretary, Mrs. L.JethruthEmelda Mary,Assistant professor of Mathematics and the session was handed over to the Resource person Dr.V.Lokesh M.Sc., Ph.D.,D.Sc , Professor and Chairman, Department of Studies in Mathematics VijayanagarasriKrishnadevaraya University,Bellari, Karnataka,India. Then the invited talk was given by speaker for 45 minutes followed by discussion or queries from the participant regarding webinar and then the session was ended with vote of thanks proposed by Mrs.L.JethruthEmeldaMary.Number of participant attended webinar is 495.

## **NATIONAL WEBINAR ON FUZZY APPLICATIONS**

PG and Research Department of Mathematics Organized one day National webinar held on 18<sup>th</sup> June through Google meet under the topics “An Introduction to Rough Sets and its Applications”, “Fuzzy Modelling& Decision Making”.

The 1<sup>st</sup>session started by prayer hosted by Mrs. A. SavithaMary, Assistant professor with the blessings of chief patron Rev.Fr. G. PeterRajendiram, Secretary. The Convener Dr. J. JonArockiaraj,Head of the Department delivered the welcome address followed the felicitations by the principal Dr. M. ArumaiSelvam,the controller of examinations Rev. Fr. Dr. Xavior,Dean of studies Rev. Fr. Alex.

The chief guest was introduced by the organizing secretary Mr.R.Julian Francis,Assistant professor of Mathematics and the session I was handed over to the Resource person Dr. A. Manimarann. He started the session by giving an introductionof fuzzy application. He gave an

explanation about fuzzy set and defined about the membership function of fuzzy sets with example. Then he explained about the accuracy and advantage of fuzzy set and its applications.

After the tea break the 2<sup>nd</sup> session started at 11:30 by the resource person Dr. Sunny Joseph Kalyathankal. She explained about the fuzzy modeling and Decision making. And then she started to explain about doing research work in Fuzzy Subsets which is very useful to the research scholars.



**Presidential Address**



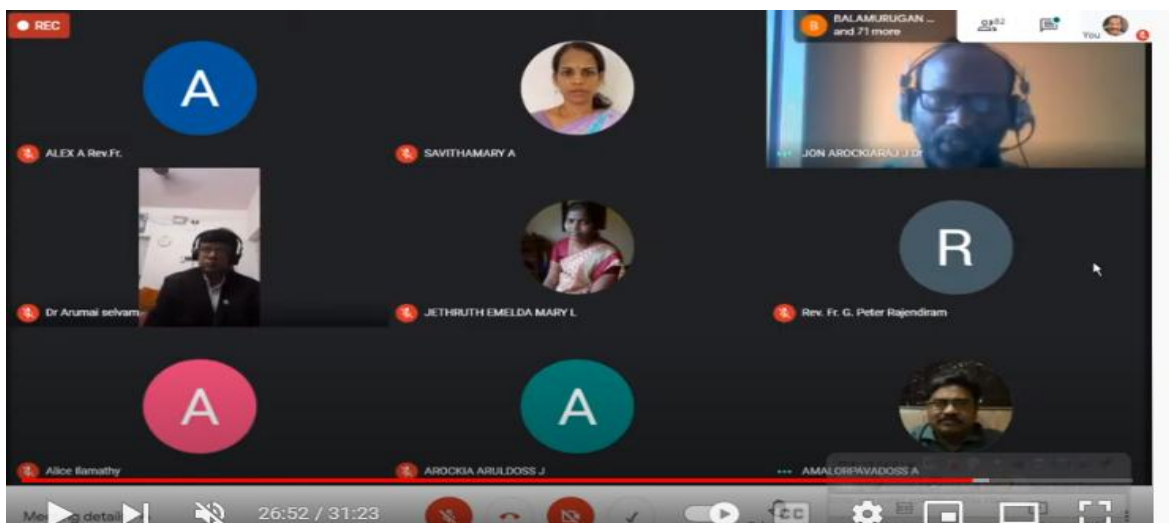
**Vote of Thanks**

The objective of the Webinar was to provide detailed knowledge to the students of the respective department on how to workout Rough Sets and its Applications and Fuzzy Modelling & Decision Making as a part of their job responsibility so that they would be able to solve problems in scientific way. The Resource persons Dr.A.Manimaran and Dr. Sunny Joseph Kalyathankal highlighted the importance and process of examples. All the students and professors took part in the webinar. Then the invited talk was given by speaker for 60 minutes followed by discussion or queries from the participant regarding webinar and then the session was ended with vote of thanks proposed by Dr. S. AnjalMose. This interactive webinar was delivered using the Google meet. The queries of the participants were clarified very well at the end of the talk.

