



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI-34 DEPARTMENT OF MATHEMATICS (SHIFT II)

A Report on

National Symposium on Mathematical Analysis



(13 March 2023)

Objective

The objective of the National Symposium on Mathematical Analysis (MATANA 2023) was to impart the knowledge of mathematical analysis and its applications to the students, researchers and faculty members in the stream of mathematical sciences.

About MATANA 2020 & 2021

With the guidance, moral and financial support of the Principal, and the management of Loyola College and under the leadership of Dr. S. Athisayanathan, coordinator of the department (2018-2021), Department of mathematics organized an Online Workshop on Mathematical Analysis in the name MANATA 2020 from 8th to 13th June 2020 in the academic year 2020-2021. Five eminent resource persons in the field of mathematical analysis were invited to share their knowledge with the participants and 26 video lectures were published on You Tube. Around 2000 academicians participated in the workshop, and they were given exercise problems through Google classroom every day after the technical sessions were over. The participation e-certificates were sent to the active participants. The participants gave feedback on the workshop and some of them wished to organize the workshop for every year. Assistant professors Dr. S. Iruthaya Raj and Dr. J. Geno Kadwin of the department of mathematics convened the workshop.

Motivated by the positive feedback given by the participants of MATANA 2020, and with the financial and moral support of the Principal and the management of Loyola College and under the guidance of the coordinator of the department Dr. J. Janet Sheeba, the department of mathematics (Shift-II) separately organized an online workshop on Mathematical Analysis (MATANA 2021) from 13th to 18th September 2021 in the academic year 2021-2022 to share the knowledge of analysis with the students, researchers and faculty members of mathematics stream and to train them in qualifying examinations like GATE, IIT JAM and CSIR-NET. Five eminent resource persons from reputed institutions were invited to impart

their knowledge. 16 technical sessions were conducted through Cisco Webex platform and around 200 people participated in the workshop. Every day, after the technical sessions got over, problems were given to the participants through Google classroom and they submitted the solutions. Active participants were given participation e-certificates. Dr. S. Iruthaya Raj and Dr. J. Geno Kadwin were the conveners of the workshop.

About MATANA 2023

In continuation with the online workshops on MATANA 2020 and MATANA 2021, the department of mathematics (Shift-II) organized a National Symposium on Mathematical Analysis (MATANA 2023) for the academic year 2022-2023, physically for the graduate students, young researchers and faculty members with the financial and moral supports of the Principal Rev. Dr. A. Thomas and the management of Loyola College, Chennai.

Resource persons

The following eminent resource persons from reputed institutions were invited to deliver talks in the symposium.

Dr. C. Ganesa Moorthy

Professor (Formerly), Department of Mathematics
Alagappa University, Karaikudi, Tamil Nadu

Dr. Ramesh Venkadachalam Palani

Assistant Professor, Department of Mathematics
Central University of Tamil Nadu, Thiruvarur, Tamil Nadu

Dr. P. Aprameyan

Assistant Professor, Department of Mathematics
IIT Madras, Chennai, Tamil Nadu

Participants

102 participants from various institutions in and around Chennai registered and participated in the National Symposium on MATANA 2023.

Inauguration

- * Dr. J. Janet Sheeba, the coordinator of the department delivered the welcome address.
- * To symbolize knowledge bestowing, a lamp was lit by the dignitaries on the dais.
- * Dr. S. Iruthaya Raj, Convener of the Symposium briefed the history of MATANA to the audience.
- * Rev. Dr. Boniface Jeyaraj, the Secretary and Correspondent of Loyola College, Chennai felicitated the gathering.

- * The inaugural function of the symposium MATANA 2023 was presided over by Dr. T. Pathinathan, Principal, Loyola College, Vettavalam, Thiruvannamali and in his inaugural address he listed out various situations in the Mahabharatha and the Bible where mathematical techniques have been used by various characters of the holy books. He also listed out the genealogy of the department of mathematics of Loyola College, Chennai.
- * Dr. J. Geno Kadwin, Convener of the Symposium proposed the vote of thanks.

