



Principal's Message



I am glad to see that the Department of Mathematics is publishing the 8th volume of the annual newsletter. I congratulate the staff and students. The college is gearing up for the 4th cycle of NAAC accreditation. This is the time we must exhibit our

best to the people around especially the team which visits us. We must introduce new quality measures and vigorously continue existing best practices. We see a fall in student enrollment in basic science programmes in Universities and colleges across Kerala. This will be a short-term trend and students will return to the evergreen basic science programmes in the near future. I wish you all the very best.

Jogy Joseph

Message from HOD



It is indeed a great pleasure that another issue of MASA is being published. The department of Mathematics began its journey in 1980. Over the last four decades, it has grown in expertise and competence in the curriculum. The department

equip the students with effective means for investigating, interpreting, explaining and making sense of the world in which they live. The teamwork of the faculty is of great significance in developing young curious minds of the next generation. The effort behind this publication is gratefully acknowledged. I wish every success in all its endeavours.

Dr. Mary George

From the Editor's Desk



Yet another volume of MASA is ready with the news and information of the academic year 2021-2022. Although the classes were partially online during the academic year 2021-22 there were good number of programs and activities. The year was one in which department received many laurels. The details of these achievements by both faculty and students are given here. I hope you will enjoy this volume of our MASA.

Dr. Jubin Antony

Our faculty Jogy Joseph is the Principal -in-charge



The Head of the Department of Mathematics Jogy Joseph is appointed the Principal-in-charge of the College from June 2022. Sri. Jogy Joseph joined the Department as a faculty in the year 1996. The Department is proud that Sri. Jogy Joseph is appointed the Principal-in-charge of the college.

Dr. Mary George is the new HoD



Dr. Mary George is appointed the new Head of the Department. Dr. Mary George joined the department in the year 2009. Before she worked as an Assistant Professor in St. Theresa's College Ernakulam for 12 years. Dr. Mary George completed her PhD from Kerala University in 2008.



Dr. Indulal G is promoted as Professor

Dr. Indulal G. is promoted as Professor of Mathematics as per UGC Regulations 2018. He is the first person from St. Aloysius College Edathua to attain the title of 'Professor'

UNIVERSITY RANK



Ms. Kiran Theresa Mathew secured 6th Rank in MG University BSc Mathematics Examination held in May/ June 2021. The Department is proud on her achievement. The College honoured her for the achievement on merit day. Dr. Shajila Beevi S., Syndicate Member of MG University presented her a memento in the presence of Fr. Mathew Chooravady, the manager of the College.

The department in limelight through the achievement of Prof. (Dr.) Indulal G.

Prof. (Dr.) Indulal G is included in the list of distinguished scientists published by the European Science Evaluation Centre, Germany. St. Aloysius College Edathua got mention as 'the institution with renowned researchers' through the achievement of

Prof. (Dr.) Indulal G. Distinguished scientist and honourable Vice Chancellor of the MG University Prof. (Dr.) Sabu Thomas is in the top of the list. Prof. (Dr.) Indulal has an H index of 16 and has 1125 citations.



DOMSAC International Lecture

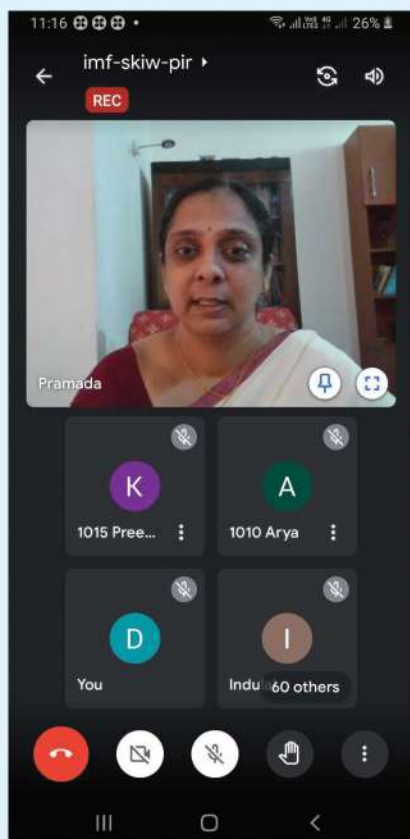
The department continued its prestigious DOMSAC

International Lecture Series in the academic year 2021-22 also. As part of the lecture series invited talks were organized on the birth/ death anniversary of legendary mathematicians.

