



# MathSpark

## Newsletter 2022

A commemoration of 50 years of Math Journey at AAC

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**DEPARTMENT OF  
MATHEMATICS**

Arul Anandar College (Autonomous),  
Karumathur – 625 514,  
Madurai.

### Editor's Desk



**Dr. J. XAVIER ADAIKALARAJ**

The incredible manifestation of Mathematics mirrored over the whole universe with its indomitable power stands supreme of all sciences. The massive growth and development of mathematical concepts applied in diverse fields of science and technology is highly astounding. The fabulous arena of Mathematics filled with magnificence and resilience is made to reach the unreached by the Department of Mathematics of Arul Anandar College, which has started its journey with the vision of disseminating the mathematical knowledge to socially and economically deprived rural students of Karumathur. The Department of Mathematics has empowered itself in the dimensions of teaching, research, extension and industrial linkages. The Department feels so pride in generating aspiring mathematicians and in witnessing their contributions in varied fields of professions. The Department desires to widen the spectrum of math radiance by initiating innovative and collaborative endeavours to facilitate a wide range of opportunities of life-long learning to the student community for their holistic growth and livelihood sustainability.

### History of the Department

The Department of Mathematics was incepted in the year 1971 to offer undergraduate programme under the aided stream. The co-education system came into practice in the year 2001 and it has created opportunities for the girl students to pursue higher education. As the desire of the students to enroll in the department of mathematics was overwhelming, various programmes were introduced in the forthcoming years.

2004 - Undergraduate Programme  
(B.Sc. - Self-Financed)

2005 - Postgraduate Programme  
(M.Sc. - Self-Financed)

2018 - Career Oriented Courses for UG

2022 - Value Added Courses for PG

### Editorial Board

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**Dr. J. Xavier Adaikalaraj**  
*Associate Professor & Head*

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**Mr. J. Robert Dhiliban**  
*Assistant Professor*

**Dr. I. Pradeepa**  
*Assistant Professor*

**Dr. Nivetha Martin**  
*Assistant Professor*

### Vision

Enrichment of society through integral development of students with a focus on mathematical innovation.

### Mission

- To provide mathematical knowledge and skills for a life long learning.
- To generate an atmosphere of creative endeavor that supports interdisciplinary collaborations and research.
- To develop soft skills and social understanding.

## Curriculum

To cater to the dynamic demands of the students, the department is making strenuous efforts in planning and implementing learner-centred curriculum to promote the holistic growth of the students incorporating learning outcome based curriculum framework. The courses are offered with special focus on fostering employability, entrepreneurship and skill development. Internships and projects are also made as part of the curriculum to provide exposure to pragmatic learning. The courses also cater to the local, regional, national and global needs.

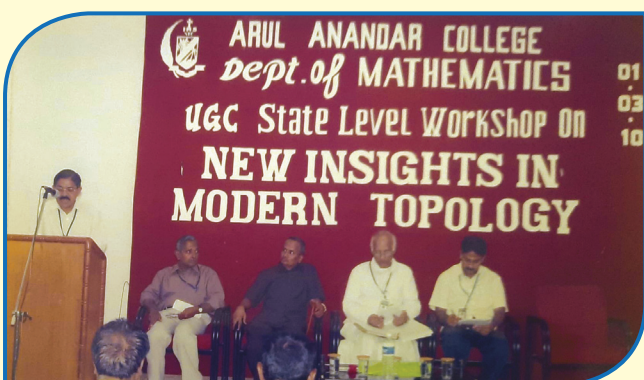
## Milestones of the Department

1998 : First UGC Sponsored state level Seminar & MATAAC - a state level Intercollegiate Mathematical Competitions on 21 Jan 1998

2000 : AIACHE, New Delhi Sponsored Two Day Refresher Programme on Modern Algebra & Computer Applications for High School & Higher Secondary School teachers of Usilampatti region, Madurai on 24-25 Feb 2000

2006 : UGC Minor research project on Fuzzy concepts applicable in Today's Topology

2010 : First UGC sponsored State level workshop on The New insights on Modern Topology on 01 Mar 2010



2011: First National Conference on Emerging Trends in Modern Topology on 22 Feb 2011



2018: First International Conference on Recent Advances in Pure and Applied Mathematics on 14 Feb 2019



2019: Institutionalization of Golden MATAAC Endowment to the tune of Rs 1,00,000 by the faculty members of the department to cater to the educational needs of the deserving students of mathematics.



