

# NEWSLETTER SEP'2020



*In this newsletter:*

EXPERT CONVERSATIONS

Page 02-05

STUDENT ACHEIVEMENTS

Page-06-07

STUDENT CORNER

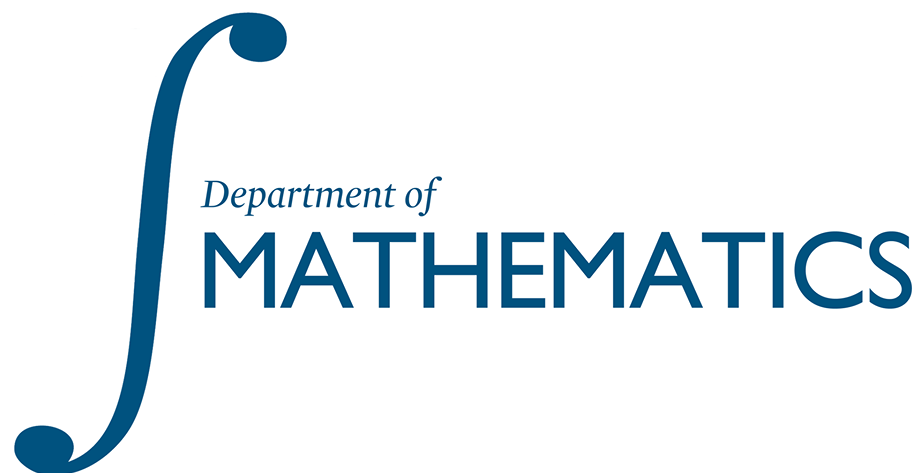
Page 08-09

FACULTY ENGAGEMENTS

Page 10

FACULTY ACHEIVEMENTS

Page 11



## MATH BITZ

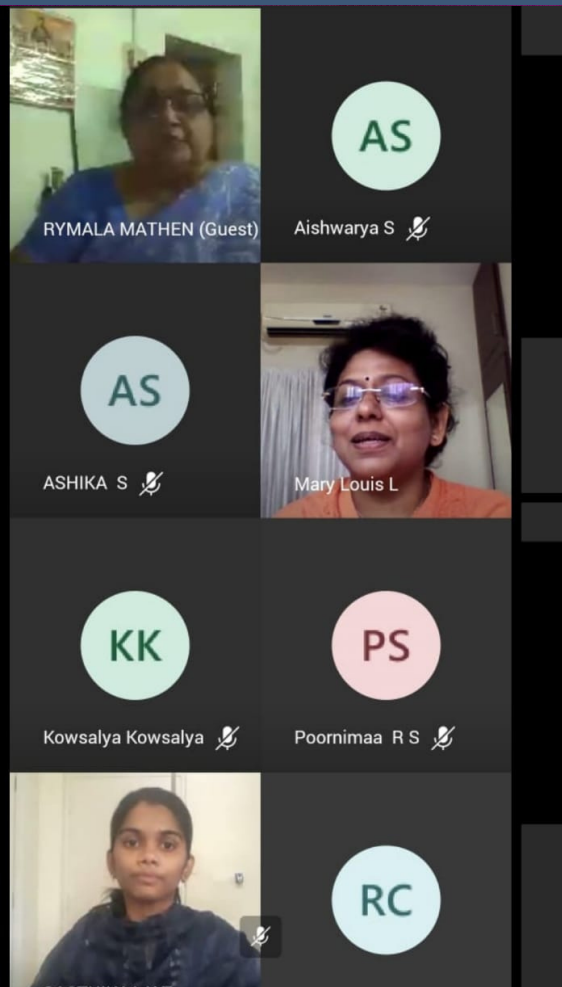
Logic and mathematics are nothing  
but specialised linguistic structures.

- Jean Piaget



# EXPERT CONVERSATION 4

## HOW TO BECOME ENTREPRENEURIAL



The Department of Mathematics organised the fourth expert conversation of the online series titled, "How to be entrepreneurial?" on 4th September 2020 from 4.00 pm to 5.00pm via Microsoft Teams. The session holder was Dr.Rymala Maathen, Chief Coordinator, EDC, School of Engineering, Avinashilingam Institute, Coimbatore.

