

Department of Physics

National Webinar on Technological Advancements in Science

• Invitation

Last Date for Registration: 23rd April 2021
Last Date for Paper Submission: 1st April 2021

Manuscript Submission:

Research findings related to technological advancements in science are invited for oral online presentation by third year UG students. The manuscript (not exceeding 10 pages) should be typed in MS Word document file in Times New Roman font of size 12 and 1.5 line spacing on A4 size along with title, name, phone number, email id and address of the authors. Margin Left-1.5", Right, Top and Bottom side-1". Tables, figures and graphs should be numbered and must be placed inside the text and should be in jpeg or tif file. The author presenting the paper should be underlined and sent to the Program Coordinator through E-mail to the following E-mail id: smcstarcollege@gmail.com

All the accepted papers will be published in proceedings with ISBN.

The papers should be submitted as per the following details

Abstract: should not exceed 300 words

Keywords: 4 to 7 words

Introduction:

Materials and methods:

Results and discussion:

Conclusion:

Reference section format:

Journals: Author (last name) AB (initials), Author BB, Title of Article, Journal name, year, volume (issue), page numbers, DOI: xxxxxxxx, PMID: xxxxxx

Books: Author AB, Author BB, Author CC, Title of Book, Ed., Vol, Publisher, City, year, page numbers

Thesis: Author Title, University, (year), pg.no.

PLEASE REFER TO THE WEBSITE OF EACH DEPARTMENT.

ORGANISING COMMITTEE

Patron

Rev. Sr. Flora Mary, Secretary,

St. Mary's College (Autonomous), Thoothukudi.

Chairman

Dr. Sr. A.S.J. Lucia Rose, Principal,

St. Mary's College (Autonomous), Thoothukudi.

Program Coordinator

Dr. Sr. Arcadia Jeronica Alphonsa,

Oversight coordinator & Member Secretary,

DBT STAR College Scheme,

Assistant Professor of Botany,

St. Mary's College (Autonomous), Thoothukudi.

Co-Chairmen

Dr. J. Manik Rathi, Head and Associate Professor,

Department of Chemistry,

St. Mary's College (Autonomous), Thoothukudi.

Dr. Sr. Jessie Fernando, Head and Associate Professor,

Department of Physics,

St. Mary's College (Autonomous), Thoothukudi.

Dr. S. Sugantha Devi, Associate Professor & Head,

Department of Chemistry, Kamaraj College, Thoothukudi.

Dr. A. Sivakumar, Associate Professor & Head,

Department of Physics, Kamaraj College, Thoothukudi.

Executive Members

St. Mary's College (Autonomous), Thoothukudi.

School of Physical Sciences

Dr. T. Linda Fernando, Associate Professor of Chemistry

Dr. S. Datchidala Inezaculata Sybil, Associate Professor of Physics,

Ms. S. Anji Jaya Mary, Assistant Professor of Chemistry

Ms. A. Lucas Reseelin, Associate Professor of Physics

Dr. Induja Anand Senthil, Assistant Professor of Chemistry,

Dr. A. Lakshmi, Assistant Professor of Chemistry

Dr. S. Divya, Assistant Professor of Chemistry

Dr. A. Parveen Sultana, Assistant Professor of Chemistry

Dr. M. Sheela, Assistant Professor of Physics

Dr. G. Anuja Arathi Gnan, Assistant Professor of Chemistry

Ms. P. Dhanalakshmi, Assistant Professor of Physics

Ms. P. Padmavathi, Assistant Professor of Physics

Dr. A. Nimisha Shreeya, Assistant Professor of Physics

Ms. L. Simla, Assistant Professor of Physics

Ms. K. Maria Neeraj Jayasek, Assistant Professor of Physics

Ms. A. Valentina, Assistant Professor of Physics

Kamaraj College, Thoothukudi.

Faculty - Department of Chemistry

Dr. G. Venkatesh, Assistant Professor

Dr. D. Kanagasabai, Assistant Professor

Dr. K. Arun Prasad Lingam, Assistant Professor

Dr. G. Rajakumar, Assistant Professor

Dr. S. Veeran, Assistant Professor

Faculty - Department of Physics

Dr. G. Narayanasamy, Associate Professor

Dr. J. Poongodi, Associate Professor

Dr. J. Helen Pious, Assistant Professor

Dr. S. Kanagasabhai, Assistant Professor

STAR PROGRAMME

2020 - 2021

Sponsored By



Department of Biotechnology
Ministry of Science & Technology,
Government of India

National Webinar on
Technological Advancements in Science
(NWTAS 2021)

April 16th and 17th, 2021

Organized by



Marian Star Centre
School of Physical Sciences

St. Mary's College (Autonomous),

Re-accredited by NAAC with 'A+' Grade

Thoothukudi - 628 001,

Tamil Nadu, India.