### **NATIONAL WEBINAR ON PROOF TECHNIQUES IN MATHEMATICS**

Post graduate and research department of Mathematics organized ‘webinar on proof techniques in Mathematics’ on 17.03.2021 between 10.00 to 11.00 a.m. With the guidance of Dr.J. JonArockiaraj Head of theDepartment,Mr.T. Henson and Mrs. A.Arokiamary, the organizing secretaries arranged the Resource person Dr. R. Lakshmi Assistant professor of Mathematics, D.G. Government Arts College for women, Mayiladuthurai. The webinar was started by Prayer song and Welcome Address. Then the Presidential Address given by the Rev. Fr. G. Peter Rajendiram, Secretary.

The introduction was given by Mrs. A.Arokiamary Assistant professor of Mathematics. The resource person explained about the “proof techniques in Mathematics”. The main concept of webinar is an introduction to proof writing techniques, covering multiple topics such as logic and proofs, set theory etc. The students certainly learned lot of concepts. Most three proofs approaches are direct, contrapositive and math induction. Knowing the various aspects of the proof techniques was very useful for research scholars.



### **Dr. J. Jon ArockiaRajFelicitationAddress**

We are Eternally Grateful to all those who helped us through the event. Our deepest thanks to the Convener Prof. Dr. J. Jon ArockiaRaj for making this session a grand success. We extend my Gratitude to our Organizing Secretaries Mr.T.Henson and Mrs.A.Arokiamary are being supportive pillars throughout the event

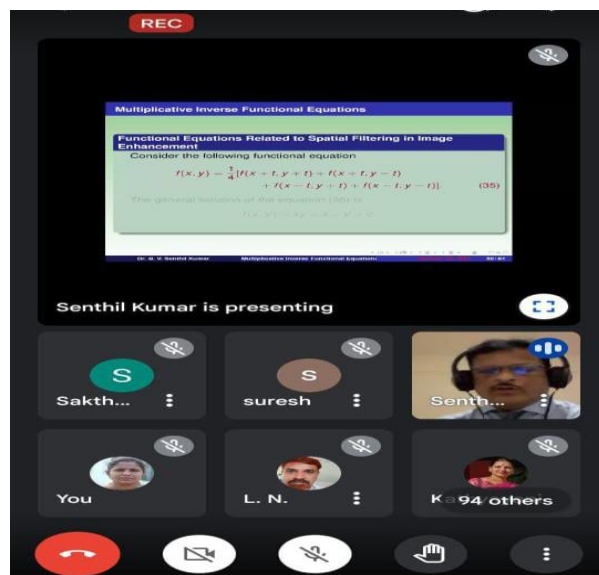
**NATIONAL WEBINAR ON VECTOR SPACES – A GEOMETRICAL APPROACH**

The PG & Research Department of Mathematics organized a Webinar on the theme “Vector Spaces – A Geometrical Approach “on 24<sup>th</sup> March 2021 from 10.00 AM to 11.00 AM through Google Meet.

The programme started with an opening remark delivered by Dr. J. Jon Arockiaraj, Vice-Principal and Head PG & Research Department of Mathematics. And The presentation started by our Resource Person Mr. L. Vikramanwith certain of Euclidean vectors that represent physical quantities such as foxes, where the plane on three dimensional space form vector spaces.

And later, the resource person had an interactive session with online participants to explain the example concepts in daily life. The session was very useful to research scholars and the participants.

### Resource Person presenting the Presentation



We are Eternally Grateful to all those who helped us through the event. Our deepest thanks to the convener Prof. Dr. J. Jon ArockiaRaj for making this session a grand success. We extend my Gratitude to our Organizing Secretaries Mr.S.Johnsonsavarimuthu and Mr.A. Virgin raj for being such a supportive pillars throughout the event.

