



ST. JOHN'S COLLEGE

ANCHAL, KERALA - 691306

Re-accredited with A Grade by NAAC
DEPARTMENT OF MATHEMATICS

Registration Details

Students	:	Rs500
Research Scholars	:	Rs750
Faculty	:	Rs1000

Registration Link

<https://forms.gle/CjTJqvxf1Y8fkjM8>

Or Scan the QR Code below



Contact

Dr. Sunitha Grace Zacharia
Assistant Professor
Department of Mathematics
St. John's College, Anchal
Ph No:91 9497336947
E mail:sunithajosie@gmail.com

Invited Speakers

- ❖ **Dr.Raju K George**
Outstanding Professor
Department of Mathematics
IIST, Thiruvananthapuram
- ❖ **Dr.Deepak Mishra**
Professor
Department of Avionics
IIST, Thiruvananthapuram
- ❖ **Dr.Sumitra S**
Associate Professor
Department of Mathematics
IIST, Thiruvananthapuram
- ❖ **Dr.Jajati Keshari Sahoo**
Associate Professor
Department of Mathematics
BITS-Pilani
Goa Campus, Goa

NATIONAL SEMINAR

ON

APPLICATIONS OF LINEAR ALGEBRA IN MACHINE LEARNING

27 - 28 FEBRUARY, 2024

Venue : Seminar Hall

St. John's College Anchal



Sponsored by KSCSTE

About the College

St.John's College is a higher education institution affiliated to the University of Kerala and started in the year 1964. It is run by the Syro-Malankara Catholic Church and is located in Anchal, Kollam, Kerala, India. The college was founded under the vision of late Archbishop Benedict Mar Gregorios and is now flourishing under the patronage of Moran Mar Basielios Cleemis Catholicos. From the beginning, St.John's College has been committed to promoting learning and fostering holistic development in the region.

About the Department

The Department of Mathematics was established in 1964 and has since offered graduate (B.Sc) and post graduate (M.Sc) degree programs in Mathematics. The department's goal is to cultivate a love for Mathematics in bright, young students, encouraging them to think independently and pursue higher levels of study in the field. With its focus on exposing students to the thrill of doing Mathematics and promoting deep understanding, the department is dedicated to preparing its students for successful careers in a variety of fields.

About the Program

This comprehensive program is designed to bridge the gap between theoretical concepts and practical implementations, offering a deep dive into the pivotal role that Linear algebra plays in shaping the landscape of Machine Learning. In this seminar we learn the fundamental concepts of linear algebra, eigenvalues, eigenvectors, exploration for task like dimensionality reduction through PCA, singular value decomposition and its role in the recommendation systems, image compression, collaborative filtering and neural Networks.

Call for Papers

Participants who wish to present papers may send a soft copy of the abstract to the email id: dilip@stjohns.ac.in

IMPORTANT DATES

Last Date for Registration	: 20/02/2024
Last Date for Abstract Submission	: 20/02/2024
Notification of Acceptance	: 22/02/2024

Advisory Committee

Dr. C V Anil Kumar
Professor and Head
Department of Mathematics
IIST, Thiruvananthapuram

Dr. B S R V Prasad
Assistant Professor (Sr)
Department of Mathematics
VIT, Vellore

Dr. K Satheesh Kumar
Professor
Department of Future Studies
University of Kerala, Thiruvananthapuram

Organising Committee

Dr. Nisha Thomas (Principal)
Rev.Fr.Jinoy Mathew (Bursar)
Dr. Dilip D S (Head of the Department)
Dr. Sibi C Babu
Dr. Tony Philip
Dr. Smitha Mary Mathew
Dr. Mini Mol S
Dr. Dhanya Ramachandran
Dr. Limna Raj B P
Mr. Sumesh S S
(Mar Ivanios College,TVM)
Mr. Adersh V K
(TKM College of Arts and Science,Kollam)
Mr. Roy John
(St. Stephen's College, Pathanapuram)
Mrs. Beena G P
(St. Gregorios College, Kottarakara)
Dr. Divya Sadasivan
(SN College, Punalur)

