

SCIENCE ACADEMIES' LECTURE WORKSHOP ON "MATHEMATICAL BIOLOGY"

Date: 18.03.2024 & 19.03.2024

Sponsored and Supported by



Indian Academy of Sciences
Bengaluru



Indian National Science Academy
New Delhi



The National Academy of Sciences, India
Allahabad

Organized by

PG & RESEARCH DEPARTMENT OF MATHEMATICS

JAMAL MOHAMED COLLEGE

(AUTONOMOUS)

Accredited with A++ Grade by NAAC (4th cycle) with CGPA 3.69 out of 4.0
(Affiliated to Bharathidasan University)

TIRUCHIRAPPALLI - 620020

Website : www.jmc.edu



About Science Academies

Indian Academy of Sciences (IAS), Bangalore founded in 1934 by Sir C.V. Raman, aims at promoting the progress and upholding the cause of science in the pure and applied branches. Its major activities include publication of scientific journals and special volumes, organizing meetings of the Fellowship and discussions on important topics, recognizing scientific talent, improvement of science education, and taking up other issues of concern to the scientific community. As part of the science education programmes, the Indian Academy of Sciences, Bangalore in association with the Indian National Science Academy (INSA), New Delhi and The National Academy of Sciences, India (NASI), Allahabad organize programmes for the improvement of science education in the Universities and Colleges throughout the country.

The Science Academies have been supporting two/three-day lecture workshops and fifteen-day refresher courses on topics of current interest throughout the country. All the programmes conducted by the Joint Science Education Panel of the Academies are fully supported by the Department of Science and Technology, GOI.

About the Institution

Jamal Mohamed College was founded in 1951, as an affiliated college to the University of Madras and then affiliated to Bharathidasan University, Tiruchirappalli, when it was formed in 1982. Jamal Mohamed College is situated in the central part of Tamil Nadu, Tiruchirappalli city. It was established as a religious minority institution with the primary objective of providing higher education to the downtrodden and socially backward section of the society in general and Muslim minority in particular.

The college is administered by the Society of Jamal Mohamed College. It is established in a sprawling land area of 87 acres, as a religious minority institution. Hajee M. Jamal Mohamed Sahib and Janab N.M. KhajamianRowther, of revered memory, were the founding fathers of this institution.

In the year 1957 the college got the single honor of being bracketed with the thirty best colleges in India when Danforth Foundation of USA selected the college for the award of study fellowships in U.S.A. In 1963 the college was elevated to the status of a post-graduate college.

In the year 1972, the college was recognized by UGC New Delhi, for the purposes of Grants under section 2(F) and 12(B) of the University Grants Commission Act 1956. In 1977, on the recommendation of the University of Madras, the UGC recognized the college as one of the ten "Lead colleges" in the university area.

Our College was bestowed with the unique honour of "CPE" status Phase-I and Phase-II by the University Grants Commission under the Scheme "Colleges with Potential for Excellence" in 2011 and 2016 respectively. Accredited with A++ Grade by NAAC (4th Cycle) with CGPA 3.69 out of 4.0.

The college has obtained the prestigious 56th rank among Top ranking institutions in NIRF Rankings - 2023. It is remarkable to state that the college has been recognized with Three Star status by the Institutions Innovation Council (IIC), MHRD innovation cell, Government of India in 2019. Department of Science and Technology (DST), Government of India has accorded FIST Scheme to the Departments of Zoology, Botany and Physics in 2004 and to the Department of Mathematics in 2008. Again DST FIST Scheme has been extended to the Departments of Mathematics, Physics, Botany, Zoology and Computer Science in 2019. Five Science Departments such as Mathematics, Physics, Chemistry, Botany and Zoology have been short-listed after a meritorious presentation, among many competing institutions and awarded the Star Status Scheme by the Department of Bio Technology (DBT) in 2020.

Over a period of 73 years the college was able to scale greater heights and raise to the present status as a multi-faculty institution with 28 UG and 20 PG courses. 18 departments of the college are functioning with the status of approved research centres. The college has a strength of around 12000 students. There are 133 Government Aided teaching faculty and 359 staff members are working under the self finance stream. The college celebrated its silver Jubilee in 1971, subsequently the Golden Jubilee and Diamond Jubilee in 2001 and 2011 respectively.

With many milestone achievements, the College has been marching towards fulfilling marvelous plans, matching the vision and mission of our noble founders and the present Management Committee Members. "The Jamal" journey continues with all gentle Jamalians for still more greater heights of glory in higher education.