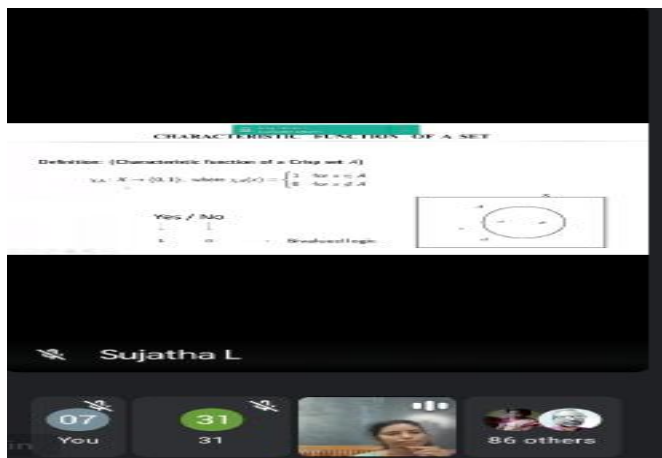
## NATIONAL WEBINAR ON FUZZY SET THEORY

PG and Research department of mathematics organized one day national webinar held on 31st march 2021 for the student of final year UG and all PG of our own department. The organizing member Dr. L. JethruthEmelda Mary has started the programme with small prayer and welcomed the resource person Dr. L. Sujatha Mwith the blessings of Rev. Fr. G. PeterRajendhiram, Secretary.

The resource person Dr. L. Sujathastarted the session with the introduction to fuzzy set theory. She elaborated the concepts of membership function, union and intersection of fuzzy sets, Linguistic variables, crisp set and other defined sets of fuzzy set theory. She particularly explained about the applications of fuzzy sets in field of research. After that she raised some questions toward the students for interaction with students. She gave some guidelines for PG students to pursue research in fuzzy set theory.

**Resource Person presenting the Presentation**

**HOD sharing his knowledge in Fuzzy**



The objective of the Webinar was to provide detailed knowledge to the students of the respective department on how to workout Fuzzy subsets as a part of their job responsibility so that they would be able to solve problems in scientific way. The Resource persons highlighted the importance and process of examples. All the students and professors took part in the webinar. Then the invited talk was given by speaker followed by discussion or queries from the participant regarding webinar and then the session was ended with vote of thanks. The queries of the participants were clarified very well at the end of the talk.

We are Eternally Grateful to all those who helped us through the event. Our deepest thanks to the Convenor Prof. Dr. J. Jon Arockia Raj for making this session a grand success. We extend my Gratitude to our Organizing Secretaries Dr. L. Jethruth Emelda Mary and Mr. J. Arockia Aruldoss for being such a supportive pillars throughout the event.

## NATIONAL WEBINAR ON LINEAR TRANSFORMATION AND ITS APPLICATIONS

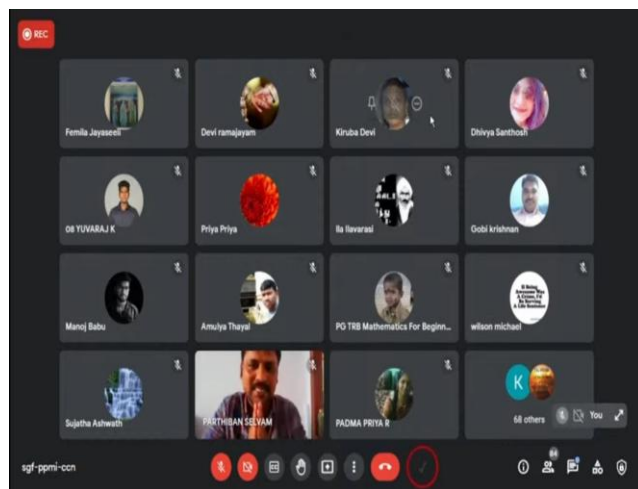
The PG and Research Department of Mathematics jointly organized the webinar on the theme “**Linear Transformation and its Applications**” on **7<sup>th</sup> April, 2021** (Friday) through Google Meet.

