

Report of the STUTI program

organized by

Central Instrumentation Facility
Pondicherry University
Puducherry - 605014

from 17th October to 23rd October 2022



Central Instrumentation Facility
(CIF)



Pondicherry University

Central Instrumentation Facility

Organizes

Synergistic Training program Utilizing the Scientific and Technological Infrastructure (STUTI)

From 17/10/2022 to 23/10/2022

Supported by

Department of Science and Technology,

Ministry of Science and Technology, Government of India, New Delhi.

In collaboration with



About Pondicherry University:

Pondicherry University is a Central University established by an Act of parliament in October 1985. The University is located on the Coromandel Coast, 160Kms, south of Chennai, 10kms from the town of Puducherry, in a serene and beautiful campus of 800 acres adjoining the scenic Bay of Bengal. It is an affiliating University with a jurisdiction spread over the Union territory of Puducherry, Lakshadweep and Andaman and Nicobar Islands, the art higher education and research that match global benchmarks by providing access, resources and opportunities, to become an institution of global eminence and to adopt to ever-changing needs of the society and industries. The University's motto is 'Vers la lumiere' meaning 'towards the light'

The Central Instrumentation Facility (CIF) was started in Pondicherry University with a mission to enrich the resources on a shared basis for promoting R & D technological infrastructure to carry out and to strengthen advanced research in various science disciplines under one roof.

About STUTI:

STUTI stand for Synergistic Training program Utilizing the Scientific and Technological Infrastructure Program funded by the Department of Science & Technology (DST), Government of India. The Scheme is intended to human resource and its capacity building through open access to S & T Infrastructure across the country by organizing training program on DST supported R&D equipment targeting Scientists/Professors/PhDs and PDFs actively involved in research across various institutions in the country.

About Shivaji University:

Shivaji University, established on 18th November, 1962 has 276 affiliated colleges with 40 post-graduate departments. Recently, accredited with NAAC 'A++' grade with CGPA 3.52 in its forth cycle of reaccreditation 2021. Various science departments of Shivaji University are well equipped with different sophisticated instruments and laboratory infrastructures procured using funds from various funding agencies such as TEQIP I & II, DST-PURSE I & II, DST-FIST I & II, SAIF, UGC-SAP I & II, UGC DRS, MHRD RUSSA Centers for Alternative Medicine, Nanofabrics and VLSI Design, DBT-IPLS, RGSTC, Erasmus Mundus+ (EU projects), MHRD PMNM/ MIT Centre for Cyber Security & Data Science, DBT-BUILDER etc. STUTI project is sanctioned by DST, New Delhi to SUK worth Rs. 2.25 crore for organizing training programs on various sophisticated instruments.

Course Contents:

The main theme of this training program is to aware of the participants regarding the sophisticated instruments or characterization such as Morphological Characterization Technique (SEM, HRTEM, and AFM), Compositional Characterization Technique (ICP-OES, GCMS-MS, and XPS), Structural Characterization Technique (NMR, XRD, Raman, FTIR, Particle Size Analyzer with Zeta Potential, and TGA-DTA-DSC) etc. The training program includes theory lectures as well as Demonstration/Hands on Training on the sophisticated instruments throughout the program.

Goal of STUTI Program:

- The participants will understand and familiarize with the various sophisticated instruments supported by DST, GoI and other funding agencies.
- The participants will get skill based knowledge about the handling of various sophisticated instruments and characterization techniques and its analysis.
- The participants get acquainted with the sophisticated instruments and characterization tools to design and implement for appropriate strategies for research work.

Eligibility:

- Participants should be Indian Citizen.
- Assistant/associate professors/Professors/Scientists/Post Doc. Fellows/ Ph.D. Fellow and /or B. Tech. students who are actively involved in the field of basic or allied sciences or engineering.
- Industry professionals who are actively involved in R&D

Registration Procedure:

- Interested candidates have to fill the online form (link given below) on or before (30/09/2022). (No registration fee)
- Only 3 participants will be selected from one organization
- Candidates will be selected according to eligibility and available seats. The confirmation of selection will be communicated to the selected candidates on (05/10/2022) by email.

General Information:

- Registration Kit, Course material and Certificate of participation will be provided to the participants.
- Local Hospitality (accommodation & Meal) will be provided. The train fare (as per actuals) by shortest route will be reimbursed to the selected outstation participants. Participants are encourage to bring their samples if any, for hands on analysis during the program.

