



# TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

DEPARTMENT OF HIGHER EDUCATION  
GOVERNMENT OF TAMILNADU



## Newsletter

Volume No. 01, Issue No. 02, October -December 2024

### About the Council



Thiru. M. K. Stalin  
Honourable Chief Minister

The Council was established in the year 1984 as an Autonomous Apex Body. It promotes **socio-economic** development through **Science & Technology** in Tamil Nadu by **16 State supported** and **5 DST supported Science & Technology schemes** for the benefit of people of Tamil Nadu.



Thiru. Udhayanidhi Stalin  
Honourable Deputy Chief Minister



Dr. Govi Chezhaan  
Honorable Minister for  
Higher Education



Dr. K. Gopal, I.A.S.,  
Additional Chief Secretary  
Department of Higher Education

### Message

As we step into the new year with **renewed enthusiasm** and **aspirations**, I am heartened to present the **second newsletter** for the **financial year 2024-2025**. This edition highlights the Council's **extensive efforts** to engage with various **stakeholders** through the **promotion and application of Science and Technology**. The **PIC Co-ordinators** meeting was organized for 40 IPR cells of higher Education Institutions of our State and made recommendations for further **innovations & research in academia**. Through SC/ST cells of Council many **livelihood programme** has been launched through Government, Aided and Private Educational Institutions with special focus on **marginalized sectors**. A well-defined training programme was organised in 15 districts of our state to **prepare the students** towards **Industrial needs**.



Prof. Dr. S. Vincent  
Member Secretary

Wishing you a year filled with success and inspiration!

### Empowering Marginalized: Leveraging Science and Technology for SC/ST Upliftment in Tamil Nadu

The Council, through its **SC/ST Cell**, has successfully launched a series of **transformative initiatives** aimed at leveraging science and technology for the **socio-economic upliftment** of **Scheduled Castes (SC)** and **Scheduled Tribes (ST)** in Tamil Nadu.

These programs focus on **reducing drudgery**, **improving livelihood** and **enabling sustainable development** ensuring that **technological advancements** directly benefit marginalized communities.

#### Key initiatives and training programs conducted includes:

- **Digital Literacy:** Through Workshops for SC/ST educated youth on **computer basics**, internet usage and **desktop publishing** to bridge the digital divide.
- **Guidance** to SC/ST people for Entrepreneurship Development with a focus on **agro-based industries** and **handicrafts**.
- **Women-Centric training** in areas like **tailoring**, **millet based value added food processing** aimed at empowering SC/ST women.
- **Eco-Friendly Technology training** on **vermicomposting**, **organic farming** and **waste-to-wealth** technologies for sustainable rural development.
- **Career-Focused Technical training** on **household electrical appliances servicing** to enhance employability among SC/ST youth.



Spirulina cultivation at  
Jamal Mohammed College, Trichy

These initiatives have significantly contributed to improving livelihood, reducing socio-economic disparities and fostering self-reliance among SC/ST communities across Tamil Nadu.



## Activities of SC/ST Cell

Five training programmes were conducted and 257 SC/ST people got benefitted.

Hands-on training on

### “Preparation of Household Hygienic Products, Health Care Products & Healthy Food Products for Economic Progress”

- **Venue:** P.Pudupatti village in Virudhunagar district, Chittoor village of Kalligudi Taluk and Subbulapuram village of Peraiyur Taluk in Madurai District.
- **Period:** 07.12.2024 to 09.12.2024
- **Beneficiaries:** 172 SC/ST people.



Hands-on training on

### “Organic manure preparation (Vermicompost)”

- **Venue:** TNSCST-DST Training Center, Sri SRNM College, Sattur in Virudhunagar district.
- **Period:** 12.12.2024 and 13.12.2024
- **Beneficiaries:** 28 SC/ST people.

Hands-on training on

### “Spirulina cultivation and its value addition”

- **Venue:** Jamal Mohamed College, Trichy District.
- **Period:** 20.11.2024 to 22.11.2024
- **Beneficiaries:** 57 SC/ST people.



### Scheduled Caste and Scheduled Tribe Cell Coordinators meeting held on 24.12.2024 at Council

**Objective:** To ensure the sustainability of the project that ultimately uplift the livelihood of people from vulnerable sector.