The webinar was started by Prayer and Welcome Address given by Dr. L. Jethruth Emelda Mary, Assistant Professor of Mathematics. Then the Presidential Address given by the Secretary Rev. Fr. G. Peter Rajendiram

The Introductory speech for the Resource Person **Dr. A. Flex** was done by Dr. A. Rajesh, Assistant Professor, Department of Mathematics. The Resource person gave a detailed information about the topic “**LINEAR TRANSFORMATION AND ITS APPLICATION**” which was very helpful for the UG&PG students. He explained about various types of linear transformations and its field of applications.



**Prof. Dr. J. Jon Arockia Raj, Felicitation**



**Resource person clearing doubts of Students**



Highlights of the session were New concepts about the Linear Transformation and Linear Transformation in Computer graphics. We are Eternally Grateful to all those who helped us through the event. Our deepest thanks to the Convenor Prof. Dr. J. Jon Arockia Raj for making this session a grand success. We extend my Gratitude to our Organizing Secretaries Dr. A. Rajesh and Ms. M. Kalaimathi for being such a supportive pillars throughout the event.

## NATIONAL WEBINAR ON APPLICATIONS OF GENERALIZED DIFFERENCE EQUATIONS

The National webinar on **Applications of Generalized Difference Equations** was held on 15.04.2021 at 10AM to 11AM for the Students Development with the blessing of Rev Fr. G. Peter Rajendiram, Secretary, St. Joseph's College of Arts and Science, Cuddalore.

The webinar was started by Prayer song and Welcome Address given by Dr. C. Devi Shyamala Mary, Assistant Professor Department of Mathematics. Then the Presidential Address given by the Rev. Fr. G. Peter Rajendiram, Secretary.

The objective of the Webinar was to provide detailed knowledge to the students of the respective department on how to **Apply Generalized Difference Equations** as a part of their job responsibility so that they would be able to solve problems in scientific way. The Resource persons highlighted the importance and process of examples. All the students and professors took



part in the webinar. Then the invited talk was given by speaker for followed by discussion or queries from the participant regarding webinar. Participants eagerly shared their feedbacks and thanked our chief guest and organizers who had made the event successful. The certificates were distributed to the participants finally the vote of thanks was given by Mr. A. Savithamary.

## NATIONAL WEBINAR ON APPLICATIONS OF FUZZY SUBSETS

The National webinar on Applications of Fuzzy Subsets was held on 22.04.2021 at 9.40 am to 11am for the Students Development with the blessing of Rev Fr. G. Peter Rajendiram, Secretary. The webinar was started by Prayer song and Welcome Address given by Mrs. D. Ramya, Assistant Professor.

The resource person Dr. S. Sethuraman, Associative professor presented his propositions on the topic of Applications Of Fuzzy Subsets that explains Pseudo-Additive Measures and Applications with examples based on Zadeh's extension principle at binary operations. Next, he discussed in uncertainty propagation. The session was ended up by the interactive of participants with the resource person.



Felicitation Address Dr. M. ArumaiSelvam, Principal & Dr. J. Jon Arockia Raj, Vice Principal