Organising Secretary

Dr.Sunitha Grace Zacharia

**REPORT
OF
NATIONAL SEMINAR ON APPLICATIONS OF
LINEAR ALGEBRA IN MACHINE LEARNING**

File No. KSCSTE/SSW/XIV/10, Dated: 26.12.2023



Sponsored by

**KERALA STATE COUNCIL FOR SCIENCE,
TECHNOLOGY AND ENVIRONMENT
(KSCSTE)**



Organized by

**Department of Mathematics
St. John's College, Anchal
Kollam – 691306
Kerala**

27-28, February 2024

Brief Report

Inaugural function of the seminar started with a prayer song and inaugurated by the Principal of St. John's College, Anchal on 27.02.2024 at 9.30 am. Head of the Department Dr. Dilip D S, presided the function. At 9.45 am inaugural function came to an end.

First two technical sessions were handled by Dr. Deepak Mishra. The first session started at 9.45 am. He gave a brief introduction to Linear Algebra. The second session started at 11.30 am. He discussed about Optimization Algorithm and Information Theory.

Third technical session started after lunch break at 1.30 pm. Dr. S Sumitra handled the session. She discussed about the basics of Machine Learning and Learning Algorithms.

Next day the fourth session started at 9.30 am and it was handled by Dr. Raju K George. He gave an introduction to Artificial intelligence in Machine Learning.

The fifth session was handled by Dr. Jajati Keshari Sahoo and was started at 11.15 am. He discussed about Artificial Neuron Model and Neural Computation.

After lunch the sixth session began at 1.45 p.m and was handled by Dr. Jajati Keshari Sahoo. He discussed about Perceptron Learning Rule and Perceptron Learning Algorithm.

Valedictory function started at 3.15 pm and certificates of participation are distributed during the function. The program came to an end by 3.40 p.m.



Dr. Sunitha Grace Zacharia
Signature of coordinator



Name and Signature of
Head of the Institution

Place: Anchal
Date :1 /03/2024


(Office Seal)

PRINCIPAL
St. John's College
Anchal - 691306



Resource Persons :

1. Dr. Raju K George
Outstanding Professor
Department of Mathematics
IIST, Thiruvananthapuram
2. Dr. Deepak Mishra
Professor
Department of Avionics
IIST, Thiruvananthapuram
3. Dr. Sumitra S
Associate Professor Department of Mathematics
IIST, Thiruvananthapuram
4. Dr. Jajati Keshari Sahoo
Associate Professor
BITS-Pilani, Goa Campus

Signature 
of Head of Institution

PRINCIPAL
St. John's College
Anchal - 691306





**Kerala State Council for
Science, Technology and Environment**

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No. KSCSTE/SSW/XIV/10

Thiruvananthapuram

Dated: 26/12/2023

To

Dr. Sunitha Grace Zacharia

Assistant Professor,

Department of Mathematics,

St. John's college,

Anchal, Kollam- 691 306

Dear Dr. Sunitha,

Sub:- KSCSTE – Scheme for promoting S&T Seminar/ Symposia/ Workshop – reg.

Read:- i)Your proposal entitled Two days National Seminar on “Applications of Linear Algebra on Machine Learning” (27-02-2024 to 28- 02-2024)

ii) Minutes of the meeting of SSW Committee, held on 16.12.2023

This is to invite your attention to the reference cited above and inform that KSCSTE is pleased to co-sponsor the Three- day National Conference by extending financial assistance of ₹ 20,000/-, subject to fulfilling the following norms.