Special Talk Series with Hands-on Training/Demo on Sophisticated Instruments

Registration Link: <https://docs.google.com/forms/d/1MV68hD6uXCVRM0KqRut6NNxDbjZhx3GA3sQAA1QoZjg/edit>

Last date of Registration: 30/09/2022

Confirmation of Selection: 05/10/2022



Chief Patron

Prof. Dr. Gurmeet Singh
Vice-Chancellor, Pondicherry University
Website: www.pondiuni.edu.in

Advisory Committee

- Prof. Dr. K. Tharanikkarasu, Director (i/c) SEI&RR, PU.
- Prof. Dr. R. G. Sonkawade, Coordinator STUTI Program, Shivaji University, Kolhapur.
- Prof. Dr. E. Arunan, IISc- Bangalore.
- Prof. Dr. M. S. Pandian, Dean, SOPCAS, PU

Contact Us:

- Programme Coordinators**
- Prof. Dr. C. Sivasankar, Mobile: 9442669711
 - Er. R. Elumalai, Mobile: 9360420029
email: head_cif@pondiuni.edu.in,
service.cif@pondiuni.edu.in.



INAUGURAL CEREMONY

**“Synergistic Training program Utilizing the Scientific
and Technological Infrastructure”**

Supported by

Department of Science and Technology

Organized by

Central Instrumentation Facility (CIF)

PONDICHERRY UNIVERSITY

In collaboration with

Shivaji University, Kolhapur, Maharashtra

Welcome Address by

Prof. Dr. C. Sivasankar, Center Head, CIF, PU

Chief Guest

Dr. Tamilisai Soundararajan

Chief rector of Pondicherry University and Honorable

Lt. Governor of Puducherry

Guest of Honour

Prof. Dr. R. G. Sonkawade, Shivaji University

Presidential Address

Prof. Dr. Gurmeet Singh

Vice-Chancellor, Pondicherry University

Vote of Thanks

Prof. Dr. Bala Manimaran

Former Head, CIF, PU

Invitation for the

Inaugural Ceremony



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Shivaji University, Kolhapur, Maharashtra.

on **17/10/2022** at **Seminar Hall**, Department of Earth Sciences,
Pondicherry University

Welcome Address

Prof. Dr. C. Sivasankar, Center Head, CIF, Pondicherry University

Guest of Honour

Prof. Dr. R.G. Sonkawade, Shivaji University

Presidential Address

Prof. Dr. Gurmeet Singh

Vice-Chancellor, Pondicherry University

Chief Guest

Dr. (Smt.) Tamilisai Soundararajan

Chief Rector of Pondicherry University and Honorable Lt. Governor of Puducherry

Vote of Thanks

Prof. Dr. Bala Manimaran, Former Head, CIF, Pondicherry University



Chief Guest

Dr. (Smt.) Tamilisai Soundararajan
Lt. Governor, Govt. of Puducherry



Guest of Honour

Prof. Dr. R.G. Sonkawade
Shivaji University



Presidential Address

Prof. Dr. Gurmeet Singh
Vice-Chancellor, Pondicherry University

Inaugural Programme

- 11:00 am : Arrival of Guests on Dais
- 11:01 am : National Anthem
- 11:02 am : Tamizh Thai Vazhthu
- 11:04 am : Lightning of Kuthuvilakku
- 11:06 am : Welcome Address by
Prof. Dr. C. Sivasankar
Center Head, CIF, Pondicherry University
- 11:08 am : Felicitation of Guests
- 11:10 am : Theme of Training in accordance with STUTI
- 11:20 am : Address from Guest of Honour by
Prof. Dr. R.G. Sonkawade
Shivaji University
- 11:25 am : Presidential address by
Prof. Dr. Gurmeet Singh
Vice-Chancellor, Pondicherry University
- 11:30 am : Address from Chief Guest by
Dr. (Smt.) Tamilisai Soundararajan
Chief Rector of Pondicherry University and
Honorable Lt. Governor of Puducherry
- 11:45 am : Vote of thanks by
Prof. Dr. Bala Manimaran
Former Head, CIF, Pondicherry University
- 11:47 am : National Anthem
- 11:48 am : Press Meet





<https://www.thehindu.com/news/cities/puducherry/tamilsai-sundararajan-underscores-importance-of-upgrading-skills-in-tune-with-the-changing-technology/article66031641.ece>





| Day 1: | | Date:17.10.2022 |
|-----------------------|--|------------------------|
| 9:00 | Registration | |
| 10:00 to 10:30 | Tea Break | |
| 10:30 to 11:00 | Assembling of the participants | |
| 11:00 | Arrival of Guests on Dais Welcome of Guests | |
| 11:10 | Lightning of lamp | |
| 11:15 | Felicitation of Guests | |
| 11:20 | Theme of Training in accordance with STUTI | |
| 11:25 | Address from Guest of Honour | |
| 11:40 | Address from Chief Guest | |
| 11:50 | Presidential address | |
| 11:55 | Vote of thanks | |
| 12:00 | Press Meet | |
| 12:30 to 13:30 | Analytical Instrumentation - Prof. R.G. Sonkawade, Shivaji University | |
| 13:00 to 14:30 | Lunch Break | |
| 14:30 to 15:30 | XPS- Prof. R.G. Sonkawade, Shivaji University | |
| 15:30 to 16:30 | XPS- Prof. R.G. Sonkawade, Shivaji University | |
| 16:30 to 16:45 | Tea Break | |
| 16:45 to 17:30 | Hands-on Training on XPS | |