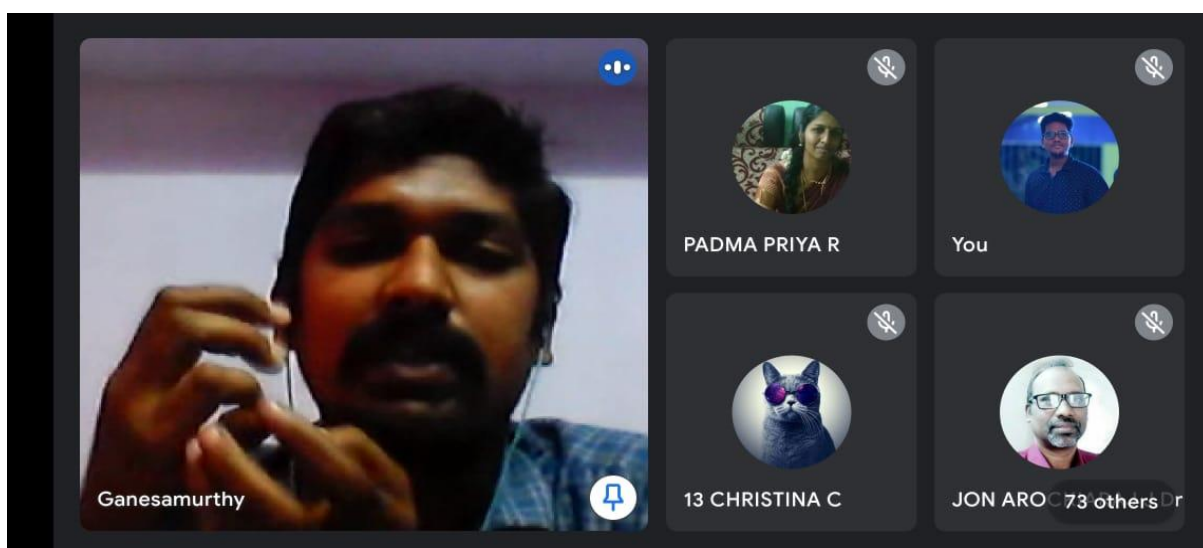
We are Eternally Grateful to all those who helped us through the event. Our deepest thank to the Convener Prof. Dr. J. Jon Arockia Raj for making this session a grand success. We extend my Gratitude to our Organizing Secretaries Dr. S. Anjalmoose and Mrs. D. Ramyaare being such supportive pillars throughout the event.

## Webinar on “Recent Trends in Graph Theory & their Applications”

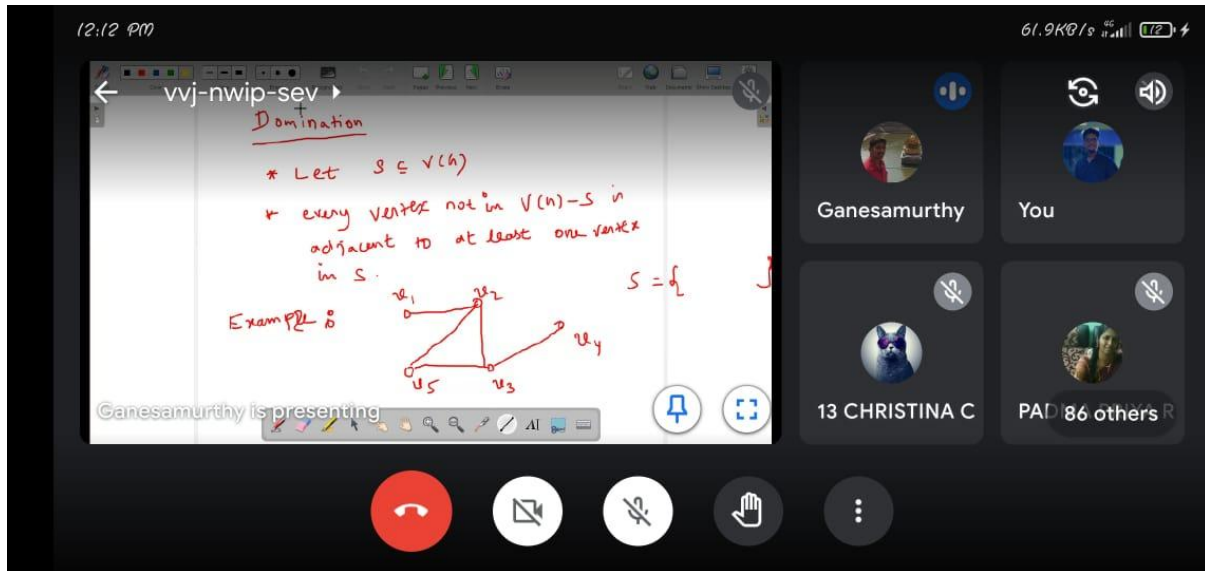
The PG and Research department of mathematics has conducted a webinar on “**Recent Trends in Graph Theory and their Applications**” on 31.08.2021 at 11.30am. **Dr. S. Ganesamurthy**, Asst.Professor, KanchiMamunivar Government Institute for Post Graduate Studies and Research, Pondicherry, was the resource person. The webinar was organized by Dr. A.Venkatesan and Mrs. R. Padmapriya through the Google meet platform. This valuable session was felicitated by the convener Dr. J. John Arockiaraj, Vice Principal and Head of the Department of Mathematics. The Webinar was initiated with the prayer by Dr. L. JethruthEmelda Mary, Asst. Professor, Department of Mathematics followed by Ms. J. Helen Jency from II PG mathematics welcomed the gathering with great enthusiasm.

