



IEEE Hyderabad Section



TATA CONSULTANCY SERVICES

“Bioinformatics: Unique discipline with new challenges”

IEEE Computer Society Chapter, Hyderabad Section with support from Tata Consultancy Services, India takes great pleasure in inviting you to a talk on **“Bioinformatics: Unique discipline with new challenges”** by **Dr. M W Pundit, Consultant at the Centre for Cellular and Molecular Biology (CCMB), Hyderabad.**

Date & Time: Saturday, 1st May 2010, 5:30 PM – 07:00 PM

Venue: Pravaha Hall, 6th Floor, Tata Consultancy Services, KLK Building, Basheer Bagh, Hyderabad.

Venue Map: <http://bit.ly/aJMFbn>

The event is free and open to all in Natural Sciences, Computer Science, Engineering, Information Technology and related fields.

Registration:

Though the event is open, online registration is required. Please register yourself at <http://bio1.ieeehyd.org> or http://meetings.vtools.ieee.org/meeting_registration/register/2267 before 30th April 2010 (8 PM IST), please note that we have limited seats and request you to register yourself at the earliest.

Agenda

5:30 PM - 5:50 PM: Registration & High Tea

5:50 PM - 6:00 PM: Welcome & Introduction to Speaker

6:00 PM - 6:50 PM: Talk on **“ Bioinformatics: Unique discipline with new challenges ”**

6:50 PM - 7:00 PM: Q&A, Interactive Session

7:00 PM - 7:05 PM: Conclusion of the Session.

Abstract

With increasing activity of genome sequencing of other organisms, biological data and DNA sequence data in particular, is accumulating with phenomenal rate. In order to exploit the wealth of sequence information and other biological data, a scientific discipline – known as ‘bioinformatics’ – has arisen that fuses biology with mathematics and computer science. How do we access, retrieve and analyze this information? How do we give a biological meaning to it? Complexity, redundancy management, integration and interpretation of such a large volume of data are some of the challenging issues, which scientists are facing today. To find a gene within a genomic sequence is a massive task. Protein coding regions existing in vast sequence information have to be located and assigned a function. Functions of most of the proteins are determined by their three-dimensional structure. Therefore, the prediction of 3-D structure of a protein is crucial for the understanding of its function. The functional genomics which will ultimately be helpful in understanding how the organism functions and survives, are some of the areas where bioinformatics is contributing significantly.. Rational design or modification of proteins for new, hitherto unknown functions is going to be probably the greatest challenge for bioinformatics in next millennium. The background of these areas will be reviewed and the present status including the changing face of bioinformatics will be discussed.

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About the speaker

Dr. Pandit is a scientist by profession, completed his MSc & PhD from Pune University in the area of Biophysical chemistry. Worked in scientific research organizations such as NCL Pune, RRL, IICT and CCMB at Hyderabad between 1963 and 1993. Served as a consultant to C-MMACS at national Aerospace laboratory (NAL), Bangalore in 1994 to 1995, consultant to the Centre for DNA Fingerprinting and Diagnostics (CDFD), an autonomous centre of the Department of Biotechnology for about two years. Served as a Nodal Manager of European Molecular Biology Computer Network (EMBnet) at CDFD between 1997 and 1999. Invited member of the Task force meeting on Bioinformatics between 1989 and 1993. Responsible for establishing Bioinformatics and Computational Biology at CCMB. At present, working as a consultant at CCMB on the wildlife conservation project.

Extracurricular activities; Theatre, Music, Literature and Video films

Directed several plays and won awards in the competition at National level. Produced a feature on the history of Marathi theatre along with well known Marathi Actress Sulbha Deshpande which was presented in US; Accompanied on harmonium several artists of repute in Indian classical music in India and abroad; Member of the society of American Magicians and also a member of the International Brotherhood of Magicians, ohio, USA; Published a collection of his own poetry in Marathi; Made a series of video films on optical illusions for UGC which was telecast on National Network.

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