NBHM sponsored Mini MTTs programme, 16-21 September 2019

Memorandum of Understanding (MoU) with the research organization IFRP (Institute for Engineering Research and Publication)

2020: First online Faculty Development Programme on Appraisal of Mathematical learning outcomes in Cybergogy environment & STTP on Matlab and Mathematica for Scientific Research.



### Faculty Achievements

The department of Mathematics is blessed with committed faculty who are highly competent and potent to tune themselves to the tone of this dynamic system of education. The efficacy of the faculty has gained great laurels to the department. The indomitable spirit of the faculty has transformed them into lifelong learners and this has made them empower themselves meticulously in the dimensions of teaching, research, extension and the related facets. The faculty members have received many awards for their contributions especially in the fields of teaching and research. The faculty members have also shared their research expertise by serving as external members at board of studies, external examiners, reviewers of journals, editors of books, resource persons of workshops, seminars and conferences.

The veteran faculty members who have served at our institution for many decades have made great contributions, to mention a few: Prof. V. S. Ramamurthy has published various articles in the fields of Algebra, Fields and Ring Theory.

Dr. S. K. Ayyasamy was the pioneer of research in the domain of Graph Theory.



Dr. S. K. Ayyasamy



2021: Memorandum of Understanding (MoU) with GTN Arts College, Dindigul



Dr. M. Lellis Thivagar was the first faculty of the Department of Mathematics of our college to become a recognised research supervisor under Madurai Kamaraj University, Madurai. He has also bagged the Tamil Nadu Scientist Award for the year 2009 from the state government.

### Pillars of the Department since 1971

S.No	Name of the Faculty	Period
1	Prof.V.S.RAMAMURTHY	1971-1975
2	Prof.N.SRIDHARAN	1971-1972
3	Prof.M.GANESH	1971-1972
4	Dr.S.K.AYYASWAMY	1972-1987
5	Prof.P.KARPOORA SUNDARAM	1972-2004
6	Rev.Fr.M.SANTIAGO, SJ	1972-1973
7	Prof.V.SRINIVASAN	1975-2000
8	Prof.THANGAMANI	1977-1978
9	Dr.T.SALAI PARKUNAN	1978-2014
10	Prof.B.R.NARASINHAN	1981-1982
11	Rev.Fr.S.JOSEPHRAJ, SJ	1982-1983
12	Dr.M.JOSEPH ISRAEL	1983-2016
13	Prof.S.JOSEPH ALANGARRAJ	1987-1988
14	Rev.Dr.M.ALBERT MUTHUMALAI, SJ	1988-1991
15	Rev.Dr.M.ALBERT WILLIAM, SJ	1991-1993
16	Dr.M.LELLIS THIVAGAR	1998-2012

### Dynamic Heads of the Department

Prof. V. S. RAMAMURTHY (1971-1975)



Prof. V. SRINIVASAN  
(1975-2000)



Prof. P. KARPOORA SUNDARAM  
(2000-2004)



Dr. T. SALAI PARKUNAN  
(2004-2014)



Dr. M. JOSEPH ISRAEL  
(2014-2016)



Dr. J. XAVIER ADAIKALARAJ  
(2016 to till date)

### Faculty of the Department (2021 - 2022)



**Dr. J. XAVIER ADAIKALARAJ**  
Associate Professor & Head



**Mr. J. Robert Dhillan**  
Assistant Professor



**Dr. M. Gilbert Rani**  
Assistant Professor



**Dr. G. Ramkumar**  
Assistant Professor



**Dr. Nivetha Martin**  
Assistant Professor



**Dr. M. Sajan Joseph**  
Assistant Professor



**Dr. I. Pradeepa**  
Assistant Professor



**Mr. R. Premkumar**  
Assistant Professor



**Ms. N. Angel**  
Assistant Professor



**Mr. R. Chinnapparaj**  
Assistant Professor



**Ms. P. Deepika**  
Assistant Professor



**Ms. R. Yoga Rani**  
Assistant Professor



**Ms. J. Jenitha Sironmani**  
Assistant Professor



## Research

The faculty of the Department of Mathematics have been contributing to various dimensions of research. The faculty members who have served at the department during the early 90's have set new benchmarks in mathematical research and were remarked as the pioneers of research especially in the field of Algebra, Analysis, Graph Theory and Topology. The department feels pride as it has housed many stalwarts in research.

