

## ASSOCIATION LONG REPORT 2023- 2024



### **HOLY CROSS COLLEGE (AUTONOMOUS)**

Affiliated to Bharathidasan University  
Nationally Accredited (4<sup>th</sup> Cycle) with 'A++' Grade (CGPA 3.75/4) by NAAC  
College with Potential for Excellence  
Tiruchirappalli - 620002.

### **PG AND RESEARCH DEPARTMENT OF MATHEMATICS (SCHOOL OF MATHEMATICAL COMPUTATION SCIENCES)**

#### **Inservice Faculty Workshop on “Manipulation & Analysis of Data in SPSS”**

**Date** : 14-07-2023  
**No. of. Beneficiaries:** 24  
**Time** : 1.30 P.M  
**Venue** : E- Learning Lab

#### **INVITATION:**

**HOLY CROSS COLLEGE (AUTONOMOUS)**  
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College with Potential for Excellence  
Tiruchirappalli-620002.

SCHOOL OF MATHEMATICAL COMPUTATION SCIENCES  
PG & RESEARCH DEPARTMENT OF MATHEMATICS

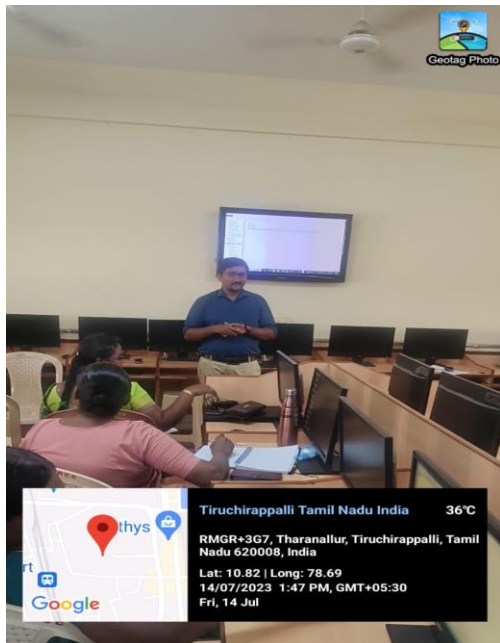
**Cordially invites you for the**  
**ONE DAY IN-SERVICE FACULTY WORKSHOP**  
**ON**  
**MANIPULATION & ANALYSIS OF DATA in SPSS**

Presided by  
**Rev.(Sr).Dr.Isabella Rajakumari**  
Principal

Resource Person  
**Dr. Mohamed Ashik,**  
Assistant Professor,  
Department of Statistics,  
National College (Autonomous),  
Tiruchirappalli-620001.

**Date:** 14.07.2023  
**Time:** 1:30 pm  
**Venue:** E-Learning Hall

#### **PHOTO:**



## **REPORT:**

The PG & Research Department of Mathematics of Holy Cross College (Autonomous), Trichy conducted the Inservice Faculty Workshop on “Manipulation & Analysis of Data in SPSS” on 14<sup>th</sup> July 2023 in the E-Learning Hall.

The workshop commenced by invoking God’s blessing through prayer Dr. Sr. Fabiana Jacintha Mary, Assistant Professor of Mathematics, Holy Cross College, Trichy rendered a warm welcome to our Resource person, Dr. A. Mohamed Ashik, Assistant Professor, Department of Statistics, National College(Autonomous), Trichy.

The Resource person started his session by introducing the concept of statistics & demonstrated the installation of SPSS software. He gave an brief explanation about the significance of SPSS in real life problems.

The expert elaborated on the concept of Testing of hypothesis: t-test, chi-square, F-test ANOVA test, small sample , Large sample using SPSS theory as well as practical.

## **INAUGURAL MEETING**

**Date : 20-07-2023**

**No. of Beneficiaries: 250**

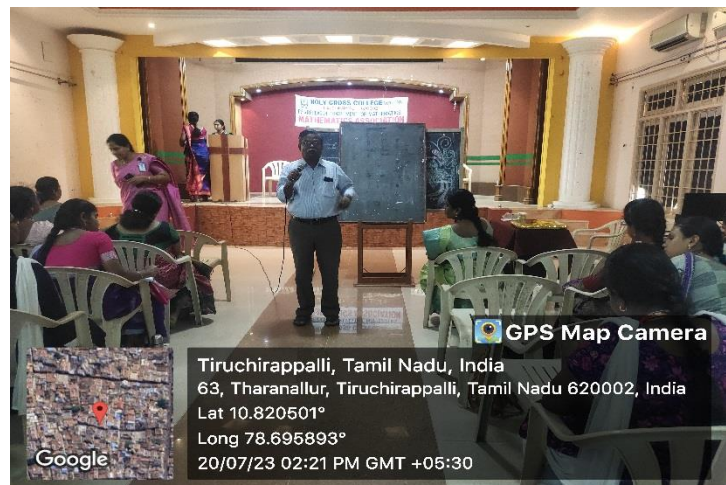
**Time : 1.30 P.M**

Venue : Sophy's Hall

## INVITATION:



## PHOTO:



## REPORT:

The inaugural meeting of our Mathematics Association was held on 20<sup>th</sup> July 2023 for the academic year 2023-2024.

