

Announcement

NATIONAL COMPETITION IN COMPUTATIONAL PHYSICS - 2024 (PHYSICS SIMULATIONS & SOFTWARE-BASED PHYSICS EXPERIMENTS) (NCICP – 2024)

The annual IAPT competition **NCICP 2024** will be held online before the Annual IAPT Convention. The details of the venue and dates of the IAPT Convention-2024 will be announced in due course of time.

Important Dates

1	Last Date of Registration	30-04-2024
2	Submission of Title and One-Page Abstract	31-5-2024
3	Online Interaction between the Experts and the Participants	15-6-2024 to 21-6-2024
4	Final Submission	31-07-2024
5	Final Presentation (online) and Interaction for Evaluation	20-08-2024 to 31-08-2024
6	Demonstration of Projects by Awards winners, and Special invitees	During the IAPT Convention-2024

TENTATIVE METRICS FOR EVALUATION

Sl. No.	Metric
1	Novelty & Innovativeness
2	Literature Survey, Bibliography & Resources
3	Presentation & Interaction
4	Software/Methodology
5	Analysis of Results
6	Discussion
7	Scope of Future work & Conclusions
8	Practical Usage & Overall Impression
9	Documentation

About the Competition

This competition will be held in Three (03) categories: 1 - School, 2 - UG Section, 3 - PG Section. Each category has two sub-categories: (A) Student, and (B) Teacher.

The work to be presented should be an original one.

The **best three presentations** in **each sub-category** will be awarded with prizes, and a certificate. Each candidate will get an e-certificate. ***THE DECISION OF THE JUDGES WILL BE FINAL.***

Theme of the Competition

INNOVATION is the main theme. The following kinds of Physics-based Simulations/Experiments are included in this competition:

For Category 1:

Smartphone Sensor based Experiments (using phyphox or other equivalent applications)

For Category 2: Any one from (a), (b), and (c)

(a) Experiments using ARDUINO coupled with Android phone / PC / ExpEYES / Any other Interfacing device.

(b) Experiments with transducer / sensor / actuator / PID interfaced with Microcontroller / Microprocessors / PC

(c) Smartphone Sensor based Experiments (using phyphox or other equivalent applications)

For Category 3: Any one from (a), (b), and (c)

(a) Experiments with software-based modeling using Android phone / PC / smartphone etc

(b) Solving physics problems by simulations or adopting numerical techniques (using Psilab / Matlab / Mathematica, Spreadsheets, Fortran, C++, Python etc.) / any other software

(c) Smartphone Sensor based Experiments (using phyphox or other equivalent applications)

For each category, exceptional submissions on topics other than those listed above may also be accepted if the committee decides.

How to register & What to do next

Follow the website: **www.indapt.org.in**

The detailed entry should be submitted via the Google Form:

<https://forms.gle/WtN2Mz4dsbwXux8T7>

An individual / the team leader in case of a group (*Max. four members*) must submit the required information, including the One-page Abstract with Title in pdf format, within May 31, 2024.

What to do next

- (i) **After the interaction meeting with participants, the team leader, in case of a group, or an individual must submit the Final pdf file within July 31, 2024, as is described in the following points, to the Google Classroom (Class Code to be sent to the individual mailbox after June 21, 2024) as an attachment.**
- (ii) The file must be named as ‘A/B-*First name of the team leader / single representation-1/2/3*’.pdf. Mention A or B carefully for the STUDENT and TEACHER groups, respectively. Also mention the category of the experiment – 1/2/3. For Example: If you belong to the Teacher group, your name is Prasant Arora (leader / single), and the category of your experiment is 2, your file name will be B-Prasant-2.pdf.
- (iii) It should contain a detailed write-up of their work (along with the computer program, if any), i.e. detailed theory with diagrams, procedure, observations, calculations, graphs, results, and references. In the case of physics simulations, the report should include a statement of the problem, formulation of the problem, flowchart, code/worksheet, test cases, and visualization of results using Gnuplot or such Open Source software. There is no limit on the number of pages. The participant(s) should write his/her (their) name(s), affiliation(s), and email(s) at the end of this file. Please mention the innovation you have incorporated with its importance regarding applications.
- (iv) Please use Times New Roman (font size 12, spacing 1.5), and margins should be appropriate (1 inch on each side).
- (v) After the Annual Convention, the papers will be published online on the IAPT website. Some selected experiments will be published in IAPT monthly Bulletin (ISSN 2277-8950).

Selected entries (Award winners and special invitees, if any) from each category will be invited for demonstration at the upcoming IAPT convention. The dates and venue will be notified in due course of time. The convention will likely be held during October 2024. The invited participants will be paid railway fare from the workplace to the convention place as per IAPT rules. In the case of joint authors, only one of the participants is eligible to receive TA (as per IAPT rules). The selected participant must come with his/her experimental setup for the final demonstration.

Your cooperation in abiding by the last date will be highly appreciated.

For any query:

Dr. Pradipta Panchadhyayee, Coordinator, NCICP-2024

Associate Professor, Department of Physics (UG & PG)

**Prabhat Kumar College, Contai; PO: Karkuli DSO, Dist-Purba Medinipur, WB,
721404**

Mail id: ppcontai@gmail.com

WhatsApp:(+91) 9476161100