As mathematics has a vital role in all the domains of science and technology, the faculty of the department have also contributed to interdisciplinary research. Many new mathematical models integrating the notions of mathematics with social, biological and environment related aspects were evolved to cater to the needs of the society. The faculty have published several interdisciplinary research articles in reputed journals. In addition to interdisciplinary research, the faculty members are also involved in transdisciplinary research for creating channels of multi-disciplinary approaches.

The phenomenon of collaborative research is gaining momentum in recent times. The faculty have established good research associations with the faculties of other foreign universities. The collaborative research articles on recent developments of mathematical concepts are emerging as new thrust areas of research. The faculty members have received both Indian and International patents as a result of collaborative endeavours. Efforts are taken to stimulate research interest in PG students by encouraging staff-student collaboration. Many articles are jointly published by both staff and students. TNSCST sponsored student projects are also received in the year 2022 and this has marked new beginnings of staff-student integrated research works.



The Department consists of three research supervisors recognized by Madurai Kamaraj University and presently there are ten research scholars pursuing research under their able guidance. The faculty of the department have tremendously contributed many research articles, books and book chapters. In addition, overseas presentation of research papers at an International conference was accomplished under UGC travel grants support. The department is marching in full swing to reach a remarkable status in the dimension of research in the coming years.

Journal Articles	Conference Proceedings	Books	Conference Presentations
270	140	17	197

## Association Activities

### Seminars & Conferences



The Department of Mathematics has been organizing UGC sponsored seminars and conferences since 1998 on the contemporary trends and applications of pure and applied Mathematics at state, national and international levels annually to build a suitable platform for the exchange of research ideas and to set interface between experts and young research minds.



**Workshops**



To enrich the mathematical skills of the students and to prepare them for competitive examinations, workshops are conducted regularly by outsourcing resource persons to deliberate on the tactics of cracking NET/SET examinations.

**MATAAC**



The department has been organizing MATAAC, an intercollegiate state level mathematical competition every year since 1998. MATAAC is a Math Extravaganza that fills the hearts of both faculty and students with ardent



joy. A combo of mathematical events makes the outside participants more delighted and every year there is an overwhelming response from the students of other colleges to take part in this Math Feast.

**Pi Mathematical Club**





The Pi mathematical club commenced in the year 2016 with the aim of stimulating the interest of students to learn mathematics in a delightful way. Dr. Nivetha Martin is the staff-incharge of the club and this club organizes various activities for enriching the mathematical skills of the students and also offers various opportunities to the students for sculpting themselves and to enhance their competency.

### Womentics Club



The women faculty of the department of Mathematics was highly interested to walk an extra mile towards the growth of women students and their brain child is the Womentics club. Dr.I.Pradeepa is the staff-incharge of this club and various activities are organized for the women students especially with special focus on career counselling, skill development activities, outreach and extension activities. This club acts as a channel for actionizing new initiatives towards the holistic growth of the women students.

### Guest Lectures



The Department of Mathematics is very keen on fulfilling the objectives of enhancing and enriching the mathematical knowledge of the learners, for which many guest lectures are organized every year. On exposing the students to the lectures of eminent persons, it is found that the students develop interest towards learning mathematics, also there is significant increase in their level of aspirations towards research. It has become the culture of the department to organize guest lectures on various dimensions of mathematics at recent times.

### Foreigner's Visits

The Department of Mathematics intended to create an environment of resource sharing by experts from other nations to make the students



gain knowledge on the advances of mathematics at global level.



**Dr. Petri T. Piironen, Professor of Mathematics,  
National University of Ireland**



**Ms. Pauline Mayer, University of Namur, Belgium**



**Dr. Paul Rajamanickam, Associate Professor,  
Luther College, USA**

## Departmental Bridge Course to the First year students



It is the tradition of the department to organize orientation programmes for both the first year undergraduate and postgraduate students to explain the dynamics of the department. The

faculty members give lectures on various aspects of curriculum, examination pattern, departmental activities and common programmes at college level. A special focus will also be laid on moral and ethical values. Fundamentals of mathematical concepts are refurbished with special concern for students from Tamil medium. The students are highly benefited by this programme and they indeed feel bridged with the department and with the subject of Mathematics.