The meeting commenced with a prayer service. Dr. M. Mary Mejrullo Merlin, Assistant Professor and head of the department of PG and Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli, welcomed the gathering.

It was followed by minutes reading by Ms. R. Vino dharshini, III B. Sc. Mathematics. She insisted on the importance of leadership.

Our Chief Guest Dr. M. Marudai, Honorary Professor, Department of Mathematics, School of Mathematical sciences, Bharathidasan University, Tiruchirappalli inaugurated the Mathematics Association for the academic year 2023-2024. Sir declared about the importance of CSIR examination. He explained the question types and the topics which are important for the examination like NBHM, CUT, GATE, etc.,

He also discussed about some problems which are really useful to the students. He motivated the students to write the eligibility examination. He also insisted that the exams are easy for the Mathematics student. Sir concluded that “Make the Mathematics as your beloved one” and spent time for your friend.

He has enlightened young minds to prepare for the CSIR examination and face it with confidence. The meeting was concluded with vote of thanks proposed by Ms. R. Shanthini, II M. SC. Mathematics, Holy cross college (Autonomous), Tiruchirappalli.

## **INTERNATIONAL CONFERENCE ON RECENT TRENDS IN APPLICATIONS OF MATHEMATICS**

**(ICRTAM)**

**Date : 04.08.2023**  
**Venue : Our Lady's Hall**  
**No of Beneficiaries : 250**

**INVITATION:**



**Organizing Committee**  
**Patron** Dr. (Sr.) Anne Xavier  
 Secretary Holy Cross College (Autonomous) Trichirappalli

**Chair** Dr. (Sr.) Rajakumari P  
 Principal Holy Cross College (Autonomous) Trichirappalli

**Convener & Organizing Secretary** Dr. M. Mary Mejrulla Martin  
 Head and Assistant Professor PG and Research Department of Mathematics Holy Cross College (Autonomous) Trichirappalli

**Organizing Team**  
 Dr. Sr. Fabiana Jacintha Mary M, Assistant Professor, HCC  
 Dr. Dhanalakshmi K, Assistant Professor, HCC  
 Dr. Leelina Maria Prakasham A, Assistant Professor, HCC

**Board Members**  
 Ms. Joy John A, Associate Professor, HCC  
 Dr. Ritha W, Associate Professor, HCC  
 Dr. Marilini Vinitha J, Assistant Professor, HCC  
 Dr. Rexlin Jayakumar S, Assistant Professor, HCC  
 Dr. Antonette Vinithine S, Assistant Professor, HCC  
 Ms. Jones Jayalitha S, Assistant Professor, HCC  
 Dr. Mary Priya Dhairini A, Assistant Professor, HCC  
 Dr. Bincy J, Assistant Professor, HCC  
 Dr. Saranya A, Assistant Professor, HCC  
 Dr. Theresal Jayaseelan A, Assistant Professor, HCC  
 Dr. Josephine Vinitha S, Assistant Professor, HCC  
 Dr. Francis Nishanth J J, Assistant Professor, HCC  
 Ms. Josephine P S, Assistant Professor, HCC

**Holy Cross College (Autonomous)**  
 Affiliated to Bharathidasan University  
 Nationally Accredited (4<sup>th</sup> Cycle With 'A' Grade (CGPA 3.754) by NAAC  
 College with Potential for Excellence  
 Trichirappalli - 620 002, Tamil Nadu, India

**PG AND RESEARCH DEPARTMENT OF MATHEMATICS  
 (SCHOOL OF MATHEMATICAL COMPUTATION SCIENCES)**

*Cordially invites you for the  
 International Conference  
 on  
 Recent Trends in  
 Applications of Mathematics  
 (ICRTAM)*

**Date** 4<sup>th</sup> August 2023, Friday  
**Time** 9.00 a.m. - 4.30 p.m.  
**Venue** Our Lady's Hall

**Programme**

**9.00 a.m. - 10.00 a.m. INAUGURATION**

**Felicitations** Dr. (Sr.) Anne Xavier  
 Secretary Holy Cross College (Autonomous) Trichirappalli

Dr. (Sr.) Rajakumari P  
 Principal Holy Cross College (Autonomous) Trichirappalli

**Inaugural Address** Dr. A. Tamilselvan  
 Professor and Head Department of Mathematics  
 Chair, School of Mathematical Sciences Bharathidasan University, Trichirappalli

**Guest of Honor** Dr. Uma Kannan  
 Associate Professor Department of Mathematics and Computer Science Auburn State University United States of America

**10.00 a.m. - 11.15 a.m. TECHNICAL SESSION - I**  
**Topic** Integrating Deep Learning and Fuzzy Logic for Malware Detection and Analysis  
**Resource Person** Dr. Uma Kannan  
 Associate Professor Department of Mathematics and Computer Science Auburn State University United States of America

**11.15 a.m. - 11.45 a.m. Tea Break**

**11.45 a.m. - 1.00 p.m. TECHNICAL SESSION - II**  
**Topic** Applications of Fuzzy Mathematics  
**Resource Person** Dr. V. Lakshmana Gomathi Nayagan  
 Associate Professor and Head Department of Mathematics - National Institute of Technology Trichirappalli