The session started with an introduction to "What is Entrepreneurship?" and its evolution and its role in each and every aspect of life. Then the session proceeded with the contribution of various eminent entrepreneurs for the society . The participants were also insisted to explore a lot, observe every small action happening around them and to interact with people who failed in entrepreneurship since these are the core aspects constituting entrepreneurship. Similarly, the speaker quoted how entrepreneurial instinct is the preparedness required to make something from nothing. It is also the mindset that allows one to take smart risks, thrive in ambiguity and bounce back from failure. The session then proceeded with few day to day examples like graphic designing, interior decor, Bus from Delhi to London.

Therefore two major ingredients of a business opportunity need to be focused:

1. Good market scope

2. Acceptable return on investment

Dr. RYMALA MATHEN, Chief coordinator, EDC, School of Engineering, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore

### What's Entrepreneurship and how to become entrepreneurial?,

**Dr. RYMALA MATHEN,**  
Chief coordinator, Entrepreneurship Development Cell, School of Engineering,  
Avinashilingam Institute for Home Science and Higher Education for Women  
Coimbatore, Tamilnadu, India  
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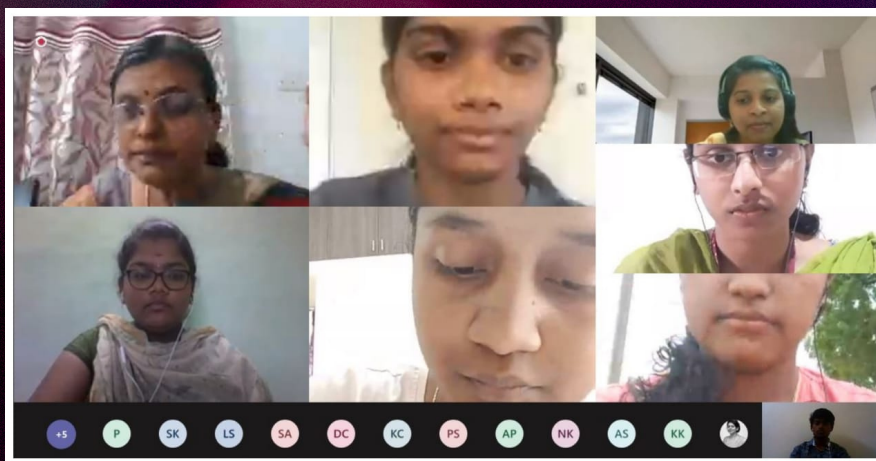
# EXPERT CONVERSATION 5

## OPTIMIZATION TECHNIQUES



Department of Mathematics organised the fifth expert conversation of the online series titled, 'Optimization Techniques' on 11th September ,2020 from 4.00 pm to 5.00pm via Microsoft Teams. The session holder was Dr. Julia Rose Mary, Associate Professor , Department of Mathematics, Nirmala college for Women, Coimbatore.

The session started with introduction of Optimization, the guest pinned that the central objective of operation research is optimization. The session then proceeded with the explanation of the fields with which the optimization is used. Queuing examples under system, customer and services and traffic control method using optimization has been explained. Advantages of operation research such as optimum strategy, how to enable proper deployment of resources, when to buy and how to buy, etc., has been put forward by the guest speaker. Insights on linear programming such as key decision variable, objective function and leaving element , entering element has been given.



### ADVANTAGES OF OPERATION RESEARCH

1. provides a tool for scientific analysis.
2. solution for various business problems.
3. enables proper deployment of resources.
4. minimizing waiting and servicing costs.
5. when to buy and how much to buy?
6. Optimum strategy is chosen.