About the Department

The Department of Mathematics of Jamal Mohamed College, was started as one of the earliest department in the year 1951. B.Sc., and M.Sc. Mathematics programmes were started in 1957 and 1963 respectively. The Department was elevated into a research department in the year 2002 by offering M.Phil. (Full Time & Part-Time) and Ph.D. (Full-Time & Part-Time) programmes. B.Sc. Mathematics (Self-Financing Section) was started for women in 2003. M.Sc. Mathematics (Self-Financing Section) was started for women and men in 2005 and 2010 respectively. In the year 2008, the Department was identified for the award of FIST – Grant by the Ministry of Science and Technology of Government of India. The Department has highly qualified faculty members actively engaged in teaching, research, continuing education programmes and consultancy. In the last 15 years, the members of the Department have written 10 books, 95 research scholars were awarded Ph.D. degrees, published more than 670 research papers in National and International journals and presented many research papers in National and International Conferences.

About the Workshop

This lecture workshop is focused to benefit the students, faculty members and research scholars to attain an expertise in developing cognitive skills mathematically about biological systems. Participants are sure to acquire fundamental skills in mathematical analysis and simulation, specialized experience in mathematical modeling in biology and neuroscience and knowledge of particular areas of biology. In addition to this, the modelling of real time problems in the form of mathematical equations, its solution methods and its impact on the global challenges are to be explained to them. Moreover, the numerical techniques will be dealt with which will provide the learners a clear idea about the behavior of the problem or the model provided. Finally, this lecture workshop is intended to motivate the students, research scholars and faculty members in understanding the applications of mathematics in biology.

REGISTRATION

The workshop is open to UG & PG students, Research Scholars and Faculty members of Mathematics and other related disciplines. There is **No Registration fee** to attend the workshop. Only Limited entries are available (FCFS). **Selected participants will be intimated through their registered Mail ID and the Selection list will be made available on our College website by 14.03.2024.**

This workshop will be conducted only through offline.

Registration link : <https://forms.gle/NXPkgNKBRq4wpTvba>

Last date of Registration : 13.03.2024.

Special Feature :

- ☒ **No Registration fee**
- ☒ **Eminent Scholars as Resource Persons**
- ☒ **Tea, Snacks and Lunch will be provided to all the Participants**

Dr. S.Saravanan, F.N.A.Sc.,
CONVENER
Professor & Head
Department of Mathematics
Bharathiar University
Coimbatore

Dr.S.MohamedYusuff Ansari
COORDINATOR
Assistant Professor
PG & Research Department of Mathematics
Jamal Mohamed College (Autonomous)
Tiruchirappalli – 620 020
Mobile:7904515874

PROGRAMME SCHEDULE

Venue : Hussaindeen Hall (A/C), Jamal Mohamed College, Trichy

18.03.2024 Monday

Time	Event	Speaker	Title of Talk
08.30 am - 09.00 am	Registration		
09.00 am - 9.30 am	Welcome and Inaugural		
09.30 am - 11.00 am	Lecture 1	Dr. S. Saravanan, F.N.A.Sc., Professor & Head Department of Mathematics Bharathiar University, Coimbatore	Some Basic Models in Mathematical Biology-I
11.00 am - 11.15 am	Tea Break		
11.15 am - 12.45 pm	Lecture 2	Dr.P. Kandaswamy, F.N.A.Sc., Former Director School of Mathematics & Statistics Bharathiar University, Coimbatore	Mathematical Model for Human Infections- I
12.45 pm - 02.00 pm	Lunch Break		
02.00 pm - 03.30 pm	Lecture 3	Dr. Mini Ghosh Professor Vellore Institute of Technology (VIT) University, Chennai	Mathematical modeling of infectious Diseases
03.30 pm - 3.45 pm	Tea Break		
3.45 pm - 05.15 pm	Lecture 4	Dr. G P Raja Sekhar, F.N.A.Sc., Professor, Department of Mathematics Indian Institute of Technology Kharagpur	Mathematical modelling - population growth models in the context of biological tumors

19.03.2024 Tuesday

Time	Event	Speaker	Title of Talk
09.00 am - 9.30 am	Re-Registration		
09.30 am - 11.00 am	Lecture 5	Dr. G P Raja Sekhar, F.N.A.Sc., Professor, Department of Mathematics Indian Institute of Technology Kharagpur	Hydrodynamics of Swimming Micro-organisms
11.00 am - 11.15 am	Tea Break		
11.15 am - 12.45 pm	Lecture 6	Dr. Mini Ghosh Professor Vellore Institute of Technology (VIT) University, Chennai	Modeling the spread of vector-borne diseases
12.45 pm - 02.00 pm	Lunch Break		
02.00 pm - 03.30 pm	Lecture 7	Dr.P. Kandaswamy, F.N.A.Sc., Former Director School of Mathematics & Statistics Bharathiar University, Coimbatore	Mathematical Model for Human Infections- II
03.30 pm - 3.45 pm	Tea Break		
3.45 pm - 05.15 pm	Lecture 8	Dr. S. Saravanan, F.N.A.Sc., Professor & Head Department of Mathematics Bharathiar University, Coimbatore	Some basic models in Mathematical Biology-II
05.15 pm - 05.45 pm	Concluding Session		

ALL ARE INVITED