#### Collaborative Institutions

1. Tamil Nadu Agricultural University, Coimbatore
2. Tamil Nadu Veterinary and Animal Sciences University, Chennai
3. Krishi Vigyan Kendras, Theni & Perambalur
4. Jayaraj Annapackiam College, Theni
5. Mannar Thirumalai Naicker College, Madurai
6. Jamal Mohamed College, Trichy
7. Sri S Ramasamy Naidu Memorial College, Sattur







## Science and Technology Projects

- Financial support is provided to researchers and scientists of our state to carry out S & T research Projects of 12 different sectors.
- Review meeting was conducted on 23.10.2024 & 24.10.2024 to assess progress, identify challenges, evaluate the technical approach and to ensure that the projects are being implemented effectively.



### DESIGN AND DEVELOPMENT OF HYBRID REMOTELY PILOTED AIRCRAFT SYSTEM FOR CROP YIELD ESTIMATION

Developed a hybrid fixed-wing Vertical Takeoff and landing (VTOL), used as a part of a smart farming technique. It focuses on designing and building a hybrid VTOL with cutting-edge navigational tools. When fitted with multispectral imaging payloads, our VTOLs can assist analysts and farmers in collecting field data.



VTOL trial 1



Aircraft

### DESIGN AND IMPLEMENTATION OF ROBOT FOR WOMEN'S SAFETY USING IOT

It is an IoT-enabled autonomous robot that can continuously monitor the surroundings for potential threats and alert the woman and designated contacts in real-time in case of danger through sensors, cameras and smart algorithms.



### Quality Improvement of Science Education in Rural Schools

- **Objective:** Improve the quality of science education, focusing on rural school students.
- **Target Group:** Science teachers handling classes 6 to 8.
- Implemented annually in 10 districts for 5-days.
- **Beneficiaries:** 500 teachers each year.



#### Collaborative Institutions



- Govt Arts College, Dharmapuri
- St. Antony College of Arts and Science for Women, Dindigul
- Presidency College, Chennai
- ST. Hindu College, Nagercoil
- Edayathangudy GS Pillai Arts & Science College, Nagapattinam
- KSR College of Arts and Science, Tiruchengode
- Govt. Arts and Science College (Co-Ed), Perambalur
- Loganatha Narayanaswamy Govt. Arts College, Tiruvallur
- Shanmuga Industries Arts & Science College, Tiruvannamalai
- National College, Trichy





## Improvement of S&T Infrastructural facilities at Government Colleges

**Objective:** To improve the infrastructural facilities in Government colleges.

**Three Government Colleges supported:**

- Chikkanna Government Arts College, Tiruppur
- Government Arts College, Salem
- Quaid-E-Millath Government College for Women (A), Chennai



## Partial Assistance for Seminar / Symposium / Workshop

**Objective:** To foster exchange of scientific knowledge and also facilitate interaction between stake holders in research such as researchers, teachers, scientists, industrialists and research scholars.

**No. of Programmes: 78**



Seminar at Dr.M.G.R Educational and Research Institute

Conference at Kalasalingam Research Institute

## Popularization of Science

**Objective:** To support Science and Technology Exhibition, Awareness programs, Competitions, Lectures, Conferences, Workshop etc., through Universities, Colleges and NGO's, for the benefit of Students, Teachers, Self Help Group Members, Farmers, Fisherman, Women as well as General Public.

- Creating Awareness on **"Uzhavan App"** among Science and Technology Students for promoting Agripreneurship in Western Districts of TamilNadu" during 24.10.2024 & 25.10.2024 at Velalar College of Engineering and Technology, Erode.

**Beneficiaries: 211**

- **"Traditional Seed Exhibition and Organic Farming for Sustainable Future"** organized at Periyar University, Salem during 05-11-2024 & 06-11-2024.

**Beneficiaries: 150**

- State Level **"Science Exhibition"** conducted at Pioneer Kumaraswamy College, Nagercoil during 24.10.2024 to 26.10.2024.
- Focuses on contemporary scientific challenges and emerging technologies, the exhibition aimed to inspire the next generation of scientists and create a platform for sharing innovative ideas.
- **Total No. of Projects Exhibited:** 23 projects includes Green Energy, Robotics & Waste Management.







