# School on "Scientific Computing, Artificial Intelligence & Machine Learning" SCAIML-2023

## Inter-University Accelerator Centre, New Delhi
### July 24-27, 2023

| REGISTRATION (24th July 2023, Monday) | | |
|---|---|---|
| **Date** | **Time** | **Location** |
| 24 July, 2023 | 8:30 AM to 9:30 AM | Registration (Venue: Lounge Area, Seminar Hall, Main Laboratory Complex, IUAC) |

### PROGRAM SCHEDULE: DAY-1 (24th July 2023, Monday)

| Time | Speaker | Organization | Presentation Title |
|---|---|---|---|
| 9:30 AM | Dr. B.K. Sahu | IUAC | Welcome Address & Lighting Lamps |
| 9:40 AM | Prof. A. C. Pandey | Director, IUAC | Opening Remarks and Overview |
| 10:00 AM | Dr. Debasisa Mohanty | Director, NII, New Delhi | Keynote Address: "Computational Microscope to Digital Twins: How scientific computing is driving major advances in Biology & Medicine?" |
| 10:45 AM | Dr. J. Antony | IUAC | Vote of Thanks |
| **11:00 AM** | | | *High Tea* |
| | | | **Session-1** |
| 11:30 AM | Dr. Rajeev Wankar | University of Hyderabad | Parallel Programming Paradigm (**Lecture**) |
| **1:00 PM** | | | *Lunch Break* |
| | | | **Session-2** |
| 2:00 PM | Dr. J. Antony | IUAC | Introduction to Deep Neural Networks, Embedded Tiny ML, Practical AI Demonstrations (**Lecture**) |
| **3:30 PM** | | | *Tea Break* |
| 4:00 PM | Dr. Mayank Sharma | DRDO | Introduction and Hands on – Python workflow to build TinyML |

| Time | Speaker | Organization | Presentation Title |
|---|---|---|---|
| **PROGRAM SCHEDULE: DAY-2 (25th July 2023, Tuesday)** | | | |
| | | | **Session-3** |
| 9:00 AM | Mr. Rishabh Sehgal Ex-Physical Design Engineer, Intel, USA | University of Texas, Austin | Hardware Machine learning Accelerators and what is it? |
| 10:00 AM | Prof. Sumantra Dutta Roy | IIT, Delhi | K-Means, GMMs and the EM Algorithm, the Stauffer-Grimson Video Background Subtraction Algorithm (Part-I) |
| **11:00 AM** | | | *Tea Break* |
| 11:30 AM | Prof. Sumantra Dutta Roy | IIT, Delhi | K-Means, GMMs and the EM Algorithm, the Stauffer-Grimson Video Background Subtraction Algorithm (Part-II) (**Lecture**) |
| **1:00 PM** | | | *Lunch Break* |
| | | | **Session-4** |
| 2:00 PM | Mr. Rohit Prajapati. | DigiToad Technologies, Bangalore | Hands on introduction to Edge AI Development Workflow (Session I) |
| **3:30 PM** | | | *Tea Break* |
| 4:00 PM | Mr. Rohit Prajapati. | DigiToad Technologies, Bangalore | Hands on introduction to Edge AI Development Workflow (Session II) (**Lecture**) |

| Time | Speaker | Organization | Presentation Title |
|---|---|---|---|
| **PROGRAM SCHEDULE: DAY-3 (26th July 2023, Wednesday)** | | | |
| | | | Session-5 |
| 9:30 AM | Dr. Surendra. Yadav | RRCAT, Indore | ANN Based Machine Learning Model for Controlling Beam Parameters for Accelerators (Part-I) |
| **11:00 AM** | | | *Tea Break* |
| 11:30 AM | Dr. Surendra. Yadav | RRCAT, Indore | ANN Based Machine Learning Model for Controlling Beam Parameters for Accelerators (Part-II) (**Lecture**) |
| **1:00 PM** | | | *Lunch Break* |
| | | | Session-6 |
| 2:00 PM | Mr. P. Rajsekar | BARC, Mumbai | Applications of Machine Learning |
| **3:30 PM** | | | *Tea Break* |
| 4.00 PM | Ms, Jyotsna Khemka | Intel | Practical session with computing |
| **5:30 PM** | | | *Break* |
| 7:00 PM | Prof. A.C. Pandey | Director, IUAC | Special Evening Talk |
| **8:00 PM** | | | *Director's Dinner* |

| Time | Speaker | Organization | Presentation Title |
|---|---|---|---|
| | | | **PROGRAM SCHEDULE: DAY-4 (27th July 2023, Thursday)** |
| | | | **Session-7** |
| 9:30 AM | Prof. Vipul Arora & Mr. Ankur | IIT, Kanpur | Generative Machine Learning for Particle and Statistical Physics (Part-I) |
| **11:00 AM** | | | *Tea Break* |
| 11:30 AM | Prof. Vipul Arora & Mr. Ankur (Lecture) | IIT, Kanpur | Generative Machine Learning for Particle and Statistical Physics (Part-II) |
| **1:00 PM** | | | *Lunch Break* |
| | | | **Session-8** |
| 2:00 PM | Dr. Ashok Kumar | University of Panjab, Bathinda | Application of Machine Learning in Material Science  (**Lecture**) |
| **4:00 PM** | | | *Tea Break* |
| 4.30 PM | Open discussion & Concluding remarks - convened by Organizing Committee SCAIML-'23 [Coordinators: Dr. B. K. Sahu / Dr. J. Antony] | | |