Vice Principal and Head of the Department of Mathematics addressed the gathering in a cheerful and pleasant manner. He also motivated the students about the webinar which will be useful for future research and studies. Mrs. R. Padmapriya, Asst.Professor, Department of mathematics introduced the resource person and handed over the session to him.

The topic of the webinar was “**Recent Trends in Graph Theory and their Applications**”. The resource person initially explained about the graph, complete



graph, open neighborhood and complete bipartite graph. He explained all the sub-topics with examples. He mainly discussed about “**Domination**”. The session ended with an open house discussion.



### Resource Person Presentation

The webinar was very informative and well appreciated by the participants. The webinar was concluded with vote of thanks by Ms. C. Christina Shiny Rachel from II PG Mathematics **Link for the webinar:** <https://meet.google.com/vvj-nwip-sev>

**Student Participation details:** Total no. of students attended the webinar: 95

Students from III UG, I PG and II PG from Department of mathematics attended the webinar.

## **WEBINAR ON “MULTIPLICATIVE INVERSE FUNCTIONAL EQUATIONS AND THEIR APPLICATIONS**

The PG and Research Department of Mathematics organized the International webinar on the theme “**MultiplicativeInverseFunctionalEquationsandtheirApplications**” on **29<sup>th</sup>October, 2021** (Friday) through Google Meet.

The **Resourceperson** of the webinar was **Dr. B. V. Senthil Kumar**, Professor of Mathematics, Department of Information Technology, University of Technology and Applied sciences, Nizwa-611, Oman.

The webinar by started by Prayer and Welcome Address given by Dr. L. JethruthEmelda Mary, Assistant Professor of Mathematics. Then the Presidential Address given by the Secretary Rev. Fr. G. Peter Rajendiram.

The Felicitation done by Principal, Prof. Dr. M. ArumaiSelvam and the Vice-Principal and the Convener of International Webinar on Functional Equations-2021, Prof. Dr. J. Jon ArockiaRaj.**GOOGLE MEET LINL** <http://meet.google.com/ixe-kthv-gwq>  
**YOUTUBE LINK** <https://youtu.be/fXoiNOJA4jU>

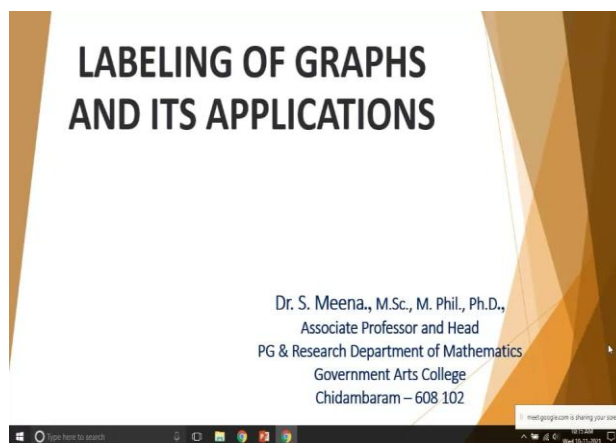
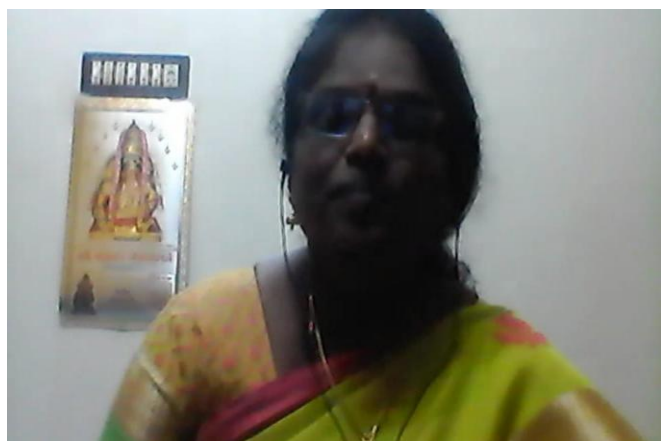
We are Eternally Grateful to all those who helped us through the event.Our deepest thanks to the Convenor Prof. Dr. J. Jon Arockia Raj for making this session a grand success. We extend my Gratitude to our Organizing Secretaries Prof. Dr. L. Jethruth Emelda Mary and Prof. Dr. A. Rajesh for being such a supportive pillars throughout the event.