### Patent Information Centre (PIC)

#### IPR Cells Coordinator Review Meeting

- Convened to discuss the roles and responsibilities of Intellectual Property Rights (IPR) cells and their efforts in **protecting** and **managing intellectual property assets**.
- Aimed to provide a **platform** to evaluate the effectiveness of existing strategies, challenges, solutions and plan for the future, leading to **sustainable growth** and **innovation** in the State.
- Chief Guest **Dr. Anita Aggarwal, Advisor-SEED, DST**, Government of India, New Delhi, inaugurated and appreciated the Council for the vibrant act.
- IPR Cells **Coordinators presented** their **IPR Activities** (IP filing like Patent, Copyrights, Trademark, Design Registration, Geographical Indications and Workshop, Awareness Programme).
- PIC has **identified** more than **45 Geographical indication (GIs)** and allocated to the IPR Cells of relevant district. IPR Cells highlighted the initiatives of GI filing and identified some prospective GIs.



#### List of best performing IPR Cells in Higher Education Institutions



- Bharathiar University, Coimbatore
- Mother Teresa Women's University, Kodaikanal
- Government College of Technology, Coimbatore
- Vels Institute of Science, Technology & Advanced Studies, Chennai
- Alagappa University, Karaikudi
- Sree Balaji Medical College and Hospital, Chennai



Shri.R.Anandasivaraj, Manager(IP-TT), Innovation Center-AICTE, Chennai delivered on Technology Transfer

Shri. S. Suresh Babuji, Director, MSME,GoI, Chennai sharing details on MSME Scheme and Reimbursement for IP filing

- Session on GIs filing procedure by Dr. A. Usha Raja Nandhini, Mother Teresa Womens University, Kodaikanal.
- Shri.S. Jerome Anthonysamy, Rural inventor/patentee sharing his experience on patent facilitation by state PIC.



#### Newspaper Clips







**Workshops and Awareness Programmes organized**

- **IPR cell of KSR College of Technology:**
  - **“Project Mentors Meeting on Intellectual Property (IP) Protection”** to provide an in-depth understanding of IP principles and their practical application in academic and research projects during 21.10.2024 & 24.12.2024.
  - Workshop on **"Converting Projects into Profitable Patents"** on 27.11.2024. **Beneficiaries:** 200 students, faculties & innovators.
- **IPR cell of Nehru Group of Institutions:**
  - **“Navigating the Journey from Idea to Prototype through IPR”** on 06.11.2024. **Beneficiaries:** 150 students, faculties & innovators.
  - **“Startups vs Trademark”** on 04.12.2024. **Beneficiaries:** 150 students, faculties & innovators.
  - **“Intellectual Property Rights- An Introduction”** on 13.11.2024. **Beneficiaries:** 135 students, faculties & innovators.



**India International Science Festival (IISF) 2024**

10th **India International Science Festival (IISF) 2024** was successfully conducted at **IIT Guwahati, Assam**, from 30.11.2024 to 03.12.2024, Organized by the **Ministry of Science & Technology, Ministry of Earth Sciences, Department of Space, Department of Atomic Energy, Government of Assam and Vijnana Bharati (VIBHA)**, the festival centered on the theme: **“Transforming India into a Science and Technology Driven Global Manufacturing Hub”**.

**Dignitaries:**

- Inaugurated by **Dr. Jitendra Singh, Shri Keshab Mahanta and Prof. Ajay Kumar Sood**.
- Other key attendees included **Dr. N. Kalaiselvi (DG CSIR), Dr. Rajesh Gokhale (Secretary DBT), Dr. M. Ravichandran (Secretary MoES) and Prof. Abhay Karandikar (Secretary DST)**.
- **Shri S Somanath**, Chairman ISRO, participated on the third day.



During IISF 2024, the **Tamil Nadu State Council for Science and Technology (TNSCST)** showcased its stall, highlighting:

- **Geographical Indication (GI) Products:** Displayed various GI products unique to Tamil Nadu.
- **Council's Achievements:** Featured the work carried out by the council during the year.
- **Information Sharing:** Provided detailed insights about GI products to visitors.

The TNSCST stall attracted over **10,000 students, academicians, teachers, researchers, scientists, innovators and entrepreneurs** from across India, making it a key point of engagement at the event.

