

ISI-NIT SILCHAR SPRING SCHOOL ON COMPUTATIONAL BIOLOGY: TOOLS AND TECHNIQUES

March 20 – 24, 2015

Department of Computer Science and
Engineering, National Institute of Technology,
Silchar, Assam

Organized jointly by



Machine Intelligence Unit (MIU)
Indian Statistical Institute (ISI)
Kolkata 700108

&



Department of Computer Science and
Engineering, National Institute of Technology,
Silchar 788010

About Assam

Assam is a northeastern state of India with its capital located south of the eastern Himalayas. It is surrounded by six states: Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Meghalaya. Assam became a part of India after the British occupied the region following the First Anglo-Burmese War of 1824-1826. It is known for Assam tea, petroleum resources, Assam silk and for its rich biodiversity. Assam has successfully conserved the one-horned Indian rhinoceros, tiger, numerous species of birds, and Asian elephant in its wildlife national parks at Kaziranga and Manas. Assam is blessed with lush greenery and salubrious climate throughout the year and offers limitless exploration possibilities in its verdant sub-tropical rain forests, which are also a treasure trove of a plethora of medicinal plants.

About the Department of Computer Science and Engineering, NIT Silchar, Assam

National Institute of Technology Silchar (NIT Silchar) is one of the NITs of India, and was established in 1967 as a Regional Engineering College in Assam. In 2002 it was upgraded to the status of National Institute of Technology, and was declared as Institute of National Importance under the National Institutes of Technology Act, 2007. The department of Computer Science and Engineering came into existence in the year 2008 with specialized interest in diverse disciplines of Mathematics, Computer Science, and academic programs such as, interaction of students and teachers, active participation in seminars and workshops. The main activities and functions of the department are: i) offering B. Tech., M. Tech. and Ph.D. Programmes; ii) providing students with a strong foundation in mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze computer science & engineering problems; iii) demonstrating the ability of designing and implementing solutions for rapidly changing computing problems and information system environments; iv) demonstrating the ability of gauging the impact of computing on society; v) coordinating with Research Institutions and other developmental departments in the State;

To reach us

Nearest Airport, Railway Station and Road Network: The institute is located at 24.75°N, 92.79°E by the Silchar-Hailakandi road, nearly seven kilometers from Silchar city. Direct flights are available from various places to Silchar, and trains and buses are also available from Guwahati and Agartala. The college lies in what is known as the education axis of Silchar. Silchar Medical College and Hospital lies 2 km behind it, and Assam University lies a further 12 kms ahead, all on a single road.

Please send the Registration Form duly filled in by February 15, 2015 along with your CV and a soft copy of your passport-size photograph, by e-mail, to:

Dr. Shubhra Sankar Ray

Machine Intelligence Unit, Indian Statistical Institute

Kolkata.

E-mail: shubhrasankar@gmail.com, miune@isical.ac.in

Phone: (033) 2575 2045

Objective: The school is aimed at providing an opportunity to the research students and teachers of north-eastern colleges/universities/institutes, with background in mathematics, statistics, computer science, electrical and electronic engineering, information technology, physics, biology and related areas, to be exposed to recent state-of-art of computational biology and its applications. Topics of the school will range from introductory concepts to different real life applications, and will be covered by the faculty members of the Machine Intelligence Unit, ISI, Kolkata.

Theme: Recent advancement of biological research are producing enormous amount of biological data. The successful analysis of this kind of has become critical. Laboratory experiment to analyze this data is expensive and time consuming. Pattern recognition techniques and machine learning methodologies provide useful tools for analyzing this data.

Computational biology involves interdisciplinary research comprising mathematics, statistics, information sciences and molecular biology. It constitutes one of the foremost application domains, where pattern recognition/data mining is found to hold great promise. The objective is to extract useful information from biological data (e.g., gene/amino acid sequences, gene expression and biochemical pathways), and thereby providing some clinical/pathological/therapeutic knowledge for various human diseases.

This ISI-NIT Silchar school will focus on various aspects of computational biology, different machine intelligence tools & techniques and their applications to domains like gene expression, disease diagnosis, data mining, etc.

Venue: Seminar Hall, Department of Computer Science and Engineering, NIT Silchar, Assam

Duration: March 20 - 24, 2015.

Participants: Research students and teachers from colleges/universities/research institutions/laboratories in the north-eastern region of India having interest in related fields.

Support: There is no registration fee for the school. Outstation participants will be provided local hospitality and 2nd class railway/bus fare by the shortest route.

Patrons: Bimal Roy, *Director, ISI*
N. V. Deshpande, *Director, NIT Silchar*

Program Director: S. Bandyopadhyay, *Head, MIU, ISI, Kolkata*

Program Coordinators: S. S. Ray, *ISI*
R. K. De, *ISI*
Nidul Sinha, *NIT Silchar*

Local Organizing Committee:
Co-patron: J. Patro, Registrar, *NIT Silchar*

Advisors: F. A. Talukdar, Dean Academic, Dept. of ECE, *NIT Silchar*
A. K. Barbhuiya, Dean Students Welfare, Dept. of CE, *NIT Silchar*

Members: S. K. Borgohain, *NIT Silchar*
P. K. Nath, *NIT Silchar*
U. Baruah, *NIT Silchar*
M. Sen, *NIT Silchar*
S. K. Biwas, *NIT, Silchar*
R. Patgiri, *NIT, Silchar*
D. Meitei, *NIT, Silchar*

Speakers:
(tentative list)
S. K. Pal, *ISI*
M. K. Kundu, *ISI*
C. A. Murthy, *ISI*
S. Mitra, *ISI*
A. Ghosh, *ISI*
S. Bandyopadhyay, *ISI*
R. K. De, *ISI*
D. P. Mandal, *ISI*
P. Maji, *ISI*
K. Ghosh, *ISI*
B. Uma Shankar, *ISI*
S. S. Ray, *ISI*

REGISTRATION FORM

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March 20 –24, 2015

Department of Computer Science and
Engineering, National Institute of Technology,
Silchar, Assam

Name :.....

Designation :.....

Institution :.....

Address :.....

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Telephone :.....

Fax :.....

Email :.....

Qualifications :.....

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Publications :.....

(Enclose additional sheets if required)

Accommodation required: *Yes / No*

Please photocopy the Registration Form for additional registrants.