The eighth lecture of the DOMSAC series was delivered by Dr. Pramada Ramachandran, Associate Professor of Mathematics, St. Paul's College

Kalamassery on 17 July, 2021. The talk was conducted in connection with the 109th birth anniversary of the renowned mathematician Alan Turing. The talk was conducted in Google meet platform and was well attended by students and faculty of the college and outside the college.

Dr. Pramada Ramachandran led the class on the topic 'Mathematics and Hollywood – The Turing Connection'. The talk was attended by students and faculty of the department and neighbouring colleges.



National Mathematics Day Celebration



The Department celebrated National Mathematics Day on December 22nd with a variety of programmes. Mathematics association organized Treasure Hunt, CuboRubicks, Hunky Brains, Magic Square and Sudoku competition as part of the day celebration. Association president Jijo Joy and Secretary Ms. Preethikumari P led the programmes.

Class on INFLIBNET and DELNET



An orientation programme on IFLIBNET and DELNET was conducted for the post graduate students of the department on 17th December 2021. The college librarian Fr. Tijomon P Issac led the class. The class was followed by a live demonstration and students were given live training on the ways to access INFLIBNET.

Mathematics Association

Office bearers of the Mathematics Association for the Academic Year 2021 – 2022 were:

Mr. Jijo Joy Association President &

Ms. Preethikumari P., Association Secretary, 3rd BSc

Mr. Alan Shaji, Treasurer, 3rd BSc



Mathematics Association Inauguration

The activities of the Mathematics association for the year 2021-22 was officially inaugurated on 9th December 2021. Dr. Tresa Mary Chacko, the Head of the Department of Mathematics, Christian College Chengannur was the chief guest. Sri. Jijo Joy, the association president presided over the meeting. Dr. Jochan Joseph, the principal and Sri.

Jogy Joseph, the Vice-Principal and Head of the Department addressed the meeting. Ms. Adithya K. S. of first MSc Mathematics welcomed the gathering and Ms. Preethikumari P, the association secretary proposed the vote of thanks. Ms. Kiran Theresa Mathew, 6th rank holder in BSc Mathematics in MG University was honoured during the meeting. Principal congratulated and handed over a memento to Dr. Indulal G for his remarkable achievement of

finding place in the list of distinguished scientists published by the European Science Evaluation Centre, Germany.

Seminar



The Mathematics Association organized a seminar on 'Mathematics in Daily Life' on 9th December 2021. Dr. Tresa Mary Chacko, HoD of Mathematics Christian College Chengannur was the invited speaker. Both undergraduate and postgraduate students of the department attended the seminar.

Release of Newsletter 2021



Dr. Jochan Joseph, the Principal released the newsletter of the department for the academic year 2020-21 by handing over the copy to Sri. Jijo Joy, the editor.

Freshers' Day



The Mathematics Association organized a memorable welcome event and freshers day for the first year students on 9th December 2021. Welcome was accorded to both first year undergraduate and postgraduate students. The senior students welcomed their juniors with fun and food.

Irene Mary Mathew Memorial Quiz Competition



An inter-class quiz competition was conducted by the Mathematics association on 4th March 2022. The competition was conducted in memory of Ms. Irene Mary Mathew Panthalanickal and the prizes were sponsored by Smt. Kochuthresiamma Joseph, the former HoD.

Sri. Jijo Joy was the quiz master. Ms. Varsha K.S. and Ms. Salini S. of 3rd BSc secured first prize. Ms. Preethikumari P. and Ms. Gayathri A. of 3rd BSc and Mr. Harikrishnan S. and Mr. Sreeraj S. of 1st BSc secured second and third prizes respectively. Dr. Jochan Joseph, Principal handed over the prizes to the winners.

Department Manuscript Magazine



The Mathematics Association released a Manuscript Magazine entitled 'DHWANI' on 31st March 2022. The manuscript magazine was released by Dr. Jochan Joseph, Principal. Ms. Aneesa Ashraf was the student editor and Ms. Aswany B. Lal, Ms. Arya Sasidharan, Ms. Varsha K.S., Ms. Kesiya Sebastian, Ms. Salini S., Ms. Preethikumari P., Ms. Reenu, Ms. Gayathri A. and Ms. Krishnendu M.S. were the associate editors of the magazine.