**Key Highlights:**

- Coordinated by **CSIR-NIIST, Thiruvananthapuram**, IISF 2024 emphasized **“Celebrating Science with the North East”**, embracing participants from across India while focusing on North East India.
- Featured **25 events**, such as the **Sci-Tech Expo, Science Odyssey of the Seven Sisters, S&T Hackathon and Students S&T Village: The New Nalanda**.
- **107 organizations**, including CSIR, DRDO, ISRO, DBT and DST, **showcased innovations** through interactive pavilions, highlighting achievements and initiatives.





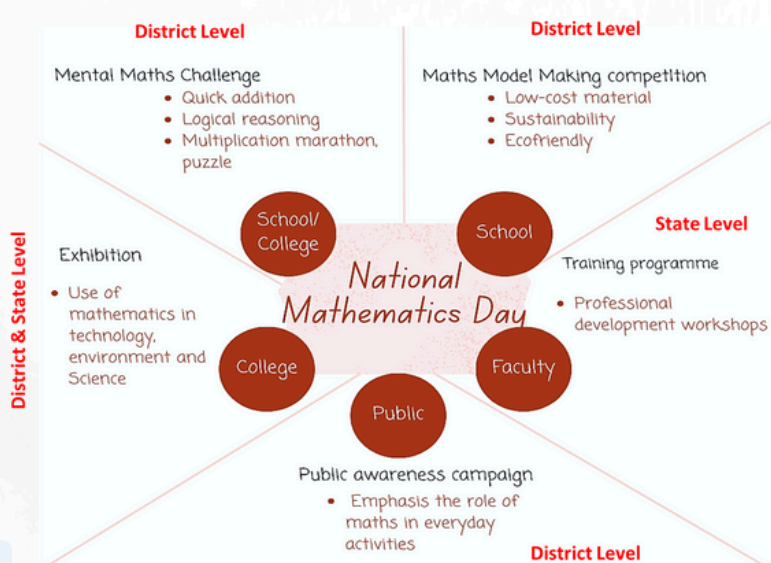
## National Mathematics Day Celebration

National Mathematics Day commemorates the **contributions of Srinivasa Ramanujan** and aspires to inspire **future mathematicians**. As the backbone of technologies like Robotics, AI, ML, Data Science and Cryptocurrency, mathematics remains essential, yet many students have a fear of the subject. As first step, **Fun with Numbers: Exploring young minds programme to Divyang students** is organized in Collaboration with KG College of Arts and Science.



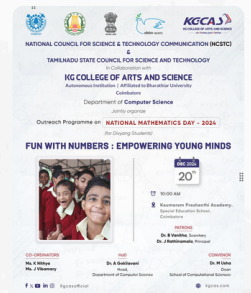
Divyang Students

The Council celebrates **National Mathematics Day at 14 centers across all 38 districts of Tamil Nadu** in December 2024 and January 2025, featuring activities such as a **Maths Challenge** and **Model Making Competition** for school students, an **innovative exhibition** competition for college students and an awareness rally to promote the significance of mathematics in everyday life to the general public.



### Collaborative Institutions

- St. Joseph Engineering College, Chennai
- KG College of Arts & Science, Coimbatore
- Kongu Engineering College, Erode
- Vivekanandha College of Arts & Science for Women, Tiruchengode
- National College, Tiruchirappalli
- Kings College of Engineering, Thanjavur
- Jayam Arts and Science College, Dharmapuri
- Jayaraj Annapackiam College for Women, Periyakulam
- Mohammed Sathak Engineering College, Keelakarai
- Auxilium College, Vellore
- St Xavier's College (Autonomous), Palayamkottai
- The American College, Madurai
- Central University of Tamil Nadu, Thiruvavur
- Theivanai Ammal College for Women, Viluppuram



The Hindu e-P...

ADPAGE CLAD RGLADPAGE REGIONAL ST/

#### EDUCATION HUB

National Mathematics Day celebrated at KG College



Dept. of Computer Science, KG College of Arts and Science in collaboration with the National Council for Science and Technology Communication and Tamil Nadu State Council for National Mathematics Day 2024 for Divyang students at Kauniarum Prashanthi Academy. The program was carefully tailored to meet the needs of specially challenged students, ensuring an inclusive and enjoyable learning experience. Many activities were designed to make mathematics more accessible and enjoyable for the students. Dr. B. Vanitha, Secretary presided over. Dr. J.Rahnamina, Principal, DM.Lisha Dhin, School of Computational Science, Dr. A.Gokulavani, HOD, & Deputy, Director, Prashanthi Academy were also present.