| Day 2: | | Date: 18.10.2022 | |
|---------------------------|--|---|--|
| 9:30 to 10:30 | | Hands-on Training FTIR | |
| 10:30 to 11:30 | | Hands-on Training UV-VIS | |
| 11:30 to 11:45 | | Tea Break | |
| 11:45 to 01:00 | | FTIR- Spectroscopy - Prof. E. Arunan, IISc. Bangalore | |
| 01:00 to 02:00 | | Lunch Break | |
| 02:00 to 03:00 | | UV-VIS-NIR - Spectroscopy Prof. E. Arunan, IISc. Bangalore | |
| 03:00 to 04:00 | | Hands-on Training on RAMAN Spectroscopy | |
| 16:00 to 16:15 | | Tea Break | |
| 16:15 to 17:30 | | RAMAN Spectroscopy - Prof. E. Arunan, IISc. Bangalore | |

| Day 3: | | Date:19.10.2022 | |
|---------------------------|--|---|--|
| 9:30 to 11:00 | | SEM- Er. S. Ramasamy, PU | |
| 11:00 to 11:15 | | Tea Break | |
| 11:15 to 12:15 | | Thermal Analysis - Prof. R. Venkatesan, PU | |
| 12:15 to 01:15 | | BDS Analysis - Prof. R. Venkatesan, PU | |
| 13:15 to 14:15 | | Lunch Break | |
| 14:15 to 15:15 | | Hands-on Training on TG_DTA&DSC, BDS | |
| 15:15 to 16:15 | | Hands-on Training on SEM | |
| 16:15 to 16:30 | | Tea Break | |
| 16:30 to 17:30 | | Hands-on Training on SEM | |

| Day 4: | | Date:20.10.2022 Time: |
|---------------------------|---|------------------------------|
| 9:30 to 11:00 | <i>NMR - Dr. Anil Kumar. P.G Bruker India.</i> | |
| 11:00 to 11:15 | <i>Tea Break</i> | |
| 11:15 to 12:15 | <i>NMR – Dr. N. Chandrasekar Bruker India.</i> | |
| 12:15 to 13:15 | <i>NMR - Dr. Anil Kumar. P.G Bruker India.</i> | |
| 13:15 to 14:15 | <i>Lunch Break</i> | |
| 14:15 to 15:15 | <i>NMR - Dr. Chandrasekar Bruker India.</i> | |
| 15:15 to 16:15 | <i>Hands-on Training on NMR</i> | |
| 16:15 to 16:30 | <i>Tea Break</i> | |
| 16:30 to 17:30 | <i>Hands-on Training on NMR</i> | |

| Day 5: | | Date:21.10.2022 Time: |
|---------------------------|--|------------------------------|
| 9:30 to 11:00 | <i>XRD - Fundamental - Dr. S. Kannan, PU</i> | |
| 11:00 to 11:15 | <i>Tea Break</i> | |
| 11:15 to 12:15 | <i>Single-crystal XRD – Fundamental - Dr. B. K Saha, PU</i> | |
| 12:15 to 13:15 | <i>Powder XRD - Dr. S. Kannan, PU</i> | |
| 13:15 to 14:15 | <i>Lunch Break</i> | |
| 14:15 to 15:15 | <i>Single-crystal XRD - Dr. B. K Saha, PU</i> | |
| 15:15 to 16:15 | <i>Hands-on Training on Powder XRD</i> | |
| 16:15 to 16:30 | <i>Tea Break</i> | |
| 16:30 to 17:30 | <i>Hands-on Training on Single-crystal XRD</i> | |