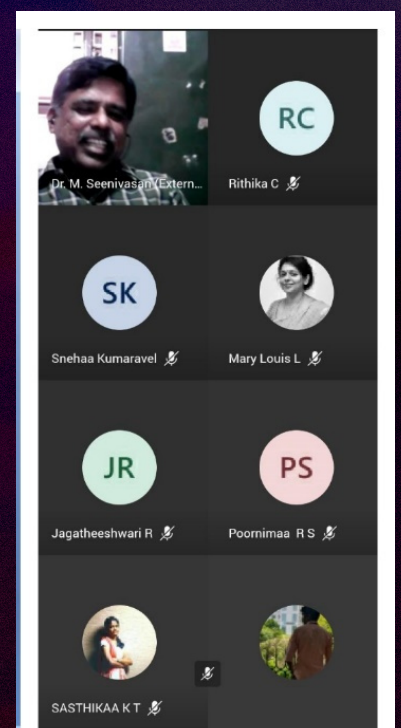
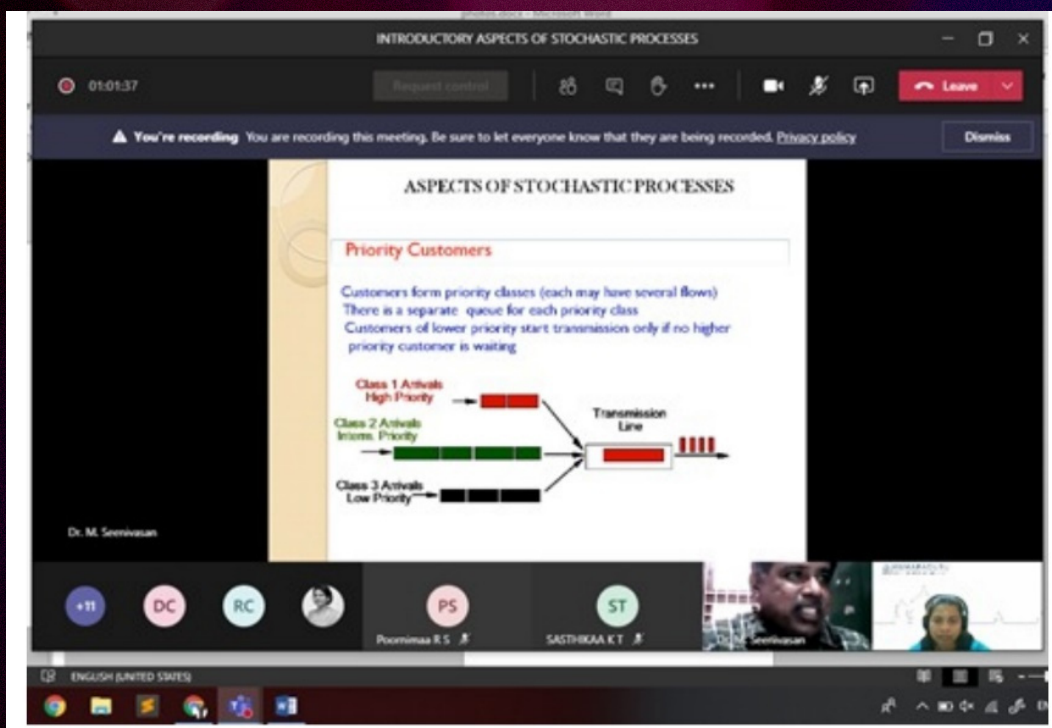
# EXPERT CONVERSATION 6

## ASPECTS OF STOCHASTIC PROCESSES



Department of Mathematics organized its 6th expert conversation of the online series entitled, 'Introductory Aspects of Stochastic Processes' on 18th September, 2020 from 4.00 pm to 5.00pm via Microsoft Teams. The session holder was Dr. M. Seenivasan, Associate Professor, Annamalai University, Chidambaram.

The session started with the introduction of Stochastic processes, its real-world application. The session proceeded with the brief explanation of the mathematics and its notable classification; namely Deterministic factors and Non - Deterministic factors. It deals with the sure event and unsure event respectively. The probability which deals with the uncertainty and was been introduced in the past 17th century was helpful in random experiments. Then the session was explained with the Probability generating functions in which Random variable function is constituted. Through differentiation functions we could find the Variance and Expectation of the random variables. Math with varied statistical distributions is positioned as the prior and base in the varied branches, amongst which Bernoulli distribution, Normal distribution, Poisson distribution and Geometric distributions were discussed with their statistical components.