## Fresher's Day Programmes



The Department conducts welcoming party to the first year students and this bridges the students with one another.

## Student's Achievements

The students of Mathematics never fail to invest hard work and this has gained laurels to the department by winning both inter and intra competitions. They have participated in various summer training programmes and also they have actively taken part in various Part V activities especially in NCC & NSS. The students have presented papers at state level and also in national and international conferences.



Theatre Fest



Extension



Sports







has adopted several villages in the previous years and presently the villages named Natthapatti and Othapatti in the nearby regions are adopted by the Department of Mathematics. The students take part energetically in various social service activities, health awareness programmes, medical camps, veterinary camps, pongal celebrations & other outreach activities. The active participation of the students have bagged them the best extension awards. The extension opportunities were a chance for the students to learn and exercise their social responsibilities.

As a part of extension activity a Math Model Competition is organized for the rural school students every year. The school students actively take part in the competition and showcase their mathematical modeling skills and the best models are awarded with prizes. The prime motto of this competition is to create an ambience in the school children to pursue higher education in mathematics.

**Math Model Competition**



The Department of Mathematics is very keen on extension activities. Under the village adoption extension programme ARISE, the department





**Placement and Higher Education**

**PREPARATION STRATEGIES FOR TNPSC GROUP II & IV EXAMINATIONS**

Resource Person

Registration link  
<https://t.me/joinchat/MSglE/JqvNUP2MBD7xHSx9>

Telegram link  
<https://t.me/joinchat/KZb06xoeg39fWF3Jab7g>



**Dr N Ramakrishnan**  
 Member Syndicate  
 Professor and Head

meet via  
 Google Meet  
 @ 10.30



The Department of Mathematics always takes efforts in offering placement training programmes, career counselling and other employment opportunities in association with the placement cell. The faculty members of the department also take special concern in encouraging the students to pursue their higher studies. At the times of pandemic, the Department organized a webinar on Preparation strategies for TNPSC Group II & IV Examinations in association with the Placement cell of our college. The placement initiatives taken by the department has more positive impact on the career of the students.



**Alumni**







The department is notable for producing illustrious alumni and they have made hallmarks in various fields. The department has very good rapport with alumni and they have been invited as resource persons for several programmes. The alumni have also instituted a scholarship of Rs.2,00,000 to cater to the academic needs of deserving students of mathematics.

### Healthy Practices

The Department has its own healthy practices as follows

- Introduction of need based courses
- Periodical upgradation of the syllabus
- Student Database management
- Institutionalization of GOLDEN MATAAC Endowment
- Organizing diverse student centric activities
- Encouraging faculty outreach activities
- Pi Mathematical Club & Womentics Club activities
- Learner centred pedagogies

### Uniqueness of the Department

Endeavours towards Women Empowerment is the uniqueness of the department. The department has been taking several initiatives towards upliftment of women students which are as follows

- Creating awareness on the impacts of early marriage to the parents during PTA meet
- Regular counselling to the women students
- Mentoring the married women students on work-life balance

The Department of Mathematics has completed its 50 years of journey at Arul Anandar College from 1971-2021. The indomitable spirit of the faculty members and the students together have made the Department of Mathematics stand high with the blessings and support of the management. At this juncture we specially remember the legendary personalities for their commitment in sculpting and moulding the department of mathematics to get loaded with achievements of greater magnitude.

Let this journey continue with the same zeal in the coming years...

**Dr. J. Xavier Adaikalaraj**, Chief Editor

- Academic & Outreach activities through Womentics Club for empowering girl students
- Encouraging the women students to participate in women empowerment & career counselling programmes
- Research work on women challenges
- As a result of such endeavours towards the growth of women students, the percentage of women students remains good in almost every year

### Educational Tour & Internship



The Department arranges educational tours to the final year undergraduate and postgraduate students to make them acquire a wide range of exposure to the applications of mathematics. The students also gain a lot of insights and also such occasions make the students feel refreshed and rejuvenated. The internship experiences also provide the students a chance to get familiar with work places and work ethics.

### Future Plans of the Department

The Department has envisioned to achieve the following in the upcoming years

- Collaborative endeavours with industries
- Signing MoU's with various institutions & research organizations
- Internship on various domains
- Research exposure to UG students
- Staff- student joint research at major level