**1.00 p.m. - 2.00 p.m. Lunch**

**2.00 p.m. - 3.15 p.m. TECHNICAL SESSION - III**  
**Topic** Introduction to Phitogenic Sets  
**Resource Person** Dr. Nivetha Martin  
 Assistant Professor of Mathematics Anu Anandar College (Autonomous) Karumathur, Madurai

**VALEDICTION**

**3.30 p.m. - 4.30 p.m. VALEDICTION**  
**Valedictory Address** Dr. X. Susan Christiana  
 Principal M.A.M. College of Engineering and Technology Sengalur, Trichirappalli

**Guest of Honor** Dr. (Sr.) Rajakumari P  
 Principal Holy Cross College (Autonomous) Trichirappalli

**PHOTO:**



**REPORT:**

Mathematical sciences are part of nearly all aspects of everyday life—the discipline has underpinned such beneficial modern capabilities in medical imaging, computer animation, cybertechnology, Awareness on Malwares, Intuitional fuzzy logic and all types of digital

communications. The vitality of the discipline is excellent and it contributes in expanding ways to most areas of science and engineering.

In particular, the research progress and higher studies in its recent applications creates a whole enterprise and continues to flourish long-term. Keeping these factors in mind, the PG and Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli, planned to organize an International Conference on "**Recent Trends in Applications of Mathematics**" aiming for the updation and enhancement in research areas pertaining to the most happening fields and also to motivate students to go for higher studies and pursue research by bringing together academic professionals, researcher scholars, staff members of the department and various other departments, M.Phil students, post graduate students and the final year under graduate students. These 250 members were the beneficiaries of the conference.

**On 4<sup>th</sup> August 2023**, the inauguration of the international conference on "**Recent Trends in Applications of Mathematics**"(ICRTAM) commenced at 9:00 am by invoking God's blessings through a prayer service followed by Tamil thali Vazhthu, lead by the students of the PG and Research Department of Mathematics, Holy Cross College (Autonomous). Following the prayer service, **Dr. M. Mary Mejrullo Merlin, Convener and Organizing Secretary, Head and Assistant Professor**, PG and Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli, welcomed the dignitaries and the gathering.

**Rev. (Sr). Dr. Anne Xavier, Secretary, Holy Cross College, Tiruchirappalli**, felicitated the gathering. She appreciated and spoke about the legacy of the PG and Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli and the dedication of the staff members in building a heritage which led to organizing and conducting useful and informative conferences like ICRTAM, which she mentioned would be beneficial to students, researchers and professors in all aspects and she gave her blessings for the successful conduct of the conference.

Following her, **Rev. (Sr). Dr. Rajakumari, Principal, Holy Cross College**, Tiruchirappalli, felicitated the gathering by expressing her appreciation and wishes for the successful conduct of the conference, which she mentioned to be the need of the hour gesture for all academic progresses related to research and learning. She stressed on the importance of the current trends and applications in the fields of Mathematics and computer science and the urge to take it to greater heights and gave her blessings for the successful conduct of the conference.

The chief guest **Dr. E. George Dharma Prakash Raj, Associate Professor, School of Computer Science, Engineering and Applications, Kajamalai Campus, Bharathidasan University**, Tiruchirappalli, gave the inaugural address. He congratulated the department for organizing a conference on the topic "Recent trends in the applications of Mathematics", which is the most happening and relevant topic, being the need of the hour requirement in current trends in Mathematics. He encouraged the students, research scholars and staff members to pursue further research in the said fields and in particular he insisted on the students to make full use of all the topics by giving their unhindered concentration throughout all the sessions.

**Dr. Sr. Fabiana Jacintha Mary, Organizing member (ICRTAM), Assistant Professor, PG & Research Department of Mathematics, Holy Cross College, Tiruchirappalli,** proposed the vote of thanks. The inauguration came to an end with the college anthem.

The first technical session followed the inauguration at 10:00 am. **Dr. W. Ritha, Dean of Research & Associate Professor, PG & Research Department of Mathematics, Holy Cross College, Tiruchirappalli,** moderated the session and the resource person of the session, Dr. Uma Kannan, Associate Professor, Department of Mathematics and Computer Science, Alabama State University, USA, spoke on the topic, **Integrating Deep Learning and Fuzzy Logic for Malware Detection and Analysis.** She gave an excellent insight on the integrating deep learning and fuzzy logic for malware detection and analysis. She explained different technologies like hashing and MD5 algorithm with suitable examples. She briefed on creating a malware database through benign database. She enumerated on cryptographic hash algorithm using quick detection and fuzzy hashing algorithm constructed using detailed scan.