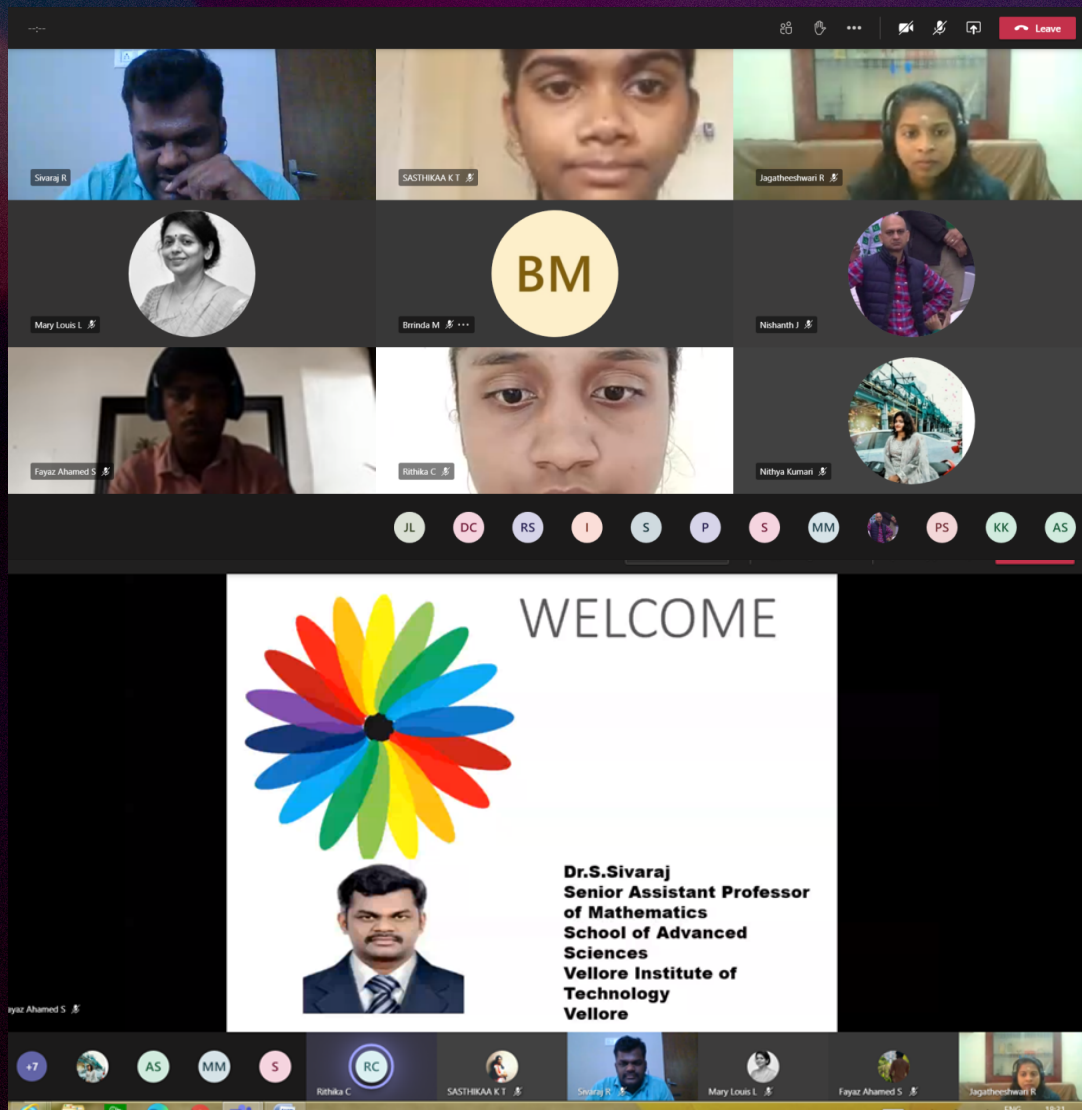
# EXPERT CONVERSATION 7



## NUMERICAL METHODS FOR BOUNDARY LAYER ANALYSIS

Department of Mathematics organized its Seventh expert conversation of the online series entitled 'Numerical Methods for Boundary Layer Analysis' on 25th September, 2020 from 4.00 pm to 5.00pm via Microsoft Teams. The session holder was Dr. R. Sivaraj, Senior Assistant Professor of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Vellore.