1. An Official from KSCSTE will be nominated to attend the programme. Hence formal Invitation and Programme Brochure should be sent to KSCSTE well in advance.
2. The organizers should ensure that the conditions stipulated as per the KSCSTE guidelines are fulfilled.
3. As per the guidelines, at least 10% of the delegates and Resource persons shall be from outside the State in the case of National Seminar. If this condition is not satisfied, the Programme will be treated as appropriately and the co-sponsorship amount shall be as per rules.
4. The financial assistance may be utilized exclusively to cover the expenditure on Course materials, Publication of proceedings, Honoraria and TA for Resource Persons. The co-sponsorship amount from KSCSTE should not be fully utilized only for meeting the TA.
5. Utilization of the grant for any other purpose other than the approved heads shall not be entertained.
6. The financial assistance from the Council shall be in the nature of co- sponsorship, and hence KSCSTE should be properly acknowledged as either '*jointly organized by KSCSTE*' or '*Co-sponsored by KSCSTE*' in all the brochures, banners, proceedings, etc. brought out in connection with the Seminar.
7. The Souvenirs/ Proceedings brought out in connection with the National Seminar should essentially include one page advertisement about KSCSTE and the matter for advertisement shall be made available on request.

8. No change of date will be permitted under any circumstances.
9. Change of venue, if any, shall be reported to the undersigned promptly.
10. In case it fails to organize the programme within stipulated time frame, this offer letter will be invalid and will automatically stands cancelled.
11. The approved amount will be released to the Head of Institution on the submission of the following documents after the event.
 - a. Total income and Expenditure Statement of the programme.
 - b. Audited Utilization Certificate (UC) and Statement of Expenditure (SE) in the format enclosed herewith. In the case of Govt. Departments/ Autonomous Institutions under the Government and Universities, audited SE & UC of the Financial Head countersigned by the Head of the Institution is accepted. In the case of affiliated Colleges and NGOs, the audited SE & UC signed by a registered Chartered Accountant, counter signed by the Head of the Institution only will be accepted.
 - c. List of participants – details of both delegates and resource persons.
 - d. A separate list of the resource person and National delegates who had attended the event duly certified by the Organizing Secretary/ Head of the Institution also should be furnished.
 - e. Brief report including photographs, press clippings etc. along with a note on specific recommendations of the programme and also the schedule of each session.
 - f. Souvenirs/Proceedings (including one page advertisement about KSCSTE) brought out in connection with the programme.
 - g. Programme Brochure/ Notice and related publicity materials with due acknowledgement to KSCSTE.

The above documents shall be submitted **within two months** after the conduct of the Programme. **In case it fails, further processing will not be considered.** Please quote the above File No. in all your subsequent correspondences in this regard.

Thanking you,

Your's sincerely,



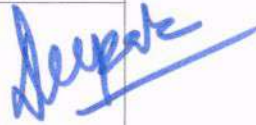
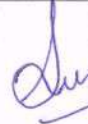


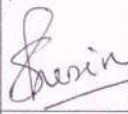

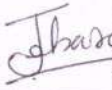


K P SUDHEER
EXECUTIVE VICE PRESIDENT

NATIONAL SEMINAR APPLICATIONS OF LINEAR ALGEBRA IN MACHINE LEARNING

DEPARTMENT OF MATHEMATICS,

ST. JOHN'S COLLEGE, ANCHAL

27-28 FEBRUARY 2024

Sl.No	Name of the participant	Address	signature
1.	DR. DEEPAK MISHRA	PROFESSOR DEPARTMENT OF ANIONICS, IIST	
2.	Dr. SUMITHRA.S	Associate Professor Department of Mathematics, IIST, TUM	
3.	Dr. RAJU.K. GEORGE	Professor Department of Mathematics IIST, TUM	
4.	Dr. Jajati Keshari Saha	Associate Professor Department of Mathematics BITS- Pilani Goa	Jajati Keshari Saha
5.	Anto Paulin Brinto	Asst. Professor Scott Christian college Nagercoil	
6.	Sherlin Paul Suresh	Asst. Professor S.T. Hindu college, Nagercoil	
7.	Dr. G. Britto Antony Xavier	Associate Professor Sacred Heart college Tirupattur	
8.	Dr. Jaba Raj. T	Asst. Professor Department of Mathematics Malankara Catholic college Mannargudi, Kattakkavilal	
9.	Reiha J. R	I Msc Data Science Vellore Institute of Technology Amaravathi, AP	
10.	Vaishnavi R	I Msc Data Science Vellore Institute of Technology Amaravathi, AP	