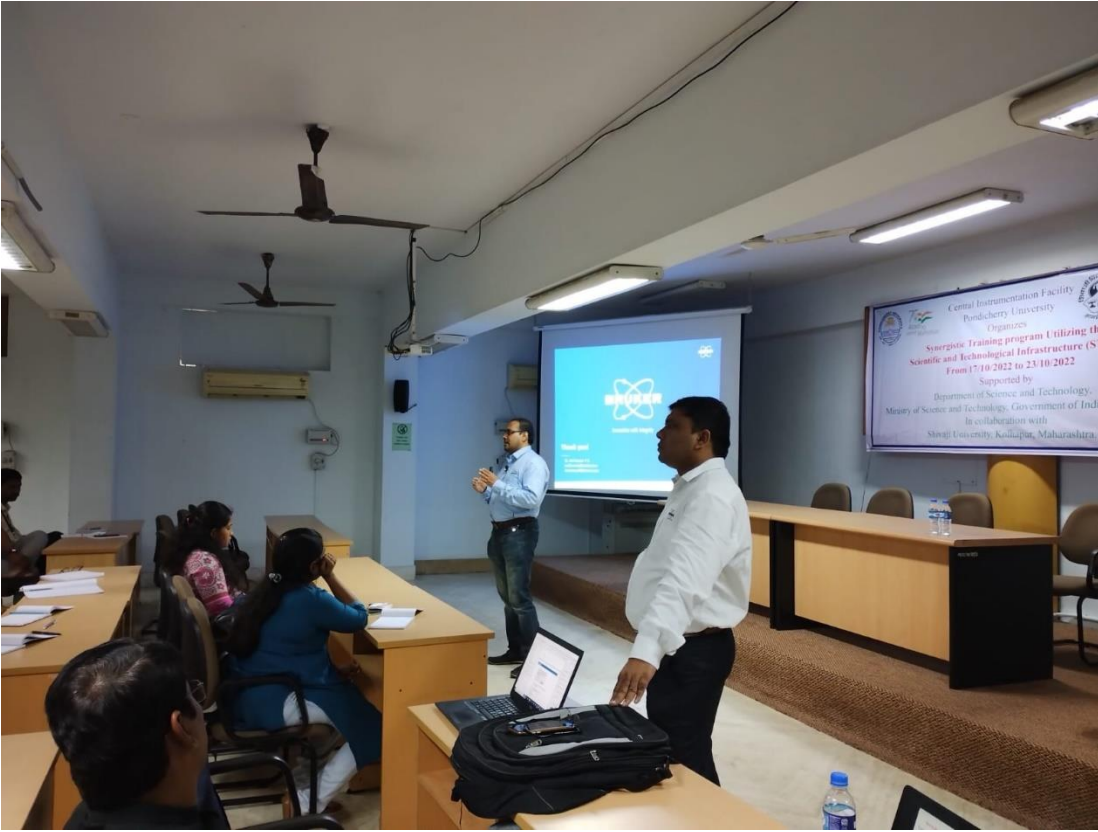
| Day 6: | | Date:22.10.2022 Time: |
|---------------------------|--|------------------------------|
| 9:30 to 11:00 | <i>AFM- Dr. G. Ramesh Babu, PU</i> | |
| 11:00 to 11:15 | <i>Tea Break</i> | |
| 11:15 to 12:15 | <i>PPMS - Dr. R. N. Bhowmik</i> | |
| 12:15 to 13:15 | <i>PPMS - Dr. R. N. Bhowmik, PU</i> | |
| 13:15 to 14:15 | <i>Lunch Break</i> | |
| 14:15 to 15:15 | <i>Hands-on Training on AFM</i> | |
| 15:15 to 16:15 | <i>Hands-on Training on AFM</i> | |
| 16:15 to 16:30 | <i>Tea Break</i> | |
| 16:30 to 17:30 | <i>Hands-on Training on PPMS</i> | |

| Day 7: <i>Date:23.10.2022 Time:</i> | |
|--|--|
| <i>9:30 to 11:00</i> | <i>Spectrofluorometer - Prof. P. Ramamurthy University of Madras</i> |
| <i>11:00 to 11:15</i> | <i>Tea Break</i> |
| <i>11:15 to 12:45</i> | <i>Hands-on Training on Spectrofluorometer</i> |
| <i>12:45 to 13:45</i> | <i>Lunch Break</i> |
| <i>14.30</i> | <i>Valedictory Function</i> |













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VALEDICTORY FUNCTION

Opening Remark

Prof. M. S. Pandian

Dean – SoPCAS, PU

Distribution of Certificates

Prof. Dr. K. Tharanikkarasu

Director- SEI&RR, PU

&

Prof. Dr. Amerash Samanthuraya

Registrar (i/c), PU

Concluding Remarks

Prof. Dr. C. Sivasankar

Center Head, CIF, PU

Vote of Thanks

Er. R. Elumalai, CIF, PU



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Valedictory Function

23/10/2022 by 2:30 pm

at

**Seminar Hall, Cultural-cum-Convention Centre
Pondicherry University**

with the auspicious hands of



Dr. M.S. Pandian
*Dean, SPCAS,
Pondicherry University*



Prof. K. Tharanikkarasu
*Director (i/c)
SEI&RR, PU*



Dr. Amaresh Samantaraya
*Registrar (i/c)
Pondicherry University*

Valedictory Programme

- 2:30 pm - Arrival of Guests on Dais
- 2:35 pm - Felicitation of Guest
- 2:40 pm - Opening remark
- 2:45 pm - Distribution of Certificates
- 3:05 pm - Concluding Remarks
- 3:10 pm - Vote of Thanks
- 3:15 pm - National Anthem