The session started with the introduction of MATLAB and Matrix. Then the session proceeded with the brief Explanation of Matrix and Numerical methods for boundary layer Analysis. Then, the guest elucidated about Mechanics, statics Dynamics, Fluid Mechanics and Fluid Dynamics. That followed with the explanation of about Liquids and gas, density formula and its usage. Then, the session briefed about Newtonian fluids & Non – Newtonian fluids and their graphs with examples. The session then discussed about Boundary layer – Velocity profile, Transitions and mentioned about General transport equations, Navier – Stokes Equations.





# STUDENT ACHIEVEMENTS

- Ms. Sasthikaa K T, as a part of Team EVOLVE, organised several webinars, titled:

Incredible India - September 1, Building A better you - September 4, Ennum eluthum - September 5 ( In collaboration with Tamil Mandram, Kumaraguru Institutions), Caught in the Act - September 8, Pep talk (CA/CS/CMA) - September 11, Fashion and Styling - September 15, Research and Analytics- September 18 Cyber security and Growing Challenges - September 22, Acing Interviews- September 25.

- Ms. Sasthikaa K T, of II B.Sc Mathematics, attended "Market Research in Business", organised by the Department of Management, KCLAS on September 8, 2020.

- She Moderated the virtual open house, 'Diploma in data analytics', hosted by KCLAS, on September 2020.

- She was one of the team leads ( of Team 13) in student immersion program, "IGNITE 2020" for the batch of 2020.

- She was selected as one among the 538 candidates for Mathematics Training and Talent Search Programme (MTTS), the most popular undergraduate/graduate training programme in Mathematics running in India, that invited applications nation - wide.



- Ms. Brinda M, of II B.Sc Mathematics, participated in Helmet Awareness Art contest conducted by KCT Uyir club in collaboration with Varam Club on 14.09.2020.

- she participated in PORTRAITing Art Event conducted by Varnam Club on 25.09.2020.



- Ms. Aishwarya S, of II B.Sc Mathematics was the moderator of the session organised by EVOLVE on the topic FASHION AND STYLING held on 15 September 2020 by Ms.Harshaa, Fashion Designer & Stylist.

- She also moderated a session on Youtube Live 'ENNUM ELUTHUM' which has been organised by EVOLVE in collaboration with Tamil Mandram of Kumaraguru institutions by Dr. Shree Parimala on 04.09.2020.



- Sasthikaa K T, Brinda M, RasikaPriya M , Nishanth J, Kowsalya S, Kartheepan C and Sudharsan S of II BSc.Mathematics are attending a Certificate Course on 'Artificial Intelligence and Machine Learning' from 28.09.2020 to 02.10.2020 jointly offered by Rajiv Gandhi National Institute of Youth Development and NIIT , Punjab. This course offered insights right from basics like Introduction to AI , Machine learning, Deep learning, big data, Data analytics, to slightly advanced concepts like Algorithms in Machine learning and Deep learning.

- 16 Students of II BSc.Mathematics have attended a 'Certificate course on Data Science with Python' From 24 August 2020 to 04 September 2020. The course gave a deep and great insights about Data manipulation, Analysis and Visualization with the very easy coding language PYTHON. The session also had covered various other important topics like Operators, Conditional statement, Loops and Functions. The hands on training was very useful for the students development.



## QUARANTINE ART...!



These days made our students to think more and that reflected as art too! Brrinda M of II BSc. Mathematics has made our various art like ZENTANGLE, SHILHOUETEE and MANDALA IDOL.