Mathematics Association Valedictory



A valedictory function of the activities of the mathematics association was held on 8th April 2022. Dr. Jochan Joseph, the principal was the chief guest. Sri. Jijo Joy, association president presented the report of the activities of the association in the

year 2021-22. Sri. Jogy Joseph, Head of the Department and Ms. Preethikumari P, Association secretary spoke on the occasion.

Farewell to the final year students



A farewell to the final year undergraduate and postgraduate students of the department was held on 8th April 2022. Students of the leaving batch shared their campus experiences. The meeting was followed by a high tea. The teachers wished all the students success in the University examination as well as in their future life.

Study Tour



The annual tour for final year graduate students was organized from 24th to 27th March 2022. 20 students of the batch visited Waynad, Coorg and Belur. Mr. Jijo Joy and Ms. Anumol Thomas accompanied the students.

Farewell to the retiring Principal Dr. Jochan Joseph



the students. Sri. Jogy Joseph, Vice Principal and Head of the Department presented a memento to Dr. Jochan Joseph.

The department organized a farewell meeting to the retiring Principal Dr. Jochan Joseph. The faculty of the department expressed their gratitude to Dr. Jochan Joseph for providing all the support for all the activities conducted by the department for the benefit of

Extension Programmes

Mathematics Popularization Programme for Plus Two Students



The postgraduate students of the department organized a workshop titled 'MathSpark' for the students of the St. Aloysius High School Edathua on 12th January 2022. The students of the department organized mathematics games and conducted quiz for the students. The winners were given prizes. Staff and students of St. Aloysius High School Edathua under the leadership of Sri. Tom J Koottakkara, Headmaster gave a warm reception to the students of the department.

Parents' Meeting

The department conducted the parents meeting despite of the Covid situation. While some of the meetings were held online others were regular physical meetings. During the meeting the academic performance of the students were discussed with parents. The parents' meeting was also a platform to hear the concerns and feedback of the parents. All the meetings were noted with good participation and response.

First Year BSc – 12th January 2022

Second Year BSc – 11th September 2021

Third Year BSc - 8th September 2021 (online)

Second MSc – 10th March 2022

Certificate Course

Two certificate courses were conducted in the academic year 2021-22. Certificate courses on "Basic Course in MATLAB" and "Typesetting using LATEX" were conducted with Dr. Mary George and Mr. Jijo Joy respectively as course coordinators.

Peer Teaching

To promote the teaching aptitude and to understand the concepts clearly peer teaching is promoted in all the classes. Peer teaching is functioning at two levels. One the peer teaching moderated by teachers and the other one where teachers are not present. Interested students are given special support to prepare for the classes. The topics are decided by students themselves based on the request from their peers.

INVOLVEMENT IN COLLEGE ACTIVITIES

Arts Festival

Arts festival of the college in the year 2021-2022 was held on 30th March, 2022. Students from the department actively participated in the writing and stage competitions and stage show.

Sports Competitions

Students actively participated in the inter-departmental competitions. Our girls won 2nd prize in Volleyball and third prize in football.