தமிழ்நாடு - திருச்சிராப்பள்ளி மாவட்டம், திருச்சி அருகில் உள்ள திருச்சி

தமிழ்நாடு - திருச்சிராப்பள்ளி மாவட்டம், திருச்சி அருகில் உள்ள திருச்சி

#### தேயி சாந்தி நகர் மற்றும் சாந்தி லைட் ஹவுஸ் குழுக்கள் சேர்ந்துள்ளன



தேயி சாந்தி நகர் மற்றும் சாந்தி லைட் ஹவுஸ் குழுக்கள் சேர்ந்துள்ளன. NCSTC மற்றும் TNSCST இன் ஒத்துழைப்பில், தேயி சாந்தி நகர் மற்றும் சாந்தி லைட் ஹவுஸ் குழுக்கள் சேர்ந்துள்ளன. இது ஒரு புதிய அணுகுமுறை மற்றும் கல்வி முறைகளை மேம்படுத்தும். இது ஒரு புதிய அணுகுமுறை மற்றும் கல்வி முறைகளை மேம்படுத்தும். இது ஒரு புதிய அணுகுமுறை மற்றும் கல்வி முறைகளை மேம்படுத்தும்.



### Important Days

#### Antimicrobial Resistance Awareness Week 2024

Tamil Nadu State Council for Science and Technology, in collaboration with the Centre for Nanoscience and Technology, Anna University, conducted the "World Antimicrobial Resistance Awareness Week" on 18.11.2024. The event, presided by Prof.Dr.S.Vincent, Member Secretary, TNSCST and inaugurated by Dr. Soumya Swaminathan, former World Health Organisation (WHO) Chief Scientist included a rally from AC Tech, Anna University to DOTE Campus. Dr.Swaminathan emphasized the urgency of addressing antimicrobial resistance, calling it a current problem.

**Beneficiaries:** More than 200 students, research scholars and faculty members from various educational institutions benefited from the event.



### Major outcomes

#### Programmes Organized

- IPR Workshops
- SC/ST Cell trainings
- Science and Technology projects
- Improvement of S&T Infrastructural facilities at Government Colleges
- Assistance for Seminar/Symposium/Workshop
- Popularization of Science programmes
- World Antimicrobial Resistance Awareness
- India International Science Festival
- National Mathematics Day Celebration

IP Filing	Patent	128 - Filed
	Design	05 - Filed
	Copyright	04 - Filed

### Nobel Prize 2024 Winners

#### The Nobel Prize in Chemistry 2024

- David Baker “for computational protein design”
- Demis Hassabis and John Jumper “for protein structure prediction”

#### The Nobel Prize in Physiology or Medicine 2024

- Victor Ambros and Gary Ruvkun “for the discovery of microRNA and its role in post-transcriptional gene regulation”

#### The Nobel Prize in Literature 2024

- Han Kang “for her intense poetic prose that confronts historical traumas and exposes the fragility of human life”

#### The Nobel Peace Prize 2024

- Nihon Hidankyo “for its efforts to achieve a world free of nuclear weapons and for demonstrating through witness testimony that nuclear weapons must never be used again”

#### The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2024

- Daron Acemoglu, Simon Johnson and James A. Robinson “for studies of how institutions are formed and affect prosperity”

### Staff Achievements

- Dr. B. Senthilkumar has published two papers in reputed International Journal, *The Lancet, Infectious Diseases and Biocatalysis & Agricultural Biotechnology*.
- Dr. V. Mohanraj has contributed Tamil book titled எங்கும் வேதியியல், எதிலும் வேதியியல்.
- Dr. Deepakram has successfully defended his research and been awarded a Doctor of Philosophy (Ph.D.).

### Editorial Board Members

#### Editor-in-chief

Prof.Dr.S.VINCENT, D.Sc., Ph.D.,FRSB (Lon),  
Member Secretary

#### Editors

Dr.B.Senthilkumar, Scientific Officer  
Mrs.S.Sangeetha, System Analyst

### Reach Us

Tamil Nadu State Council for Science and Technology  
Sardar Patel Road, DOTE Campus, Chennai - 600 025  
Tamilnadu, India.

Phone Numbers : +91 44 2230 1552  
+91 44 2230 1428

Email : ms.tanscst@nic.in