தாயாகவும் உணர்வாகவும் உள்ளவாகவும்  
உன்னிலும் என்னிலும் கலந்த தமிழைக் கொண்டு  
பரதியின் வரிகளை மேற்கோள்காட்டி  
பெண் பிறப்பின் குறிக்கோள் ஆறிய விழைகிறேன்  
வார்த்தைகள் எனக்குத் துணை வருமா?  
அன்பில் ஒரு அன்னையாய்  
அழகில் ஒரு தேவதையாய்  
சிறந்த நட்பின் சாரதியாய்  
தந்தையின் தங்கத் தாரகையாய்  
ஒளிவீசும் பெண்களே...

கலப்பையையும் எடுப்பர்  
கைப்பேசியும் இயக்குவர்  
அறுவடையும் அருமையாய் செய்வர்  
பட்டையும் நேர்த்தியாய் நெய்வர்  
அடுப்பையும் ஊதுவர்  
வேதங்களையும் ஒதுவர்  
வீட்டில் இருந்து விண்வெளி வரை  
விண்மீனாய் விறுருக்கும் விடிவெளிகளே  
வெற்றிச் சிகரங்களே

நீ கூனிக் குறுகி நடப்பதேன்?  
.....குற்றமற்றவள் நீ!  
ஒடி ஒளிந்து கொள்வதேன்?  
.....சுதிரவனாய் ஒளிப்பிறந்தவள் நீ!  
உதிர்ந்து போவது ஏன்?  
.....உச்சம் தொட பிறந்தவள் நீ!  
உனக்கென ஒரு வட்டத்தை உருவாக்கியது ஏன்?  
.....உலகத்தையே வசப்பட பிறந்தவள் நீ!  
இடைவிடாமல் போராடுகிறாய்  
இன்னும் கொஞ்சம் உரிமைக்காக போராடுகிறாய்  
சச்சரவுகள் தாண்டியும் போராடுகிறாய்  
சம உரிமைக்காக போராடுகிறாய்

Ms. Sasthikaa.T of II B.Sc Mathematics has got her poem published in the book titled, 'Ullangayil Aimbathu Vaanam' (உள்ளங்கையில் ஐம்பது வானம்). The book aggregates the poems of all 50 poetesses who recited their poems in an exclusive confluence for poetesses across TamilNadu( titled "Penpa" event), hosted as a part of Codissia Book Fair, Coimbatore.

கற்றுச்சூழல் மற்றும் பேரிடர் மேலாண்மை

அன்பு அன்னையானவள்  
அழகிய உயிர் கோளத்தை சுவாசித்து நேசிக்க கையில் கொடுத்தாள்.  
ஆயிரம் வளங்களை அதுனுள் அடக்கி,  
ஆ என்று வியந்தாள் மனிதன்-அன்று  
இல்லை என்று சொல்ல இங்கு ஏதுமில்லை.  
இன்றோ இல்லை இல்லை என்கிறது  
நாரமில்லாத நிலமும் கண்ணீர் இன்றி அழுகிறது காரணம் தன்னிடம்  
தண்ணீர் இல்லை என்று,  
நாரமின்றிய இருதயத்தை,  
உடையவனின் கரண்டலின் விளைவா இது?  
உச்சிவெயிலில் தாகமும் தீர்க்க இயலாமல் புள் இனம் புலம்புகிறது,  
ஊற்றிலும் வற்றாத ஆற்றிலும் நீரில்லை என ஐந்து அறிவு விலங்குகளும்  
அலறுகின்றன.  
ஊரில் உள்ள மக்களே இவ்வாறு சென்றால் நாளை நீயுமில்லை நீரும்  
இல்லை  
எழுத்தறிவு இன்றி நீ இருக்கலாம் -ஆனால்  
எண்ணியாவது பார்க்க வேண்டுமல்லவா!  
ஏட்டுடன் படிக்க சென்ற உன் சந்ததிக்கு நாளை  
ஏதுமில்லாத உயிர் கோளத்தை அளித்து செல்வாய் என்று  
ஐயமும் அச்சமும் உள்ளது.  
ஐயோ எத்துணை பேரிடர்கள் இயற்கையாலும் செயற்கையாலும்  
ஒட்டி அடுக்குமாடி குடியிருப்புகளும் ஒரு நொடிப்பொழுதில் காணாமல்  
போகும் நிலநடுக்கத்தினால்,  
ஒன்றிய கிராமங்களில் வாழும் விவசாயிகளும் மடிகின்றன வரட்சியினால்,  
ஓடிய நதிகளும் தங்கிய கடல்களும் பொங்கியெழுந்து  
உடன்பிறப்புகளையும் உறவுகளையும் உடன் அழைத்துச் செல்லும்  
வெள்ளமும் கனாமியும்,  
ஓராயிரம் அழிவுகள் ஓரிகு விளாடிகளில் நிலச்சரிவினாலும் இயற்கையாக  
ஒளரதனை (மகன்) தாய் இழந்தால் ஆழ்துளைக் கிணற்றில்

