FIVE-DAY WORKSHOP ON

Spectroscopy & AI Methods to Study Protein Aggregates and Diseases

Date: 12–13 & 16–18 November, 2026

Department of Chemistry & Department of Computer Applications, NIT Tiruchirappalli

Venue · NIT Tiruchirappalli | **Seats** · Limited to 50 | **Register by** · 3 November 2026

About

About the workshop

Designed to equip participants with skills to study protein structure, interactions and dynamics, with special focus on protein aggregation and associated neurodegenerative diseases, using spectroscopic, microscopic and AI-based methods.

About the institute

NIT Tiruchirappalli, formerly Regional Engineering College, was established in 1964 through a collaboration between the Government of India and Government of Tamil Nadu. It became a Deemed University and, in 2007, was declared an Institution of National Importance.

About SPARC

The Scheme for Promotion of Academic and Research Collaboration (SPARC) strengthens India's research ecosystem by fostering academic and research collaborations between Indian institutions and leading global institutions.

Department of Chemistry

Offers PG and research programs in frontier areas of chemistry, backed by sophisticated equipment and well-equipped laboratories, with a strong focus on nationally recognised research problems.

Program details

Objective

- Lectures by national and international experts on protein structures, interactions and dynamics, with relevance to protein aggregation and associated neurodegenerative diseases.
- Hands-on sessions on protein structure visualization, structure analysis, modelling, molecular docking and simulation for studying protein–drug interactions.
- Hands-on sessions on spectroscopic techniques — UV-Vis absorption, steady-state fluorescence, fluorescence lifetime measurement, FTIR and dynamic light scattering.
- A grounding in how machine learning and deep learning-based AI methods support early disease detection.

Who can attend?

Students at all levels (UG, PG, PhD and Postdoctoral) · Faculty · Researchers and scientists from government or industry, including R&D laboratories.

Faculty & course topics

Faculty team

Dr. Peter K. Stys — Professor, Dept. of Clinical Neurosciences, University of Calgary, Canada

Dr. Scott D. Ryan — Professor, Hotchkiss Brain Institute, University of Calgary, Canada

Dr. Sarthak Mandal — Asst. Professor, Dept. of Chemistry, NIT Tiruchirappalli

Dr. Gangadharan G.R — Professor, Dept. of Computer Applications, NIT Tiruchirappalli

Coordinators

Dr. Sarthak Mandal, Department of Chemistry and **Dr. Gangadharan G R**, Department of Computer Applications, NIT Tiruchirappalli

Course topics

- Fundamentals of protein structures, visualization and structure analysis
- Protein interactions and dynamics, and misfolding leading to aggregation and disease
- Experimental and simulation studies of protein aggregation
- Fluorescence imaging for detecting Alzheimer's disease
- Machine learning and deep learning-based methods for disease detection

Registration

Registration fees

Category	Course fee	Food & refreshments	Total (INR)
UG / PG / PhD / Postdocs	NIL	1500	**1,500**
Faculty	1000	1500	**2,500**
Industry personnel	2500	1500	**4,000**

*Incl. 18% GST. Accommodation may be provided subject to availability, for an additional fee.

💳 Payment — SBI Collect

- Pay via State Bank Collect (onlinesbi.sbi)
- Accept the terms and conditions
- Category: Educational Institutions · State: Tamil Nadu
- Institution: Conference and Workshop NIT Trichy
- Payment category: PROTEIN-AI 2026
- Keep the payment reference — it's needed on the registration form

📝 Register

Registration form link

https://forms.gle/Edzt25PPy1YH6YVt6

Click the link above or use the button below

Register now →

Last date: 3 November 2026

Please note: the number of participants for the workshop will be limited to 50.

Contact

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