College Union Election



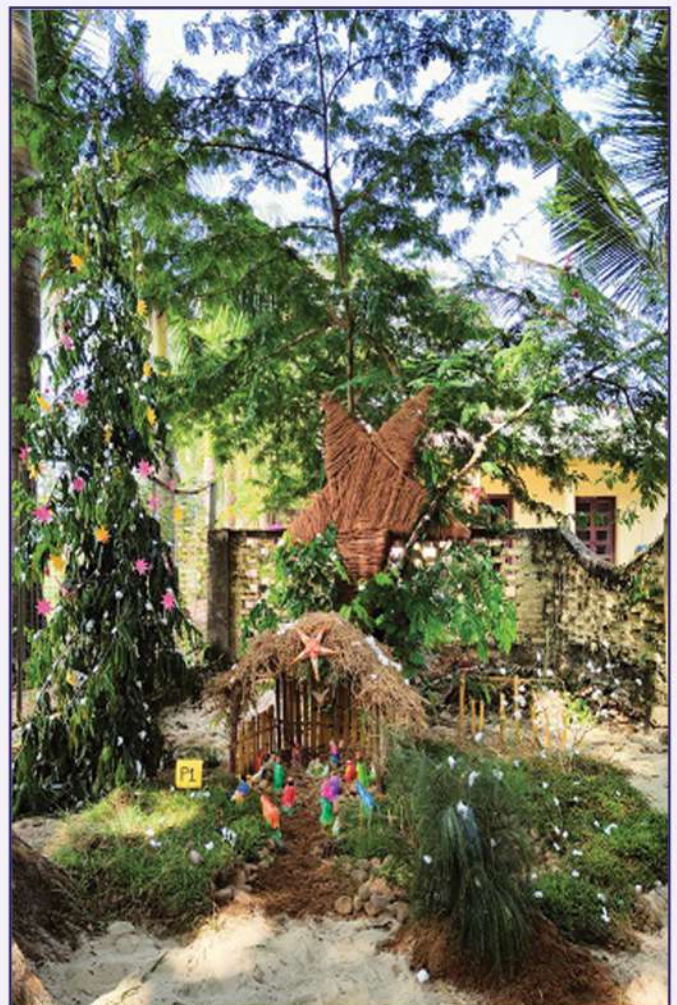
The College Union Election was held on 15th March 2022. First year B.Sc. student Mr. Sreejith Subash was elected University Union Councilor. The following were the class representatives.

1. Mr. Sreejith Subash & Ms. Azeela Abdul Rahim – I BSc
2. Mr. Guruprasad S. & Ms. Megha Gireesh – II BSc
3. Mr. Anandha Krishnan B & Ms. Reenu – III BSc
4. Mr. Ben Ros Thomas & Ms. Sivakami G. – I MSc

CHRISTMAS CELEBRATION



Christmas was celebrated with full fervour on 23rd December 2021 by the staff and students. Students of the department participated in the crib and star making competitions. Ms. Azeela Abdul Rahim and Mr. Abhijit P represented the department in Angel and Santa Clause competitions respectively. The head of the department Jogy Joseph cut the Christmas cake and gave the Christmas message.



Best UG Student



Ms. Aneesa Ashraf received Rev. Fr. Zacharias Punnappadom Memorial Award for 'Best UG student of the College' based on overall performance

Aloysian Exemplar



Aloysian Exemplar is the prestigious competition held every year to identify the best 5 outgoing UG and PG students. The competition is conducted in 5 stages and it identifies the best outgoing students who are extremely good in both academic and extra-curricular space. During the year there were close to 100 contestants in the first round and of which 10 students were selected for the final stage round. Ms. Aneesa Ashraf and Ms. Sreelekshmi R. of the department selected to the final stage round. The final stage round was held on 21st March, 2022. The department is proud that Ms. Sreelekshmi of 3rd B.Sc. Mathematics won the 'Aloysian Exemplar' title.

STUDENT'S ACHIEVEMENTS (2021 -2022)

Women's Day

Women's day celebrations were conducted in the college under the leadership of KSWDC -Women's Cell on 30th March 2022. Ms. Krishnendu M.S. of 3rd BSc represented the department in Miss Aloysius competition.

PG Fest

The postgraduate students of the department actively participated in the inter-departmental PG fest 'Izredna' conducted on 4th March 2022. Mr. Gokul J. won first prize in Poetry Writing (Malayalam), Mr. Ben Ros Thomas received second prize in Water Color Painting and 2nd MSc students received third prize in Tableau.



Inter-collegiate Competitions

Ms. Gayathri A. received first prize in the quiz competition organized by the Department of Statistics, KE College Mannanam and Kerala Statistical Association in connection with the National Statistics Day Celebrations 2021.

Ms. Prerana S was adjudged as the best parliamentarian from Alappuzha district in the State level Model Parliament Competition.

Ms. Aneesa Ashraf, 3rd BSc Mathematics received prize in the Online Power Quiz competition organized by the KSEB Officer's Association.