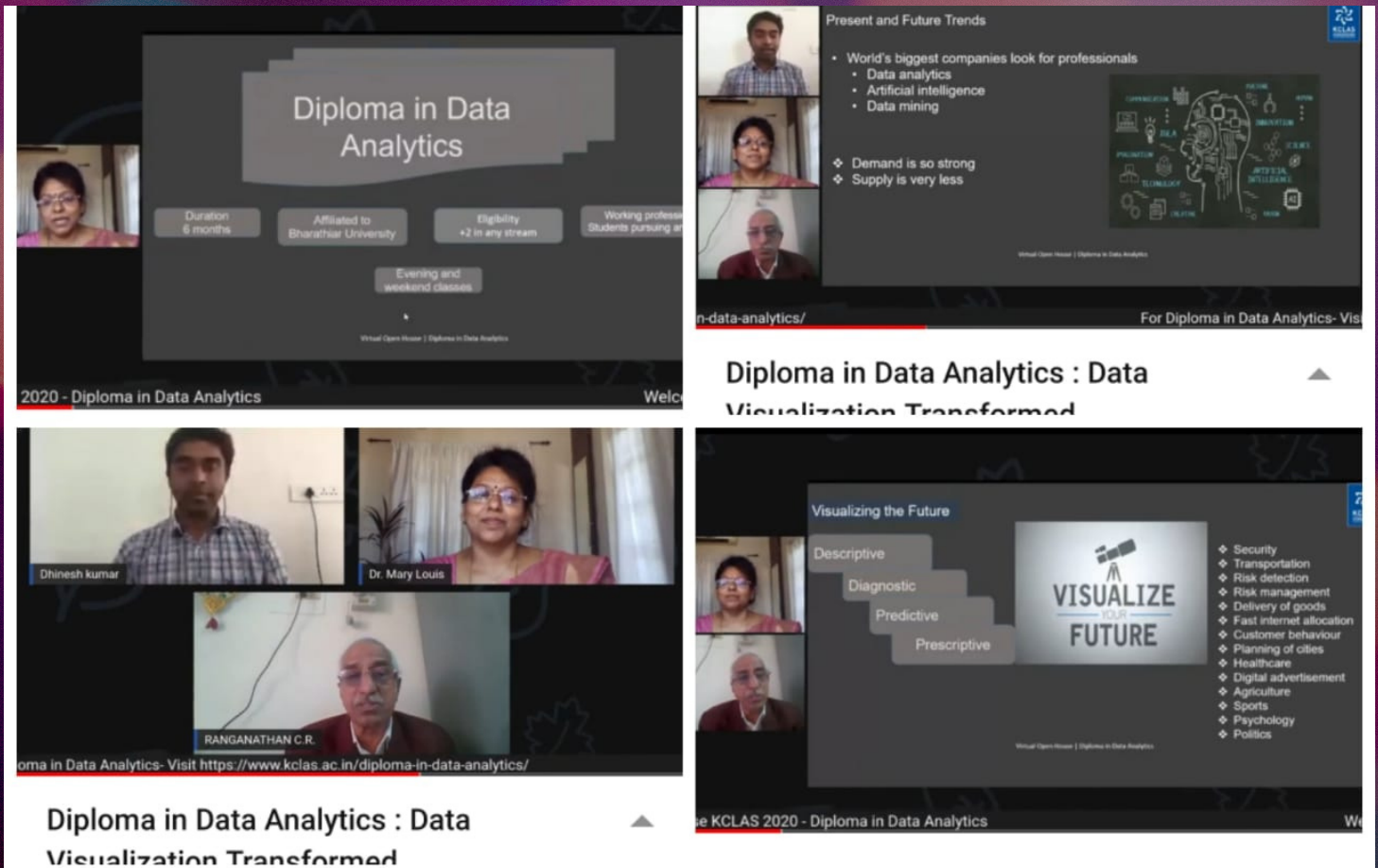
ஒளலியாகள் (பக்தர்கள்) ஆயிரம் கடவுள்களை வேண்டினர்  
அஃது ஒரு ஆயுதமும் உதவவில்லை, காலம் கடந்ததால்  
இஃது செயற்கை இடராகியது.  
கலங்குகின்றனர் பல்லாயிரம் மக்கள் இராசயனத்தினாலும்,  
அணுச்சக்தியினாலும் பேரிடர் நேருமே என அஞ்சுகின்றனர்.  
கலங்கத்தினையும் கண்ணிரையும் போக்கும் வகையில் ஒரு பட்டாலியன்  
படைகளை அரக்கோனத்தில் அமைந்தது தமிழக பேரிடர் மேலாண்மை.  
ஞானம் பெற்ற பலர் ஞாலத்தை கையாலும் போது தவறுகின்றனர்  
ஞானம் தவறியவர்களுக்கு, சரியான நேரத்தில்  
ஞானம் அளிக்க பேரிடர்களை அளித்து அழிவுகளை அள்ளி தந்து  
விடுகிறது.  
வாழ்பவர்கள் அனைவரையும்  
விழ்த்தி விடுகிறது.  
கற்றுச்சூழலை பாதுகாப்போம்  
கற்றும் பூமி நம்மை பாதுகாக்கும்.