Keynote address

A keynote address on the topic "**Dimensions**" was delivered by Dr. D. Antony Xavier, Head of the Department of Mathematics and in his address, he introduced various dimensions characterized in mathematics.

Technical sessions

- * Three technical sessions on mathematical analysis were arranged during the symposium.
- * The first talk was delivered by Dr. C. Ganesa Moorthy of Alagappa University. His talk was on "**Conductivity of nanoparticles from Brouwer's fixed point theorem**" and in his session he explained the Brouwer's fixed point theorem with proof and how the theorem is used in conductivity of nanoparticles.
- * The second talk was on "**Reisz representation theorem and its application**" which was delivered by Dr. Ramesh Venkadachalam Palani of Central University of Tamil Nadu. He explained Reisz representation theorem and gave one of its applications.
- * The third talk on "**Eigenfunctions, quantum resonances and scattering poles**" was delivered by Dr. P. Aprameyan of IIT Madras, Chennai. He explained some essential concepts initially to get into the topic, and the main topic of his talk was a collective application of analysis.

Valediction

- * The valedictory function of the workshop on MATANA 2023 was held in the evening.
- * Dr. T. Rajaretnam, Head of the department of Data Science, Loyola College was the chief guest of the function.
- * Dr. J. A. Charles, the Deputy Principal felicitated the gathering and, in his speech, he pointed out the importance of mathematics in science and engineering.
- * In the valedictory address, Dr. Rajaretnam highlighted the importance of learning mathematics and said that learning mathematics will transform a man into a man of morality.
- * Participants were given participation certificates from the members of the dais.
- * Finally, Dr. S. Iruthaya Raj, Convener of the symposium proposed vote of thanks.

Feedback

Feedback was received from the participants. Many of them have given concrete feedback which motivated us to organize more programmes in the field of mathematical analysis for the benefit of active mathematicians in the coming years also.

Photo Gallery



Registration Desk



Dr. T. Bharathi - MC



Welcome address by the Coordinator Dr. J. Janet Sheeba



Lamp lighting by the Chief guest Dr. T. Pathinathan



Lamp lighting by the Secretary Rev. Dr. Boniface Jeyaraj SJ



Lamp lighting by the Head of the Department
Dr. D. Antony Xavier



Lamp lighting by the Conveners
Dr. S. Iruthaya Raj & Dr. J. Geno Kadwin



History of MATANA by the Convener Dr. S. Iruthaya Raj



Felicitation by the Secretary Rev. Dr. Boniface Jeyaraj SJ



Honouring the Chief guest Dr. T. Pathinathan by the Secretary



Presentation of memento to the Chief guest by
Dr. D. Antony Xavier, Head of the Department



Inaugural address by the Chief guest Dr. T. Pathinathan



Participants of the Symposium



Participants of the Symposium



Vote of thanks by the Convener Dr. J. Geno Kadwin



Group Photo with Faculty members



Honouring the Keynote speaker Dr. D. Antony Xavier by Dr. C. Ganesa Moorthy



Keynote Address by Head of the Department Dr. D. Antony Xavier



Honouring the Resource person Dr. C. Ganesa Moorthy by the Coordinator Dr. J. Janet Sheeba



Session-1 by Dr. C. Ganesa Moorthy (Conductivity of nanoparticles from Brouwer's fixed point theorem)



Honouring the Resource person Dr. Ramesh Venkadachalam Palani by Dr. C. Ganesa Moorthy



Session-2 by Dr. Ramesh Venkadachalam Palani (Riesz representation theorem and its application)



Participants of the Symposium



Honouring the Resource person Dr. P. Aprameyan by Dr. S. Maria Jesu Raja



Session-3 by Dr. P. Aprameyan
(Eigenfunctions, quantum resonances and scattering poles)



Dignitaries of the Valedictory function



Felicitation by the Deputy Principal Dr. J. A. Charles



Honouring of the Chief guest Dr. T. Rajaretnam by the Deputy Principal



Valedictory address by the Chief guest
Dr. T. Rajaretnam, Head, Dept. of Data Science



Feedback by the participants



Certificate distribution to a participant by the Deputy Principal Dr. J. A. Charles



Certificate distribution to a participant by the Deputy Principal Dr. J. A. Charles



Certificate distribution to a participant by the Chief guest Dr. T. Rajaretnam



Certificate distribution to a participant by the Chief guest Dr. T. Rajaretnam



Certificate distribution to a participant by the resource person Dr. P. Aprameyan



Certificate distribution to a participant by the resource person Dr. P. Aprameyan



Vote of thanks by the Convener Dr. S. Iruthaya Raj



Group photo with Faculty members

Programme outcome

The participants will gain knowledge in the field of mathematical analysis, and they will come to know the trends in mathematical analysis and its applications in various fields of science, engineering and technology.