College Level Competitions

Mr. Vishnu K, 2nd BSc Mathematics received second prize in 'Adikuruppu Rachana Competition' conducted by the Department of Malayalam in connection with Martyr's Day

Ms. Krishnapriya K. received second prize in 'Malayala Cherukadha Sahithya' quiz competition conducted by the Department of Malayalam in connection with World Mother Tongue Day

Participation in National/ International Seminars

Our MSc students attended the National Seminar on 'Differential Equations: Analysis and Applications' organized by St. Thomas College Kozhencherry on 18th December 2021. Ms. Reema Paul, Ms. Revathi Sachin A.S., Ms. Sruthi S., Ms. Sivakami G., Ms. Archana Babu, Ms. Anju Andrews, Ms. Sreelekshmi S., Ms. Mariya Varghese, Ms. Lini S. and Ms. Sruthi Babu attended the seminar.

NCC Awards



Ms. Sivakami G. of the 3rd year BSc Mathematics received 'Best Motivated Cadet in 5 Kerala Naval Unit' award from the Commanding Officer, 5 Kerala Naval NCC Unit Changanassery.

Student Participation in International Conference



Reema Paul, I M.Sc. Mathematics Presented a paper entitled "Frieze Groups" in an international conference organized by VTM NSS College, Dhanuvachapuram.

P.G. Students



U.G. Students



Proficiency Prize for Students

Sl. No.	Name of the Student	Prize
1	Aneesa Asharaf	Overall topper in II Semester CBCS B.Sc. Examination, October 2020
2	Aneesa Asharaf	For securing 100% marks in Mathematics in II Semester CBCS B.Sc. Examination, October 2020
3	Salini S.	For securing 100% marks in Mathematics in II Semester CBCS B.Sc. Examination, October 2020
4	Aneesa Asharaf	For securing 100% marks in Statistics in II Semester CBCS B.Sc. Examination, October 2020
5	Salini S.	For securing 100% marks in Statistics in II Semester CBCS B.Sc. Examination, October 2020
6	Aneesa Asharaf	Overall topper in III Semester CBCS B.Sc. Examination, July 2021
7	Aneesa Asharaf	For securing 100% marks in Mathematics in III Semester CBCS B.Sc. Examination, July 2021
8	Salini S.	For securing 100% marks in Mathematics in III Semester CBCS B.Sc. Examination, July 2021

Sl. No.	Name of the Student	Prize
9	Poornima P.P	For securing 100% marks in Mathematics in III Semester CBCS B.Sc. Examination, July 2021
10	Varsha K.S	For securing 100% marks in Mathematics in III Semester CBCS B.Sc. Examination, July 2021
11	Aneesa Asharaf	For securing 100% marks in Statistics in III Semester CBCS B.Sc. Examination, July 2021
12	Salini S.	For securing 100% marks in Statistics in III Semester CBCS B.Sc. Examination, July 2021
13	Aneesa Asharaf	Overall topper in IV Semester CBCS B.Sc. Examination, November 2021
14	Aneesa Asharaf	For securing 100% marks in Mathematics in IV Semester CBCS B.Sc. Examination, November 2021
15	Salini S.	For securing 100% marks in Mathematics in IV Semester CBCS B.Sc. Examination, November 2021
16	Aneesa Asharaf	For securing 100% marks in Statistics in IV Semester CBCS B.Sc. Examination, November 2021
17	Salini S.	For securing 100% marks in Statistics in IV Semester CBCS B.Sc.
18	Aneesa Asharaf	Overall topper in V Semester CBCS B.Sc. Examination, January 2022
19	Aneesa Asharaf	For securing S grade in VI Semester CBCS B.Sc. Examination, April 2022
20	Salini S.	For securing S grade in VI Semester CBCS B.Sc. Examination, April 2022
21	Parvathy M. Kaimal	Overall topper in I Semester CBCS B.Sc. Examination, September 2021
22	Aarthira S.	For securing 100% marks in Mathematics in I Semester CBCS B.Sc. Examination, September 2021
23	Rossana James	For securing 100% marks in Mathematics in I Semester CBCS B.Sc. Examination, September 2021
24	Meenu Madhu	For securing 100% marks in Statistics in I Semester CBCS B.Sc. Examination, September 2021
25	Rossana James	For securing 100% marks in Statistics in I Semester CBCS B.Sc. Examination, September 2021
26	Aathira S.	Overall topper in II Semester CBCS B.Sc. Examination, December 2021
27	Nighil Prakash	For securing 100% marks in Statistics in II Semester CBCS B.Sc. Examination, December 2021
28	Rossana James	For securing 100% marks in Statistics in II Semester CBCS B.Sc. Examination, December 2021
29	Aathira S.	Overall topper in III Semester CBCS B.Sc. Examination, April 2022
30	Rossana James	Overall topper in III Semester CBCS B.Sc. Examination, April 2022