Following the tea break, the second technical session commenced at 11:45 am. **Dr. J. Merline Vinotha, Assistant Professor, PG & Research Department of Mathematics, Holy Cross College, Tiruchirappalli,** moderated the session and the resource person of the session, **Dr. V. Lakshmana Gomathi Nayagam, Associate Professor and Head, Department of Mathematics, National Institute of Technology, Tiruchirappalli,** spoke on the topic, **Applications of Fuzzy Mathematics.** He explained basic concepts in fuzzy logic and the applications of fuzzy mathematical models such as fuzzy control theory, fuzzy clustering, and fuzzy decision making. He differentiated the types of decomposition theorems on fuzzy sets. He gave an insight to score functions, accuracy score function and total order on fuzzy numbers.

After the lunch break the third technical session commenced at 2:00 pm. **Dr. I Antonitte Vinoline, Assistant Professor, PG & Research Department of Mathematics, Holy Cross College, Tiruchirappalli,** moderated the session and the resource person of the session, **Dr. Nivetha Martin, Assistant Professor of Mathematics, Arul Anandar College (Autonomous), Karumathur, Madurai,** spoke on the topic, **Introduction to Plithogenic Sets.** She clearly enumerated on the concept of decision making through intuitionistic fuzzy sets with real life examples and also gave a clear insight on plithogenic sets which is generalization of crisp, fuzzy, intuitionistic fuzzy and neutrosophic sets through various definitions and real life examples.

The valediction followed the third technical session, at 3:30 pm. It commenced with the prayer service, followed by the welcome address delivered by, **Dr. K. Dhanalakshmi, Organizing member (ICRTAM), Assistant Professor, PG & Research Department of Mathematics, Holy Cross College, Tiruchirappalli.**

**Dr. M. Mary Mejrullo Merlin, Convener and Organizing Secretary (ICRTAM), Head and Assistant Professor,** PG and Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli, read the conference report, followed by the valedictory address,

which was delivered by, Dr. X. Susan Christiana Principal, M.A.M College of Engineering and Technology, Siruganur, Tiruchippalli.

**Dr. A. Leema Maria Prakasam, Organizing member (ICRTAM), Assistant Professor, PG & Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli,** proposed the vote of thanks and the valediction of the International Conference On Recent Trends In Applications of Mathematics (ICRTAM), ended successfully with the national anthem sung by the students of the PG & Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli.

“Knowledge is power and updation of knowledge in any form is a boon to the society”.

With this note to ponder on, the **PG & Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli,** successfully conducted the **International Conference On Recent Trends In Applications Of Mathematics (ICRTAM)** on 4<sup>th</sup> August 2023, and is yet to conduct such productive seminars and conferences for continuous knowledge updation of students and faculty in the near future.

## WEBINAR REPORT

**Date : 11.08.2023**  
**Venue : Sophy's Hall**  
**No of Beneficiaries : 70**

### INVITATION:

**NIRMALA COLLEGE FOR WOMEN (AUTONOMOUS)**  
AFFILIATED TO BHARATHIAR UNIVERSITY  
ACCREDITED WITH A++ GRADE BY NAAC IN IV CYCLE  
WITH COPA 3.78  
RED FIELDS, COIMBATORE - 641018  
TAMIL NADU, INDIA

IN ASSOCIATION WITH  
HOLY CROSS COLLEGE (AUTONOMOUS), TRICHY  
AND CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA  
"AS PART OF ACADEMIC COLLABORATING ACTIVITY UNDER  
XAVIER BOARD OF HIGHER EDUCATION, INDIA"

Organises a webinar on the topic  
**Environmentally responsible and  
sustainable inventory models**

**RESOURCE PERSON**  
Dr. W. RITHA  
Associate Professor  
Department of Mathematics  
Holy Cross College (Autonomous)  
Tiruchirappalli-620002

Date : 11/08/2023      Time : 2 pm - 3 pm      Mode : Hybrid mode

**CHIEF PATRONS**  
Rev.Sr.Dr.A.Kulandai Therese  
Secretary, Nirmala College for Women  
Rev.Sr.Dr.Anne Xavier  
Secretary, Holy Cross College

**PATRONS**  
Rev.Sr.Dr.G.S.Mary Fabiola  
Principal, Nirmala College for Women  
Rev. Sr.Dr.Isabella Rajakumari  
Principal, Holy Cross College  
Rev.Fr. Dr. Jolly Andrews CMI  
Principal, Christ College

**CONVENOR**  
Dr. K. Julia Rose Mary  
Associate Professor & Head  
Department of Mathematics  
Nirmala College for Women

**ORGANIZERS**  
Faculty members of  
Department of Mathematics  
Nirmala College for Women

### PHOTO:





## **REPORT:**

As a part of academic collaborating activity under Xavier Board of Higher Education, India. Nirmala College for women (Autonomous), Coimbatore in association with Holy Cross College (Autonomous), Trichy and Christ College (Autonomous), Irinjalakuda organises a webinar on “Environmentally responsible and sustainable inventory models” on 11<sup>th</sup> August in hybrid mode.

The resource person is Dr. W. Ritha, Associate Professor, PG and Research Department of Mathematics, Holy Cross College (Autonomous), Tiruchirappalli.

The webinar started with the prayer continued by welcome address by the students of Nirmala College for women (Autonomous).