## **WORKSHOP ON “LABELLING OF GRAPHS AND ITS APPLICATIONS**

The PG & Research Department of Mathematics, organized a one day Workshop on the theme “Labelling of Graphs and its Applications “on 10 th November 2021 from 10.00 AM to 11.00 AM through Google Meet.The Resource Person for the Workshop was Dr. S. Meena, Associate Professor and Head PG & Research Department of Mathematics, Government Arts College, Chidambaram. The programme was organized by Mr. A. Virgin Raj, Assistant Professor, PG & Research Department of Mathematics, St. Joseph’s College of Arts & Science, (Autonomous), Cuddalore.

The programme started with an opening remark delivered by Dr. J. Jon Arockiaraj, Vice-Principal and Head PG & Research Department of Mathematics, St. Joseph’s College of Arts

&Science, (Autonomous), Cuddalore and the Convenor of this Workshop followed by Welcome Address.



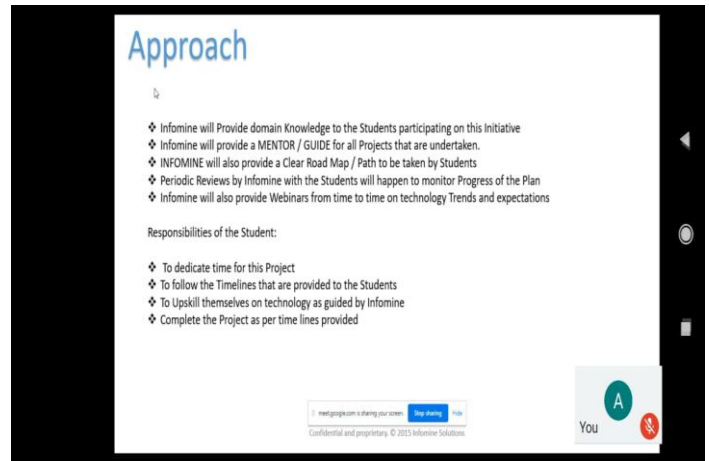
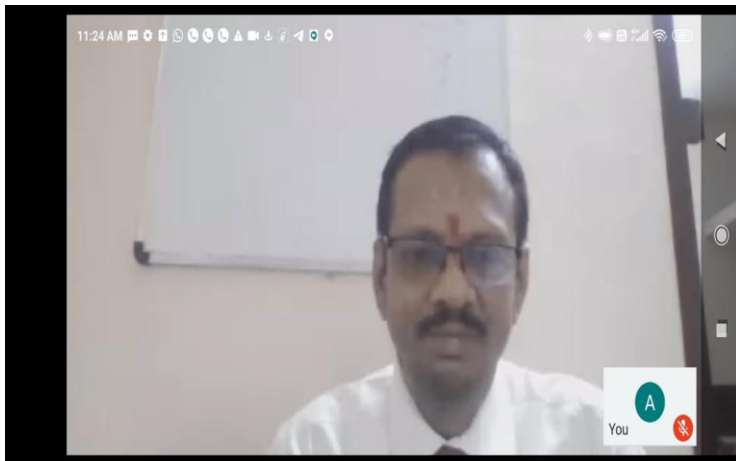
Resource Person Presentation

The presentation started with an Introduction about Graph Theory and then Dr. S. Meena highlighted the most interesting problem in the area of Graph Theory – Labeling of Graphs with its types and examples together with its applications in our daily life.

The session ended with a Vote of Thanks by Dr. C. Devi Shyamala Mary, Assistant Professor, PG & Research Department of Mathematics, St. Joseph's College of Arts & Science, (Autonomous), Cuddalore. The Workshop was attended by around 100 participants.