11	Sreha chacko	1st MSc Mathematics Mar Ivanios College, Tvm	<i>Sreha</i>
12	Arun Krishna k.S	1st MSc MATHEMATICS ST. JOHN'S COLLEGE ANCHAL	<i>Arun</i>
13	Jasmin.T	1st MSc. Mathematics St. Gregorios college, kottacattur	<i>Jasmin</i>
14	Drishya.S	1st MSc. Mathematics St. Gregorios college, ktr	<i>Drishya</i>
15	Sreelakshmi Boban	1st MSc. Mathematics St. Gregorios college, ktr.	<i>Sreelakshmi</i>
16	SOORYA.V.S	1st Bsc Mathematics St Johns college Anchal	<i>Soorya</i>
17	Anuja S.	1st Bsc Mathematic St Johns College, Anchal	<i>Anuj's</i>
18	Ayushaathashim.S	1st Bsc Mathematics St. Johns College, Anchal	<i>Ayusha</i>
19	Amal.S	1st Bsc Mathematics St. Johns college Anchal	<i>Amal</i>
20	Alby Joseph	2nd M.Sc Mathematics Mar Ivanios College, Tvm	<i>Alby</i>
21	Aramal.M	2ND BSC MATHEMATICS ST. JOHN'S COLLEGE, ANCHAL	<i>Aramal</i>
22	Anusree.S	2ND BSC MATHEMATICS ST. JOHN'S COLLEGE, ANCHAL	<i>Anusree</i>
23	Albi Mathew	2ND BSC MATHEMATICS ST. JOHN'S COLLEGE, ANCHAL	<i>Albi</i>



24	Fathima. A	Msc. Mathematics St. Gregorios college kottarakkara (2023-25)	
25	Sachu Vinay	Bsc. Physics St. John's college Anchal (2023-26)	
26	Sukhi. S	MSc. Mathematics Mar Ivanios College Ponnandam	
27	Alfiya. S	MSc Mathematics St. John's College, Anchal	
28	Abhisami. Raj	MSc Mathematics St. John's College, Anchal	
29	Riya Samson	MSc Mathematics St. John's College, Anchal.	
30	Gowri M Pillai	MSc. Mathematics St. John's college, Anchal	
31	shahinashajahan	M.Sc. Mathematics St. John's college, Anchal	
32	Mubsina. J. P	MSc Mathematics st. John's college	
33	Rincy K	I MSc. Mathematics st. John's college, Anchal	
34	Neena Susan Paul	I Msc Mathematics st Johns college, Anchal	
35	Abulia. A	I Msc Mathematics St. Johns college, Anchal	
36	Bhagya. R. Nair	I Msc Mathematics St. John's college Anchal	



37	Nithin Joseph	I st MSc MATHEMATICS St John's College Anchal	NS
38	Princy Mathew	I st Msc Mathematics St John's College Anchal	PA.
39	Adithya S	I st msc mathematics st John's College Anchal	Ad
40	Jessy Johnson	II nd M.Sc Mathematics St. John's College, Anchal	Jessy
41	Anjaly R	III rd DC Mathematics St. John's College, Anchal	AN
42	Amal Krishna	III rd DC, Mathematics St. John's College, Anchal	Amal
43	Afsana S	III rd DC Mathematics St. John's College, Anchal	Afsana
44	Anusha Krishna A.U	III rd DC mathematics St. John's College, Anchal	Anusha
45	Archana AB.	II nd Msc. Mathematics, St. John's college Anchal	Archana AB
46	Ancy Harris	II nd MSc Mathematics St John's college Anchal	Ancy
47	M.S. Manjima	II nd Msc Mathematics Mar Ivanios college, TVM	Manjima
48	Amutha K	I nd MSc Mathematics Mar Ivanios College TVM	Amutha K
49	Gladha Sathesh	1 st Msc Mathematics Mar Ivanios College TVM	Gladha