Following this Dr. W. Ritha gave a short introduction about the Environmentally sustainable Inventory models. Madam also summarized about the significance of the organization sustainability. She gave a clear explanation about the need for sustainable inventory models and discussed about the three pillars of sustainability, i.e., social, environmental and economic also learnt the benefits of environmentally sustainability inventory works.

She also insisted that a successful production system must have flexibility, Reliability and quality. Madam has explained about Environmental Economic order quantity Model with package cost. She pointed out that today’s world is full of environmental pollution. Madam also encouraged the students to do a research based on this topic. Madam concluded that “Every individual is responsible for the gradation of transparency of our environment”.

“Gratitude is a powerful catalyst for happiness”. The webinar ended up with vote of thanks by the student of Nirmala College for women (Autonomous), Coimbatore. Truly, the webinar was very useful to the students and also for the research scholars

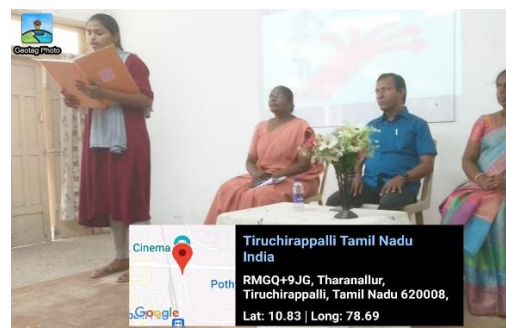
## CAREER GUIDANCE

**Date** : 11-12-2023  
**No. of Beneficiaries:** 75  
**Time** : 1.30 P.M  
**Venue** : Seminar Hall

### INVITATION:



### PHOTO:



### REPORT:

The Career guidance session was held on 11<sup>th</sup> December 2023 for the academic year 2023-2024 by Mathematics Association, PG and Research Department of Mathematics.

The meeting commenced by invoking God's blessing through prayer Dr. Sr. Fabiana, Assistant Professor of Mathematics, Holy Cross College, Trichy, rendered a warm welcome to our resource person Rev. Dr. K. Arockiam, SJ, Associate Professor, Department of Human Resource Management, St. Joseph's college, Trichy.

Following this Ms. R. Vinodharshini, Vice President read the minutes of the last session held on 11<sup>th</sup> August 2023.

The Resource person started his session by explaining Decision making process for our future career. He insisted us to take correct decision which will pave way for successful career. He also advised us to make self-assessments using SWOT and Psychometric assessments. He explained about SWOT. SWOT stands for S-Strength, W-Weakness, O-Opportunities, T-Threads. He clearly explained us how the government competitive exams question papers are prepared and hence directed us to learn 6-10 CBSE books. He told that every student must try to clear competitive examinations like TNPSC, group I, II,III,IV etc., which would be very useful for our future. He also mentioned that **“Every one should try for UPSC exams and he wanted us to becomes IAS officers to build a just friendly society.”**

He concluded that **“more than private sectors jobs, every student might try for government sectors.”** The session came to end with vote of thanks proposed by Ms. A. Aruna, student secretary in Mathematics Association, Holy Cross College, Trichy. The session was very useful to us.

## **HUMAN RIGHTS**

**Date: 14.12.2023**

**No. of. Beneficiaries: 188**

**Time: 1.30 P.M**

**Venue: Sophy's Hall**

**INVITATION:**

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 Tiruchirappalli-620002, Tamilnadu, India

**PG & RESEARCH DEPARTMENT OF MATHEMATICS**  
 Cordially invites you for the Association Meeting on

**HUMAN RIGHTS**

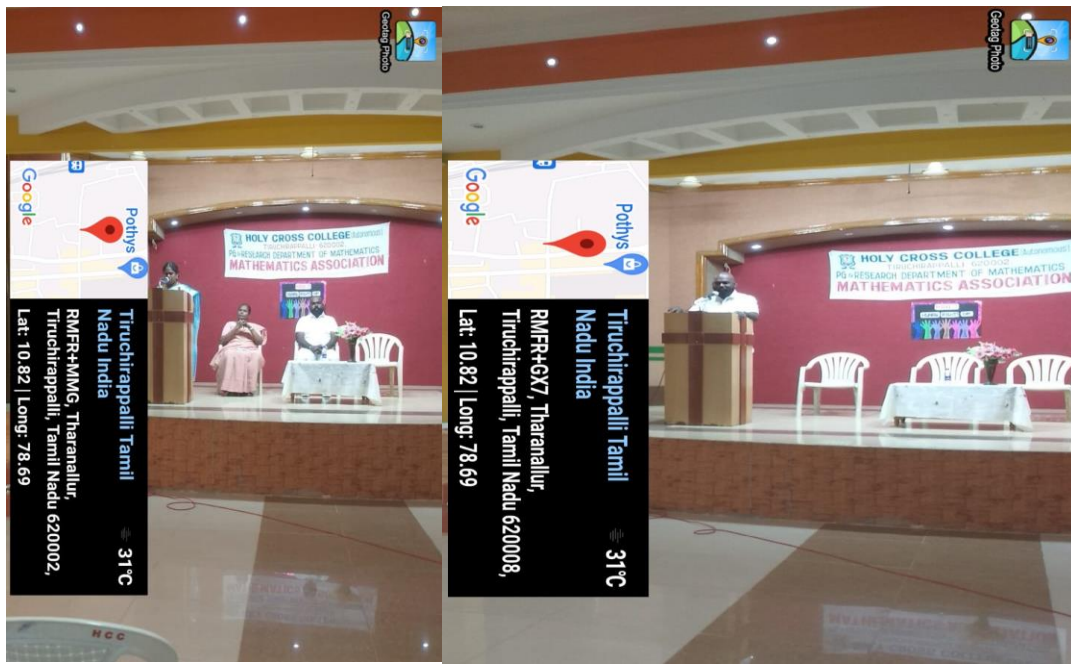
**RESOURCE PERSON :**  
 Mr.V.Vinesh Kumar,MIB(LONDON), BL  
 Advocate -HR &CE  
 (Government of Tamilnadu)  
 Tiruchirappalli district.