சு. ஐஸ்வர்யா,  
முதலாமாண்டு கணிதத் துறை.

Ms. Aishwarya S, of II B.Sc Mathematics contributed and won II prize in state level online poem writing competition organised by World Bank Assisted Coastal Disaster Risk Reduction Project.



# FACULTY ENGAGEMENT



**Diploma in Data Analytics**

Duration 6 months  
Affiliated to Bharathiar University  
Eligibility +2 in any stream  
Working professional/Students pursuing a degree  
Evening and weekend classes

**Present and Future Trends**

- World's biggest companies look for professionals
  - Data analytics
  - Artificial intelligence
  - Data mining
- Demand is so strong
- Supply is very less

**Visualizing the Future**

Descriptive  
Diagnostic  
Predictive  
Prescriptive

**VISUALIZE YOUR FUTURE**

- Security
- Transportation
- Risk detection
- Risk management
- Delivery of goods
- Fast internet allocation
- Customer behaviour
- Planning of cities
- Healthcare
- Digital advertisement
- Agriculture
- Sports
- Psychology
- Politics

**Diploma in Data Analytics : Data Visualization Transformed**

Department of Mathematics hosted a Virtual open house on 'Data Visualization Transformed - Diploma in Data Analytics' by Dr C R Ranganathan Professor, Dept. of Computing on September 23, 2020, 4.00 pm - 5.00 pm. The session was an interactive open house session where professors and experts quoted how data analytics is the need of the hour. About 350+ participants were benefitted from the session.

Session Link:







Dr. Mary Louis L, Professor, Department of Mathematics was awarded, AWARD OF MERIT- TEACHING for the year 2019-2020 on Teacher's Day.

- Ms. R. Jagatheeshwari, Assistant Professor, Department of Mathematics has participated in the International Workshop on 'Geometry of Continued Fractions: Ramanujan and his Successors' on September 14 and 15 2020 organised by Central University of Himachal Pradesh.
- Ms. R. Jagatheeshwari, participated in International Conference on Discrete and Applied Mathematics (ICDAM 2020) organised by Vidhya Academy of Science and Technology on September 18 and 19 2020.





Editorial board:

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