Organizing committee

Rev. Dr. P. Francis Xavier, SJ

Rector

Rev. Dr. Boniface Jeyaraj, SJ

Secretary and Correspondent

Rev. Dr. A. Thomas, SJ

Principal

Dr. J. A. Charles

Deputy Principal

Dr. D. Antony Xavier

Head of the Department

Dr. J. Janet Sheeba

Coordinator of the Department

Dr. S. Iruthaya Raj

Convener

Dr. J. Geno Kadwin

Convener



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI-600034

DEPARTMENT OF MATHEMATICS (SHIFT-II)

organizes

National Symposium on Mathematical Analysis



ABOUT MATANA 2023

Mathematical Analysis is one of the major subjects in Mathematics out of which most of the applications are being produced. By understanding this, the department of Mathematics organized Online Workshops on Mathematical Analysis in the years 2020 and 2021 and more than 2000 participants benefited out of them. In continuation, this year the department organizes a one day National Symposium on Mathematical Analysis (MATANA 2023) to impart the knowledge of Mathematical Analysis to the teachers, research scholars and graduate students. It is expected that the topics to be covered in the symposium by the eminent resource persons will ignite the spirit of learning and doing research in Mathematical Analysis.

REGISTRATION FEE

Faculty	₹ 200
Research Scholars	₹ 200
Students	₹ 200

REGISTRATION LINK

<https://erp.loyolacollege.edu/loyolaonline/conference>



The last date to register: **10 March 2023**

CONTACT



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matana@loyolacollege.edu



<https://sites.google.com/loyolacollege.edu/matana2023>

MATANA 2023

13 March 2023

YD Hall, Loyola College

Invited speakers



Dr. C. Ganesa Moorthy

Professor (Emeritus)
Department of Mathematics
Alagappa University, Karaikudi, Tamil Nadu



Dr. Anoop TV

Associate Professor
Department of Mathematics
Indian Institute of Technology Madras, Chennai



Dr. Ramesh Venkadachalam Palani

Assistant Professor
Department of Mathematics
Central University of Tamil Nadu, Thiruvavur



Dr. P. Aprameyan

Assistant Professor
Department of Mathematics
Indian Institute of Technology Madras, Chennai

ORGANIZING COMMITTEE

Steering Committee

Rev. Dr. Francis P Xavier SJ, Rector
Rev. Dr. B. Jeyaraj SJ, Secretary & Correspondent
Rev. Dr. A. Thomas SJ, Principal
Dr. J. A. Charles, Deputy Principal
Dr. D. Antony Xavier, Head, Dept. of Mathematics
Dr. J. Janet Sheeba, Coordinator, Dept. of Mathematics

Conveners

Dr. S. Iruthaya Raj, Assistant Professor
Dr. J. Geno Kadwin, Assistant Professor

Advisory Committee

Rev. Dr. Samuel Jeyaseelan SJ,
Principal, Loyola College, Mettala, Tamil Nadu
Dr. S. Athisayanathan
Controller of Examinations, St. Xavier's College, Palayamkottai
Dr. M. Marudai
Professor (Emeritus), Bharathidasan University, Trichy
Dr. T. Pathinathan
Principal, Loyola College, Vettavalam, Tamil Nadu
Dr. R. Lawrence Joseph Manoharan
Former Head, Dept. of Mathematics, St. Joseph's College, Trichy
Dr. T. Rajaretnam
Head, Dept. of Data Science, Loyola College, Chennai