FACULTY CORNER

Research Papers

Dr. G. Indulal

1. Liju Alex, G. Indulal, Some degree based topological indices of a generalised F sums of graphs, Electronic Journal of Mathematical Analysis Applications (2021), 91-111
2. Jeepamol P, Indulal G, Aparna L, The spectrum of the Anti-Gallai Graphs of some graphs, Indian Journal of Pure and Applied mathematics, 52, 304-311 (2021)
3. Jinu Mary Jameson, Gopalapilla Indulal, On the normalized (distance) Laplacian spectrum of linear dependence graph of a finite-dimensional vector space, Discrete Math. Lett. 5 (2021) 49-55
4. G Indulal, Liju Alex, I. Gutman, On Graphs preserving PI index upon edge removal. Journal of Math.Chem, 59, (2021)1603-1609.
5. Indulal Gopalapillai, Deena C Scaria, The Distance related spectra of some subdivision

related graphs, Journal of Computer Science and Applied Mathematics Vol. 3, No.1, (2021), 23-36

6. Liju Alex, Indulal Gopalapillai, Wiener index of FH sums of graphs, Journal of Computer Science and Applied Mathematics, Vol. 3, no.2, (2021), 37-57

Deena C. Scaria

Indulal Gopalapillai, Deena C Scaria, The Distance related spectra of some subdivision related graphs, Journal of Computer Science and Applied Mathematics Vol. 3, No.1, (2021), 23-36

Conference/Workshops Presentation

Dr. G. Indulal

1. Delivered an e-lecture on "The role of Mathematics behind Google search" in the seminar series organised by MES Kalladi College, Mannarkkad, Palghat on 11.09.2021
2. Delivered a lecture on 'Reflection on Art and Creative writing' organised by the PG Department of English, St Aloysius College, Edathua on 15.12.2021
3. Delivered a lecture on 'Basics of Spectral Graph Theory' in the Enrichment programme to PG students organised by the Department of Mathematics, Cochin University of Science and Technology on 22.12.2021
4. Delivered a lecture on 'Energy of Graphs' in the Prof N Dharmambal Memorial Lecture Series organised by the Department of Mathematics, St Theresa's College, Eranakulam on 11.01.2022
5. Delivered a lecture on 'Interconnection between Linear Algebra and Graph Theory - A Primer' in the Ramanujan Lecture Series organised by the Department of Mathematics, St Dominic's College, Kanjirappalli on 27.2.2022.
6. Delivered a lecture on 'Applications of Graph Theory and Connections between Graph Theory and Linear Algebra' at Mar Baselios College of Science and Engineering, Thiruvananthapuram on 20.5.2022

Jijo Joy

Participated and presented a paper titled "An (s, S) inventory system with perishable items and Age-dependent Demands" in the 13th International Workshop on Retrial Queues and Related Topics Organized by the Centre for Research in Mathematics, Department of Mathematics, CMS College Kottayam from December 6 to 8, 2021.

Dr. Jubin Antony

Delivered an invited talk on the topic 'Introduction to SPSS' in the National Webinar Series titled 'Statistical Tools and Software for Data analysis' organized by St. Thomas College Kozhencherry on 12th June 2021.

Conference/Workshops /Training Attendance

Deena C Scaria

Attended FDP on "Managing online classes & Co-Creating MOOCs (Level 2)" organized by Teaching Learning Centre, Ramanujan College, University of Delhi under MHRD from 2/6/2021 – 16/6/2021

Attended FDP on "Learning Management System (Moodle) and Course Design" organized by KSHEC from 9/8/2021 – 13/8/2021

Participated in the question bank upgradation initiative of the Fourth Semester PG CSS Mathematics of Mahatma Gandhi University Kottayam.

Jijo Joy

Participated in the question bank upgradation initiative of the Fourth Semester PG CSS Mathematics of Mahatma Gandhi University Kottayam.