**14 /12/2023**  
**12.30-1.30PM**  
 venue : Sophy's hall

**INTERNATIONAL HUMAN RIGHTS DAY**



**PHOTO:**



## **REPORT:**

In the view of Human Rights Day, the session on “Human Rights “ was conducted on 14<sup>th</sup> December 2023 by the Mathematics Association, PG & Research Department of Mathematics.

The session started by invoking God’s blessings through prayer. Following this Dr. Leema Maria Prakasam, Assistant professor, PG & Research Department of Mathematics, Holy cross college (Autonomous), welcomed the gathering and introduced the day’s speaker.

The minutes of the last meeting was read by student’s vice president Ms. Vinodharshini, III-B.Sc Mathematics, Holy cross college (Autonomous). The resource person of the session was Mr. Vinesh Kumar (Advocate), addressed the gathering. First he explained about the origin of UDHR. It was adopted by the General Assembly of the United Nations on 10 December 1948. He explained about the difference between Indian constitution and UDHR. UDHR stands for Universal Declaration of Human Rights. He explained about Article 26. The application of article 26 has served to protect individuals from discrimination in the enjoyment of a variety of Economic, Social and Cultural rights. He also discussed about the Similarities of Indian constitution and UDHR. Both categories of rights aim at protecting and promoting the dignity, freedom and well doing of individuals. Core-Principles such as non-discrimination, equality before the law and freedom of expression are common across human rights and fundamental rights. He also told about the acts for Women Rights like 1. Succession Act 2. Dowry Act 3. Eve-teasing Act 4. Indecent Representation Act. He started about the theme of UDHR for the present year. The theme is “Freedom, Equality and Justice for all”. He also explained us, how to file a complaint in National Human Rights Commission. He said about Article 21, which explains about the Right to educate and Right to equality. Sir briefly explained about the basic Human Rights. They are as follows: i) Social Rights ii) Economic Right iii) Culture Rights iv) Civil Rights and v) Political Rights. He concluded that “Human Rights is a right which we have by birth. But, it should not disturb other’s right.

The session came to an end by vote of thanks proposed by student’s president Ms. Shanthini, II-M.Sc Mathematics, Holy cross college (Autonomous).

The session was truly useful to know about our basic rights according to UDHR and what the real freedom is.

## **INSTALLATION OF Sr.ELECTA MATH ACADEMY & MOU SIGNING -REPORT**

**Date : 28.02.2024**

**Vanue: Shanthi’s Hall**

**No .Of Beneficiaries:30**

On **February 28<sup>th</sup> 2024**, the PG and Research Department of Mathematics, organized and held a Dual celebration of the installation of “Sr.Electa Math Academy” and MoU signing ceremony with consultants for student internship and academy coaching between the PG and Research Department of Mathematics Holy Cross College (Autonomous) and the Department of Data Science St.Joseph’s College, Trichy Plus and Zenith Academy respectively.

The program started with a prayer service followed by the installation of “Sr.Electa Math Academy” by Rev.Sr.Dr.Anne Xavier, Secretary, Holy Cross College (Autonomous), Trichy and Rev.Sr.Dr.Isabella Rajakumari, Principal, Holy Cross College (Autonomous), Trichy. Following the Academy installation, Ms.S.Jone Jayashree, Coordinator of “Sr.Electa Math Academy” and Assistant Professor of the PG and Research Department of Mathematics welcomed the dignitaries and Dr.M.Mary Mejrullo Merlin, Head and Assistant Professor of the PG and Research Department of Mathematics Holy Cross College (Autonomous) briefed on the MoU signing ceremony after which Rev.Sr.Dr.Isabella Rajakumari, Principal, Holy Cross College (Autonomous), gave her felicitations. The MoU signing ceremony took place in the presence of Rev.Sr.Dr.Isabella Rajakumari, Principal, Holy Cross College (Autonomous), Trichy.

