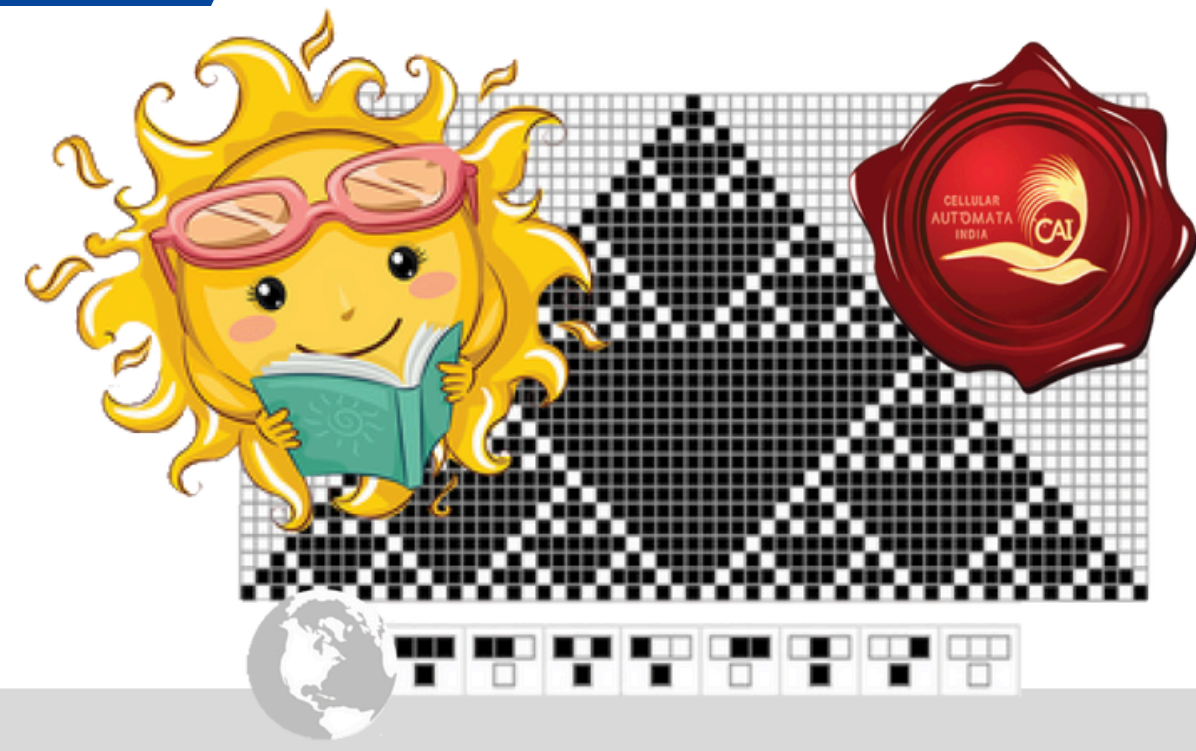


Indian Summer School on Cellular Automata

2025

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This Free internship program is rigorously research-based and project oriented. The relevant theory will be discussed in class.

19th May 2025 - 18th July 2025

Last date of Registration 5th May 2025

Who can apply

Any one such as undergraduate and graduate students, research scholars, or any such degree holders currently not employed, who wish to enter into the world of cellular automata can apply.

Objective

Cellular Automata are non-conventional model of computation that have been used to understand many natural phenomena, such as biological self-reproduction, science of life, etc., to model complex systems like traffic systems, forest fire, weather system, spread of disease, etc., to devise solutions to many technological issues such as circuit design, computer security, etc. Objective of this summer school is to run an internship program to nurture the theories, applications and prospects of cellular automata so that an enthusiasm, as well as a research ecosystem is developed around cellular automata. The school also aims to produce a number of high-quality research works through the projects to be carried out in the program.

Overview of School

First phase: One month of theory class focusing on the following topics -

- Introduction to Cellular Automata
- Game of Life
- Modeling of natural and social phenomena
- Reversibility and Randomness
- Non-uniform cellular automata
- Cellular Automata Technology

Second phase: Research based project work.

This year's thrust application areas are -

- Pseudo-Random Number Generation
- Supervised and Un-supervised Learning
- Societal phenomena modelling
- Quantum-dot Cellular Automata
- Cellular Automata modelling for Mining and Material Science
- Technology/software development

Mode of School

The school runs in online mode. Classes will be conducted online. For discussions and projects, participants may visit the mentors from the institutes, such as

- IEST Shibpur
- NIT Durgapur
- BIT Mesra
- IMA Bhubaneswar
- Kazi Nazrul University, Asansol
- GGS Indraprastha University, Delhi
- NIT Trichy
- NIT Calicut
- VIT Chennai
- IEM Kolkata
- JIS University, Kolkata

Benefits

The participants can learn cellular automata through classroom teaching, assignments and hands-on experiments. They have to participate in research-based projects, which will be mentored by renowned researchers of cellular automata, and which have a great possibility to be published in good conferences and journals. So, the participants can be co-authors of these publications.

Cellular Automata India

CAI is an open Research Group. This group organizes several events related to Theory and Applications Cellular Automata (CAs), such as, discourse of lecture series, associated webinars and academic workshops, conference series on recent trends of research in CAs. If you are a research aspirant and wants to learn CA, feel free to explore and connect with us.

Registration link <https://forms.gle/MrYB91eDinynCkfy6>



Last date of Registration
5th May 2025

No Registration Fee



Visit CAI website

www.cellularautomata.in