Bioinformatics holds key to various research, says Prof Sridhar

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Bioinformatics, the new buzzword in science, holds the key today to multidisciplinary research efforts involving people associated with classical biology, statistics, mathematics and computer science, stated Prof. Sridhar Hannenhalli, Cell Biology and Molecular Genetics at the University of Maryland.

Delivering a talk at the SOA University, Prof. Hannenhalli said bioinformatics had several definitions though the National Institute of Health in US described it as research, development or application of computational tools and approaches for expanding the use of biological, medical, behavioral, and social sciences data.

"I consider bioinformatics to be the interface between statistics, computer science and biology. The combination of these fields is what makes the field so exciting. A good bioinformatics is the glue that holds a multidisciplinary team together," he said. Prof. Hannenhalli, who is presently on a sabbatical at the Indian Institute of Science, Bengaluru, said a shift in research in biological sciences had been witnessed since centuries.

"While experiments were once conducted on a single gene or a single locus at a time, high-throughput techniques such as microarrays and next-generation sequencing allows us to query entire genomes often in a fraction of time and study biological systems on multiple scales," he said. These techniques, he said, had led to the so-called 'data deluge' shifting scientific research to favour multidisciplinary teams working to explore complex systems. The talk was organised by the SOA University's Internal Quality Assurance Cell. Prof. PKNanda, Dean introduced Prof. Hannenhalli to the audience while Mr Dinabandhu Das, Chief Administrative Officer presented him a memento.

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Bioinformatics new buzzword in science: Prof Hannenhalli

Bhubaneswar, Nov. 9

BIOINFORMATICS, the new buzzword in science, holds the key today to multidisciplinary research efforts involving people associated with classical biology, statistics, mathematics and computer science. Prof. Sridhar Hannenhalli, Professor, Cell Biology and Molecular Genetics at the University of Maryland, said.

Delivering a talk at SOA University, Prof Hannenhalli said bioinformatics had several definitions though the National Institute of Health in US described it as research, development or application of computational tools and approaches for expanding the use of biological, medical, behavioural or health data including those to acquire, store, organize, analyse or visualize such data. “I consider bioinformatics to be the interface between statistics, computer science and biology. The combination of these many different fields is what makes the field so exciting. A good bioinformatics is the glue that can hold a multidisciplinary team together,” he said.

Prof Hannenhalli, who is presently on a sabbatical at the Indian Institute of Science, Bengaluru, said a shift in research in biological sciences had been witnessed since the turn of the century. “While experiments were once conducted on a single gene or a single locus at a time, high throughput techniques such as microarrays and next generation sequencing now allow us to query entire genomes often in a fraction of the time and study biological systems on multiple scales,” he said.

These techniques, he said, had led to the so-called ‘data deluge’ shifting scientific research to favour multidisciplinary teams working to explore complex systems by integrating different data types and pooling knowledge. “Although people have learned a lot from these approaches and will undoubtedly continue to do so, making the most significant contributions requires a different thought process than those associated with classical biology, statistics, mathematics or computer science. Future generation of scientists needs to work at the interface of these different fields, or at least be able to converse effectively with others that hail from these backgrounds,” Prof Hannenhalli said.

The talk was organized by the SOA University’s Internal Quality Assurance Cell. Prof PK Nanda, Dean (Research) of the university introduced Prof Hannenhalli to the audience comprising professors, researchers and students while Dinabandhu Das, Chief Administrative Officer of the university presented him a memento.

Tripti Swarnkar, Associate Professor, Department of Computer Science and Dr Anurag Satpathy, Professor in the Institute of Dental Sciences, were present.