Dr.L.Arockiam, Head and Associate Professor of the Department of Data Science St.Joseph’s College, Trichy, Mr.Sivakumar, CEO, Trichy Plus Academy, PG and Research Department of Mathematics Holy Cross College (Autonomous), Trichy and Mr.Vimal, CEO, Zenith Academy, PG and Research Department of Mathematics Holy Cross College (Autonomous), Trichy signed the MoU as second parties representing the Department of Data Science St.Joseph’s College, Trichy Plus Academy, and Zenith Academy respectively. Rev.Sr.Dr.Isabella Rajakumari, Principal, Holy Cross College (Autonomous), Trichy, Dr.M.Mary Mejrullo Merlin, Head and Assistant Professor of the PG and Research Department of Mathematics Holy Cross College (Autonomous), Trichy and Dr.J. Merline Vinotha, Assistant Professor of the PG and Research Department of Mathematics Holy Cross College (Autonomous), Trichy signed the MoU as first parties representing the PG and Research Department of Mathematics Holy Cross College (Autonomous), Trichy.

INVITATION:





PHOTO:



**ONE DAY INTERNATIONAL SYMPOSIUM**  
**ON**  
**COLLABORATIVE ONLINE INTERACTIVE LEARNING (COIL)**  
**ON MATHEMATICAL RESEARCH**

**Date : 01.03.2024(Friday)**

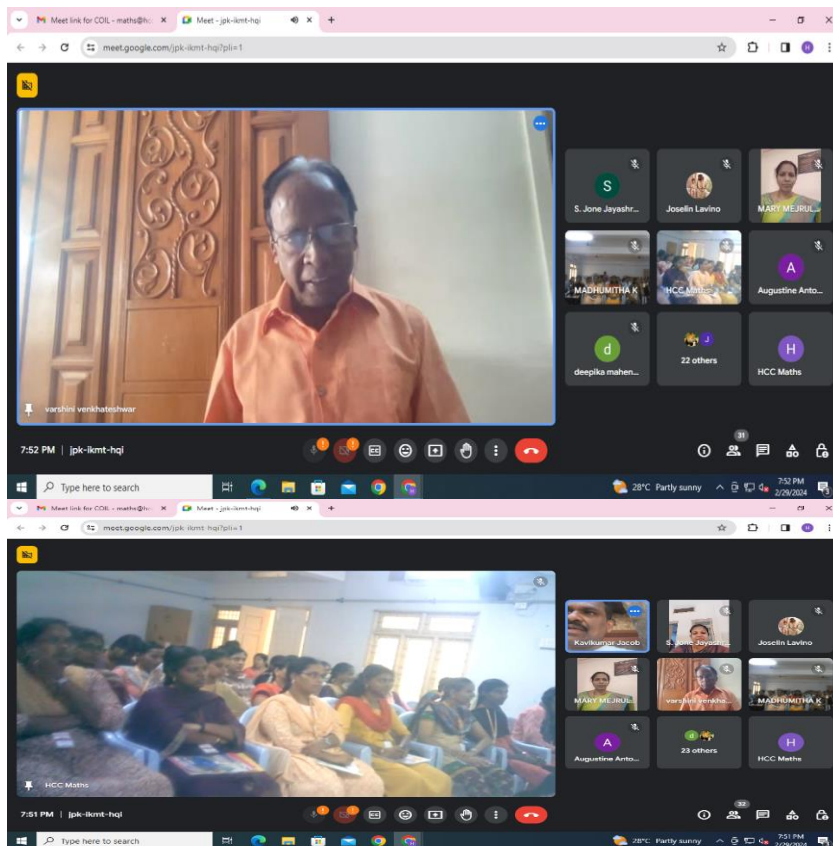
**Google meet link: <https://meet.google.com/jpk-ikmt-hqi>**

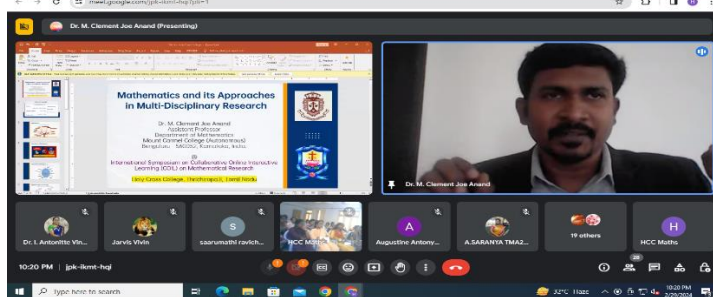
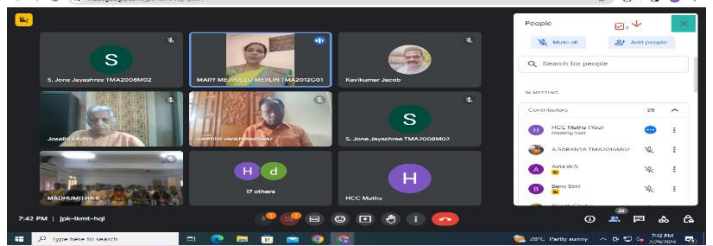
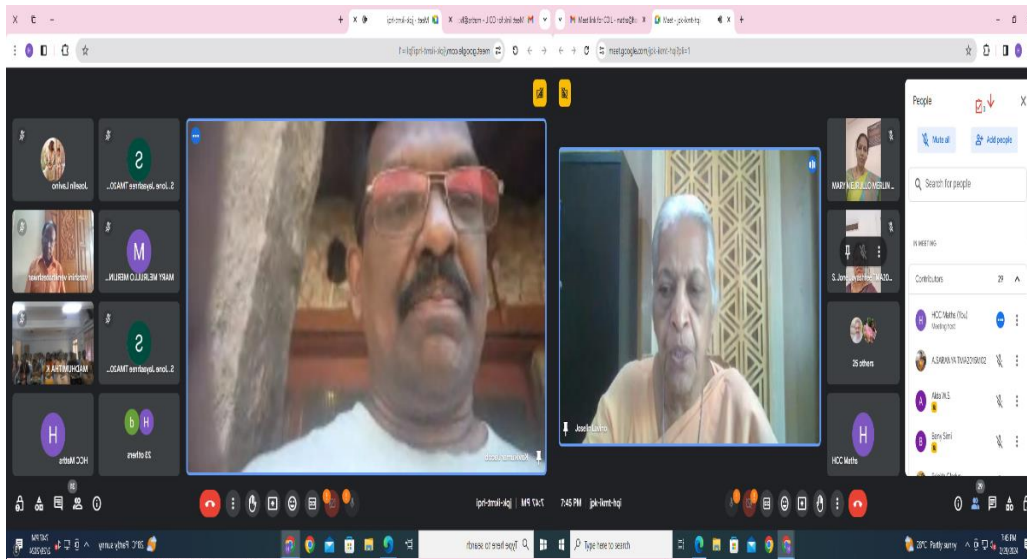
**No. of. Participants: 60**