### **SKILL DEVELOPMENT ORIENTATION PROGRAM**

The PG & Research Department of Mathematics, organised a webinar on the theme “Skill Development Orientation Program” through the virtual zone in Google Meet on 27<sup>th</sup> September 2021 in the time zone 11.00a.m IST. The resource person for the webinar was Mr. Harikrishna, founder of the Infomine software solutions, Chennai. This webinar session was headed with an opening remark delivered by Dr. J. Jon Arokiaraj, Vice Principal, Head of the Department of Mathematics. Followed by the welcome address from Mr. J. Arokia Aruldoss, Assistant Professor.



Resource Person Presentation

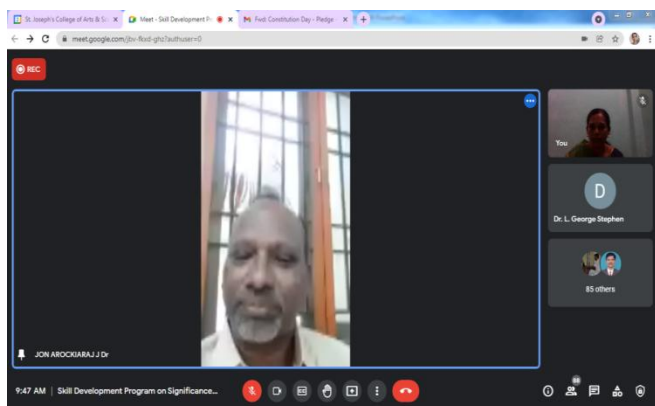
This webinar was headed by the Chief Patron Rev. Fr. G. Peter Rajendiram, Secretary. The felicitation members of the institution Dr. M. ArumaiSelvam, Principal, Dr. J. Jon Arokiaraj, Vice Principal, Rev. Fr. Dr. S. Xavier, Controller of Examination, Rev. Fr. Dr. A. Alex, Dean of Studies, The webinar was attended by around 94 participants.

Mr.Harikrishna then took the students through a wide range of opportunities for a successful career. He was being experienced in various projects of industrial, Machine Learning with Data Science and AI. He also explained about some of the projects they have taken and how they train the students should be during placement opportunities.Mr.Hairkrishna Shankar Rao, Founder of Info mine Software Solutions, ChennaiSir shared his personal experiences to motivate the students; by sharing we came to know how interesting and inspiring is his journey to his current position. The students gained a wide range of knowledge on how to proceed with their future. We are very grateful to have him. The students interacted with the resource person about their doubts and career opportunities. The session ended with a round of discussion and vote of thanks by Ms. Christina, II M.Sc., and Department of Mathematics. This webinar was a successful one among the students as the Resource Person Mr.Harikrishna Shankar Rao announced that they will have an MOU with the department of mathematics for the placement opportunities.

## **.ONLINE SKILL DEVELOPMENT PROGRAM ON “SIGNIFICANCE OF FUNCTIONAL ENGLISH TO DEVELOP COMMUNICATION SKILL**

With the blessings and support of Rev. Fr. G. Peter Rajendiram, Secretary, Dr. M. ArumaiSelvam, Principal, Rev. Fr. S. Xavier, COE, Rev. Fr. A. Alex, Dean, we have organized a **Skill Development Program on “Significance of Functional English to develop communication skill”** for the final year UG & PG Students of Department of Mathematics through online mode. on 02.12.2021 at Google meet link: **meet.google.com/jbv-fkxd-ghz**

The program was started at 9.30am. The dignitaries were welcomed by the Dr. A. Rajesh Assistant Professor, Dept of Mathematics. Dr. M. ArumaiSelvam, Principal given Felicitation address for the program. Dr. J. Jon Arockiaraj, Vice-Principal & Head, Dept of Mathematics given inaugural speech. Mrs. A. Savitha Mary, Assistant Professor, Dept. of Mathematics introduced the resource person.



Then the guest speaker **Dr. L. George Stephen, Assistant Professor, Department of Pedagogical Sciences, Tamil Nadu Teachers Education University, Chennai-600 097, Tamil Nadu** given a lecture on Significance of Functional English to develop communication skill.

The expected outcome of the programme is the development of the four different skills of language. Listening, Speaking, Reading and Writing Skills are given equal importance. At the end of the programme the students will be able to use English fluently. Their confidence level is improved as training is given to face interviews and group discussions.