Faculty Members

Dr. T. Bharathi, Assistant Professor
Mr. F. R. Emmanuel, Assistant Professor
Mr. A. Christopher, Assistant Professor
Mr. D. Kumanan, Assistant Professor
Dr. S. Ruth Julie Kavitha, Assistant Professor
Dr. S. Maria Jesu Raja, Assistant Professor



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI-600034
DEPARTMENT OF MATHEMATICS (SHIFT-II)
National Symposium on Mathematical Analysis
(13 March 2023)



PROGRAMME SCHEDULE

Registration	-	08.30 am - 09.00 am
Inauguration	-	09.00 am - 09.45 am
Keynote address	-	09.45 am - 10.30 am Dr. D. Antony Xavier Head, Department of Mathematics Loyola College, Chennai
Coffee break	-	10.30 am - 11.15 am
Session-1	-	11.15 am - 12.15 pm Dr. C. Ganesa Moorthy Professor (Emeritus) Alagappa University, Karaikudi
Lunch break	-	12.15 pm - 01.45 pm
Session-2	-	01.45 pm - 02.45 pm Dr. Ramesh Venkadachalam Palani, Associate Professor Central University of Tamil Nadu, Thiruvallur
Session-3	-	02.45 pm - 03.45 pm Dr. P. Aprameyan, Assistant Professor IIT Madras, Chennai
Valediction	-	03.45 pm - 04.30 pm



DEPARTMENT OF MATHEMATICS (SHIFT-II)
LOYOLA COLLEGE (AUTONOMOUS), CHENNAI-600034

We cordially invite you to the Inaugural function of
National Symposium on Mathematical Analysis



MATANA 2023

Chief Guest

Dr. T. Pathinathan
Principal
Loyola College, Vettavalam
Thiruvannamalai District, Tamil Nadu

Felicitation

Rev. Dr. B. Jeyaraj, SJ
Secretary and Correspondent
Loyola College, Chennai

Monday :::: 13 March 2023 :::: 9 am :::: YD Hall

Dr. S. Iruthaya Raj & Dr. J. Geno Kadwin
Convener

Dr. J. Janet Sheeba
Coordinator

Programme Schedule

(09.00 am - 09.45 am)

Tamil Thaaai Vaazhthu & Prayer song	- Department Choir
Welcome address	- Dr. J. Janet Sheeba, Coordinator
Lighting the lamp	- Dignitaries
About MATANA	- Dr. S. Iruthaya Raj, Convener
Felicitation	- Rev. Dr. B. Jeyaraj SJ, Secretary
Introducing the chief guest	- Mr. F. R. Emmanuel, Assistant Professor
Inaugural address	- Dr. T. Pathinathan Principal, Loyola College, Vettavalam
Vote of thanks	- Dr. J. Geno Kadwin, Convener

Keynote Address

Dr. D. Antony Xavier
Head
Department of Mathematics
Loyola College, Chennai

Topic: **Dimensions**



DEPARTMENT OF MATHEMATICS (SHIFT-II)
LOYOLA COLLEGE (AUTONOMOUS), CHENNAI-600034

We cordially invite you to the Valedictory function of

National Symposium on Mathematical Analysis



MATANA 2023

Chief Guest

Dr. T. Rajaretnam
Head
Department of Data Science
Loyola College, Chennai

Felicitation

Dr. J. A. Charles
Deputy Principal
Loyola College, Chennai

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Monday ::: 13 March 2023 ::: 3.45 pm
YD Hall, Loyola College, Chennai

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Dr. S. Iruthaya Raj & Dr. J. Geno Kadwin
Conveners

Dr. J. Janet Sheeba
Coordinator

Programme Schedule

(03.45 pm - 04.30 pm)

Prayer song	- Department Choir
Welcome address	- Dr. J. Janet Sheeba, Coordinator
Summary of MATANA 2023	- Dr. J. Geno Kadwin, Convener
Felicitation	- Dr. J. A. Charles, Deputy Principal
Introducing the chief guest	- Dr. S. Maria Jesu Raja, Assistant Professor
Valedictory address	- Dr. T. Rajaretnam Head, Department of Data Science Loyola College, Chennai
Vote of thanks	- Dr. S. Iruthaya Raj, Convener