In Collaboration with

Kamaraj College

Thoothukudi - 628003,

Tamil Nadu, India.

Registration link

<https://forms.gle/hvHLDhnd40YLLxUEA>

marianstarcentredbt2020@gmail.com

chemstry.smc@gmail.com

stmpy2012@gmail.com

About the college

St. Mary's college (Autonomous), a catholic institution of higher education for women founded in 1948, plays a significant role in shaping the destiny of innumerable young coastal women in and around Thoothukudi. With a proud legacy of 72 years, the college has excelled in every discipline keeping in pace with the global trends in the academia. The college, affiliated to Manonmaniam Sundaranar University, Tirunelveli, offers graduate, post-graduate, M.Phil., and Ph.D., programmes in various disciplines and has attained Autonomous status in the year 2009. Recognising the great potential within the campus, the NAAC has reaccredited the institution with 'A+' grade in its fourth cycle. A holistic education with an overall personality development is ensured by involving students in academic, curricular and co-curricular activities. The motto of the college is FIDE VIVANT (Live by Faith).

About the DBT STAR College Scheme

The Star College Scheme has been initiated by Department of Biotechnology (DBT) in 2008 to support colleges and universities offering undergraduate education to improve science teaching across the country. The DBT identifies colleges with ambition and potential for excellence and provide academic and physical infrastructure for achieving excellence in teaching and unique exposure of students to experimental science. The Department has supported around 200 undergraduate colleges across the country in the past 9 years. The Star College scheme was sanctioned in March 2019. Four departments of the college namely Physics, Chemistry, Botany and Zoology have been recommended by the Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India, New Delhi, to receive financial assistance under the Star College Scheme.

About the School of Physical Sciences

The School of Physical Sciences was established with the aim of deepening of knowledge through teaching and research in the field of fundamental and applied sciences. The school consists of two departments, Department of Physics and Chemistry. The school has highly dedicated and knowledgeable faculty supported by excellent technical staff.

About the Webinar

Science is a holistic understanding of the world, a task to describe how and why things work the way they do. Through this national webinar, students will learn that the world is interconnected, the disciplines of science are interrelated and the innovations and developments that unfold daily. This provides opportunities for the students to understand the importance and relevance of science in our lives. Their own knowledge curiosity and enthusiasm about the natural world, appreciate the natural world and the physical environment and explore the basic concepts of the following strands: physics, science, earth science, the science, technology and society, science process and history, health and the environment.

The Webinar on 'Technological Advancements in Science' sponsored by the Department of Biotechnology, New Delhi, India and organized by The School of Physical Sciences, also aims to create a bond for innovative research among the young undergraduate students.

The main objective of this webinar is to offer an interdisciplinary platform for students, researchers, academicians and inventors to discuss and debate the latest trends and innovations in science and technology on key subject areas like nanotechnology, functional materials, microfluidic materials, biomaterials and more.

Programme Schedule

16 April - 2021

9:00 A.M. - 9:30 A.M.	Registration
9:30 A.M. - 10:30 A.M.	Session I Role of Engineering Materials in Advanced Technology Dr. V. Nisugama Assistant Professor of Physics Sree Vidyanikethan Engineering College, Tirupati, Andhra Pradesh
10:30 A.M. - 12:30 P.M.	Paper Presentation by III U.G Physics students.
1:30 P.M. - 2:30 P.M.	Session II Polymers as Smart Materials for Self Healing Technology Mr. S. Jeevi Raj, M.Tech., Senior Scientist Vikram Sarabhai Space Centre (ISRO) Thiruvananthapuram, Kerala
2:30 P.M. - 4:30 P.M.	Paper Presentation by III U.G Chemistry students.