**Mode: Hybrid**

**Venue: Shanthi's Hall**

**Photo:**





## Report:

In this academic year 2024, The PG & Research Department of Mathematics, Holy Cross College, Tiruchirappalli, planned to organize an one day International Symposium on Collaborative Online Interactive Learning (COIL) on Mathematical Research held on 1<sup>st</sup> March in hybrid mode.

The inauguration of the one day International Symposium commenced at 9.00 am by invoking God's blessings through a prayer service. Following prayer service, Dr. M. Mary Mejrullo Merlin, Assistant Professor and Head of the department of Mathematics, Holy Cross College, Trichy

welcomed the dignitaries and the gathering. Rev. (Sr).Anne Xavier ,Holy Cross College, Tiruchirappalli felicitated the gathering.

The chief guest Dr. Kavi Kumar Jacob, Associate Professor of Mathematics, Faculty of Applied Science and Technology, Universiti Tun Hessein Onn Malaysia gave the inaugural address and Our Guest of honor was Prof. Pa. Navitham, Professor, Head(Retired), Department of Statistics, Thanthai Periyar Govt Arts and Science College (Autonomous), Trichy.( Co Author of Business Mathematics and Statistics Book).

The first technical Sessions followed the inauguration at 10.30 am on online mode. Dr. Merlin Vinotha, Assistant Professor, Holy Cross Collge, Tiruchirappalli moderated the session and the resource person Dr. Kavi Kumar Jacob. He explained about the topic, Collaborative Online Interactive Learning in Mathematical Research. He had given some tips of the online interactive learning for mathematical research. He enumerated to find a right collaborative through sending our email to experts opinion, after discussion only we evaluate and implement our paper and how to connect the people to collaborative online platforms. He enumerated that online collaborative is very efficient and useful for our future research.

Dr. Antonitte Vinoline moderated the Technical Session II. The resource person Dr. Shiv Prasad Yadav, Professor(Retired), Department of Mathematics, Indian Institute of Technology(IIT) Roorkee, Uttarkhand, India. He started the session with basic definitions such as fuzzy set, convex fuzzy set etc., He tells about the Arithmetic Operation on Triangular Fuzzy Number(TFNs), proposed FEDEA Model and ranking approach. He enumerated that the main objective is to measure how to efficiently the individual IIM works and to identify efficient and inefficient performs. He explained some of the models such as Fuzzified DEA model, CCR multiple model, Fuzzified CCRDEA model, etc.,using some example related to this models. He also comparing the geometric ranking method and FFDEA model. He concluded that the both of the ranking methods are similar and he also tells the Education sector applications.

The moderator of Technical Session III was Ms.F.S. Josephine, Assistant Professor introduced the resource person Dr. Clement Jeo Anand, Assistant Professor, Department of Mathematics, Mount Carmel College(Autonomous), Bengaluru, Karnataka, India. He started his session with the topic, Mathematics and its approaches in Multi-Disciplinary Research. He explained that we

should understand the nature of mathematical content and applied in our real world sceneries and some mathematical approach in various sector such as Engineering and Technology etc., He explainde the application of Multi-Disciplinary Research in Psychology, Biology and Noise Reduction. He concluded that mathematics is applied in many place but we use with the help of some other technology such as Computer Science, Data Science, Physics etc.,

At last, we had paper presentation session under the resource person captain Dr. M. Tamilselvi, Associate Professor, PG and Research Department of Mathematics, Seethalakshmi Ramaswami College, Trichy. In this session our PG students, Department of Mathematics, Holy Cross College, Trichy presented their project paper.