✓
✓
✓



50	Amal Udayan	II ND BSC MATHEMATICS ST. JOHN'S COLLEGE ANCHAL	Amal.
51	Lekshmi Deth	1 st year BSc mathematics st. John's Anchhal	Red
52	Greema. Sajeev	1 st year BSc Mathematics st. John's college Anchhal	greema
53	Dr. PRAVEEN S.G.	Asst. Prof Department of Physics & John College Anchhal	Praveen
54	CHANDANA . C.L	I nd year Bsc Mathematics st. John's college Anchhal	Chandana
55	Simil. Abraham	Asst. Professor Bishop Moore College, Maralikkana	Simil. Presentations center
56	Ayisha Hashim S	I st year BSc Mathematics st. John's College Anchhal	Ayisha
57	Greenardana Punil	I st year BSc Mathematics st. John's College Anchhal	Greenardana
58	Navya N.A	I st year BSc Mathematics st. John's college Anchhal	Navya
59	Athulya Krishna Ms	I st year BSc Mathematics st. John's college Anchhal	Athulya
60	Arakha . A Kurup	"	Arakha
61	Vaishnavi. L.M	"	Vaishnavi
62	Anjana V.S	"	Anjana



Presented certificate

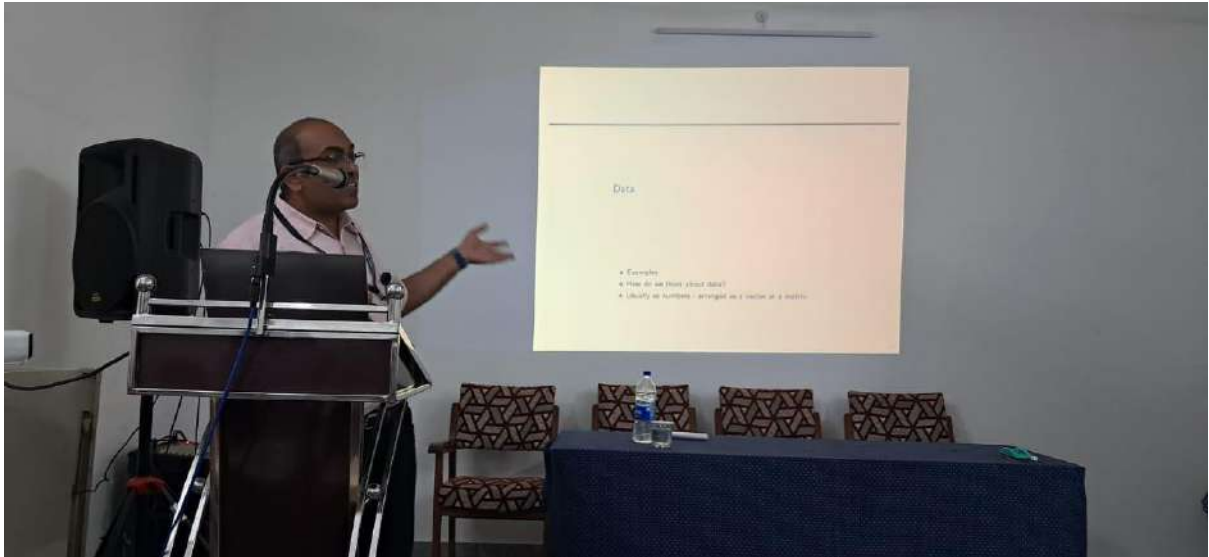
63	Haritha. S.	Research scholar, Dept of Mathematics, MCR college TUPM.	<u>Haritha</u>
64	Pranavya. S	1ST YEAR BSC MATHEMATICS ST. JOHN'S COLLEGE ANCHAL	<u>Pranavya</u>
65	Anoop M Das	II NO YEAR BSC MATHEMATICS ST. JOHN'S COLLEGE ANCHAL	<u>Anoop</u>
66	Dr. Dilip. D. S	Assistant Professor Head of the Dept., St. John's college Anchal	<u>Dilip</u>
67	Dr. Sibi. C. Babu	Assistant Professor Dept. of Mathematics St. John's college Anchal	<u>Sibi</u>
68	Dr. Tony Philip	"	<u>Tony</u>
69	Dr. Smitha Mary Mathew	"	<u>Smitha</u>
70	Dr. Sunitha Grace Zacharia	"	<u>Sunitha</u>
71	Dr. Dhanya Ramachandran	"	<u>Dhanya</u>
72	Dr. Linnaraj. B.P	"	<u>Linnaraj</u>
73	Dr. Minimol. S	Assistant Professor Dept. of Statistics, St. John's college Anchal	<u>Minimol</u>



