

Ants, bees and birds inspire boffins, engineers



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CHARLES Darwin's theory of evolution, migration of birds, social pattern of ant and bee colonies and even patterns seen in genetic materials have one thing in common _ they have inspired computational scientists and engineers in having new ideas to solve the intricate real world problems.

Sounds strange?

But scientists feel that from observing the short-cut routes taken by migratory birds of Siberia to warmer places in South-East Asia, studying swarming patterns of bees and ants and their collective social behaviour can influence the basic mathematical applications through algorithm principles with the help

of numerical modelling and problem solving.

Though started in seventies, the application of biologically inspired computing and applications (BICA) has come a long way like today's particle swarm optimisation, artificial life, digital organisms and swarm robotics. With vast applications relating to pattern recognition software development mainly in the field of security check through fingerprint analysis and face studies to complicated bio-medical applications, remote sensing and geo-information system analysis and even planning for distribution of electricity and drinking water supply the inter-disciplinary applications are now helping all engineering disciplines .

Speaking at a two-day interna-

tional symposium on BICA at city-based Institute of Technical Education and Research under Siksha o Anusandhan University, experts presented 70 papers on BICA.

According to organising chairman Prof. PK Nanda, a team from University of North Texas presented a paper on how to minimise leakage of current in nano chips under the leadership of Prof. Saraju Mohanty.

In another study, Prof. Gerald Schaefer from University of Loughborough, the UK, said how thermal imaging techniques can help in early detection of breast cancer. It cannot be an alternative to mammography, but can add to the process in women, he observed adding it can be a low-cost affair sans any radiation hazard and also comes with a convenient way.