17 April - 2021

9:00 A.M. - 10:00 A.M.	Session III Tailor Made Organisms Genome Editing Tools in Biology Dr. P. H. Sathesh Kumar Professor, Centre of Advanced Study in Botany, Banaras Hindu University Varanasi
10:00 A.M. - 12 noon	Paper Presentation by III U.G Botany Students
1:00 P.M. - 2:00 P.M.	Session IV Understanding Autism Spectrum Disorder Using Synapse 1 heterozygous Mutation Dr. James Clement Associate Professor Neuroscience Unit, Jawahar Institute Centre For Advanced Scientific Research Bangalore
2:00 P.M. - 4:00 P.M.	Paper Presentation by III U.G Zoology Students
4:00 P.M.	Valedictory Function

• Certificate

NATIONAL WEBINAR ON TECHNOLOGICAL ADVANCEMENTS IN SCIENCE

Organised by
Marian Star Centre
Department of Physics
St. Mary's College (Autonomous),
Re-accredited by NAAC with 'A+' Grade
Thoothukudi - 628001.

Sponsored by
Department of Biotechnology
Ministry of Science & Technology,
Government of India





CERTIFICATE OF PARTICIPATION

Ms. VARSHA. N
II B. Sc Physics
St. Mary's College (Autonomous), Thoothukudi

has successfully completed the **NATIONAL WEBINAR ON TECHNOLOGICAL ADVANCEMENTS IN SCIENCE** organised from 16.04.2021 to 17.04.2021 by
Department of Physics, St. Mary's College (Autonomous), Thoothukudi, Tamilnadu, India.

Arockia Jenecius Alphonse
Dr. Sr. A. Arockia Jenecius Alphonse
DBT - Overall Coordinator

Jessie Fernando
Dr. Sr. Jessie Fernando
Convener

Lucia Rose
Dr. Sr. A. S. J. Lucia Rose
Principal

➤ Report

It was on the radiant morning of April 16, 2021, a very informative national webinar was organized on the Technological Advancements in Science. The webinar was organized by the untiring moulders of the School of Physical Sciences, St. Mary's College(Autonomous), Thoothukudi under the Star College Scheme sponsored by the DBT, New Delhi. Dr. V. Nirupama, Assistant Professor of Physics, Sree Vidyanikethan Engineering College, Tirupathi, Andhra Pradesh was invited to share her observance in the session. The program began with a prayer led by Dr. Sr. Jessie Fernando and she welcomed the gathering as well. The head of the institution, Dr. Sr. A.S.J. Lucia Rose extended her words of glee to the gathering through her inaugural address. Mrs. A. Lucas Rexceline, Associate Professor of Physics proliferated her spell of gratitude. The speaker gave an abbreviate talk on,

- The definition of material engineering
- The types of biomaterials
- Uses of biomaterials
- Nano materials
- Properties of nano materials
- Metallic glasses
- Applications of meta material
- Applications of claytronics
- Shape memory alloys
- Different shape memory effects

She gave the participants a clear idea on the types of materials and highlighted the properties and applications of bio materials. The information about claytronics and its types was the top notch of the session. After the session the participants were asked to present their research papers in the field of Physics. The rapport of the resource person made the participants free to answer the questions raised by the resource person regarding the project. The participants sketched out ardent gratitude through their feedback.

The next session commenced in the afternoon. The speaker, Mr.S.Joel Raj, Senior Scientist, Vikram Sarabhai Space Centre Organisation, Thiruvananthapuram, Kerela gave a detailed talk on


- Invention of Self - Healing materials
- Types of self -healing
- Self – healing concept using embedded microcapsules
- Design of self healing materials
- Working of Lamborghini terzo
- Composition of self healing concrete
- Pros and cons of self healing concrete
- Smart materials
- Technical application of smart materials
- Polymerization mechanism of DCPD with Grubbs catalyst

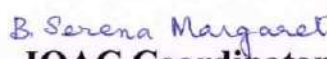
Successively the participants were asked to present their research papers in the field of Chemistry. They were enthusiastic in answering the questions raised by the resource person. The students held out thankful hearts to the institution and the Star College Scheme for such a wonderful opportunity.

YouTube Link

https://youtu.be/Xc_vfh-HoN0

<https://youtu.be/v5taiAaAidU>


Head of the Department
HEAD
Department of Physics,
St. Mary's College (Autonomous),
Thoothukudi - 628 001.


IQAC Coordinator
IQAC Co-ordinator
St. Mary's College (Autonomous)
Thoothukudi


Principal
St. Mary's College (Autonomous)
Thoothukudi - 628 001.