[Handwritten signature]

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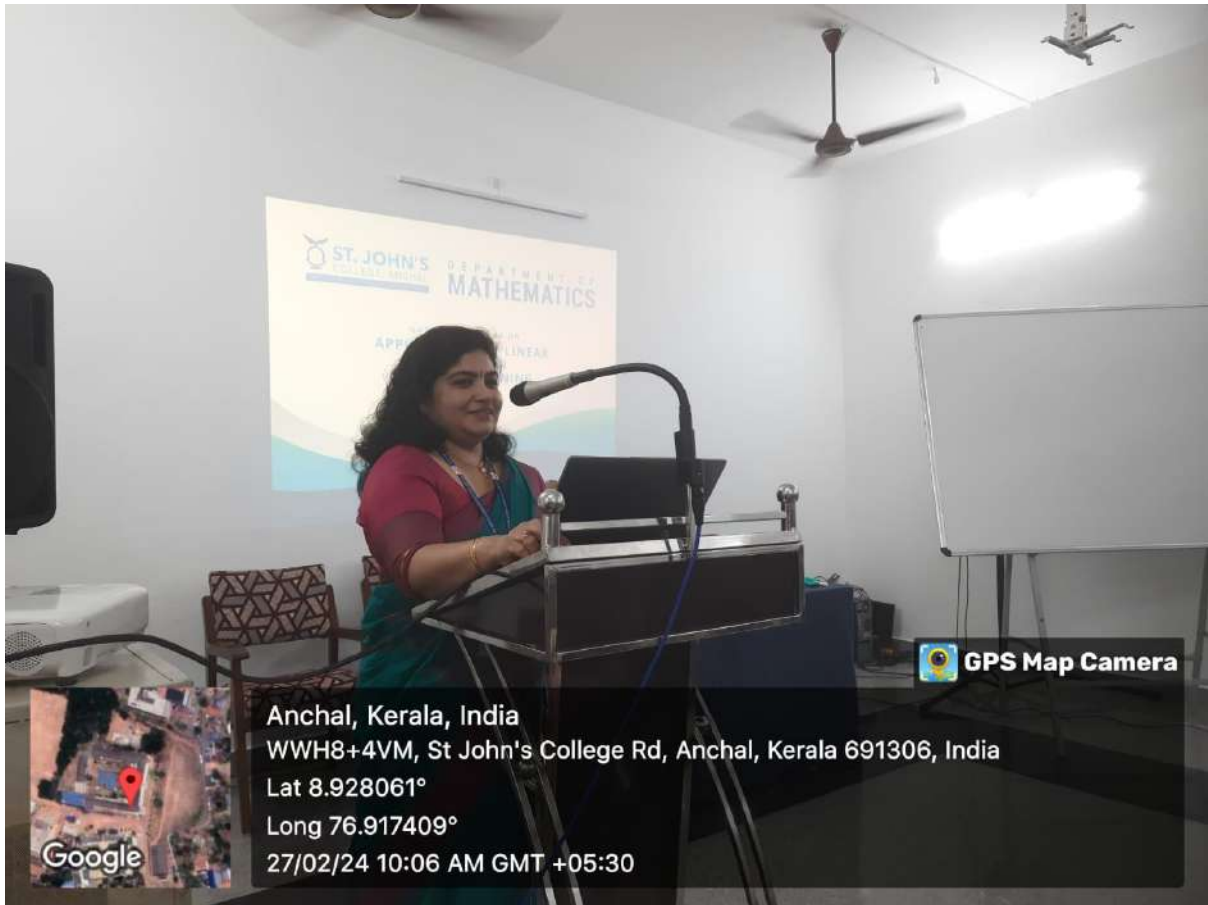






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