Editorial

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Biographical notes: Srikanta Patnaik is Chairman and Founder Director of Interscience Institute of Management and Technology, Bhubaneswar, India. Prior to his present assignment he was Chairman, Post Graduate Council and Professor and Head of Information and Communication Technology Department of F.M. University, Balasore, India He has graduated in Electronics and Telecommunication Engineering in 1989 and post graduated in Electronics Systems and Communication in 1993 and received his PhD in Engineering in the year 1999 from Jadavpur University, Calcutta, India. He has published more than 60 technical papers in the national/ international journals and magazines of repute. He has served as Programme Committee members in many International Conferences and also convened a few seminars, Training Programmes, Workshops sponsored by various agencies. He has acted as Principal Investigator of projects sponsored by All India Council for Technical Education and University Grants Commission. His name has been placed in the MARQUIS Who's Who in the World for the 2004. He has been nominated as the International Educator of the Year 2005, by International Biographical Centre, Great Britain.

N.P. Mahalik is presently working as Visiting Professor in the Department of Industrial Technology, California State University, Fresno, USA. He completed his BSc Engg and MEng in the year 1989 and 993 respectively from UCE, Burla in India. He has been awarded with PhD Degree from De Montfort University UK in the year 1998, for his research contribution in the field of distributed control systems. He published several research papers, books, papers in the field of mechatronics, process control and automation. He has completed many projects sponsored by various sponsoring agencies. He is the recipient of the Brain Korea 2004 fellowship.

Welcome to Volume 1 Issue 2 of *International Journal of Information and Communication Technology*. This issue brings articles of IT applications into various domains.

The first paper entitled 'Mining images using clustering and data compressing techniques' by S. Pattnaik, P.K. Das Gupta and M. Nayak. This paper explains data mining clustering technique along with vector quantisation, applied to cluster and

compress static colour image. Here they have applied this technique to satellite images of clouds to predict weather conditions. In their paper, they have shown the results to demonstrate the findings both subjectively and visually.

The second paper by Devedžić, V., Gašević, D. and Djurić, D. entitled 'Clarifying the meta' explains some of the most interesting cases of using the concept of meta in computing in order to help build the big picture. The word and the concept of meta are used in virtually all disciplines of computing. Professionals often use it intuitively and in specific contexts in which the meaning of a word containing the meta- prefix is well understood, at least by specialists. However, the meta can imply much more than understanding some concepts in a specific domain.

The third paper entitled 'A novel approach of speaker authentication by fusion of speech and image features using Artificial Neural Networks' by A. Shukla and R. Tiwari explains a decision fusion technique for a bimodal biometric verification system that makes use of facial and speech biometrics. The work considers multimodal biometric systems and their applicability to access control, authentication and security applications. They have developed a prototype biometric system, which integrates faces and speech utterances.

The fourth paper entitled 'Simple cryptanalysis studies of a stream cipher' by Nalini N. and Raghavendra Rao explains a simple algorithm for the known ciphertext attack of 160-bit SEAL (Software Encryption Algorithm) cipher. They have formulated a differential and Chi-square cryptanalysis of SEAL, for the cryptanalysis of ciphers, other than brute-force methods and other optimisation heuristics. Their technique is simple heuristic techniques not based on any optimisation formulation. The technique developed by Nalini and Raoare are useful in the cryptanalysis of block and stream ciphers.

The fifth paper entitled 'Wavelet-based, speaker-independent isolated Hindi digit recognition' by H.M. Gazi, O. Farooq, Y.U. Khan and S. Datta, presents wavelet packet based features for recognition for isolated Hindi digit. In their paper, admissible wavelet packets are used to design a set of filter bank to follow the Mel scale. And a Hidden Markov Model is developed for recognition.

The sixth paper entitled 'An adaptable transport protocol based on Genetic Algorithms' by Sheng-Uei Guan, Chek Liang Dominic Boh and Fei Liu presents an adaptable protocol i.e., Genetic Algorithm Transport Protocol (GATP) based on genetic algorithms (GAs), which evolves and adapts to the network environment to achieve best effort user-configurable Quality of Services (QoS). They have applied different fitness functions of weighted, single objectives, and finally multi-objectives to understand the network problem. They have also conducted experiments to provide the performance analysis of GATP in an actual network environment and also shown the experimental results.

This issue concludes with the paper entitled 'Atmospheric temperature retrieval using a Radial Basis Function Neural Network' by E.H. Shiguemori, J.D.S. da Silva, H.F. de Campos Velho and J.C. Carvalho. In this paper, vertical temperature profiles are obtained from measured satellite radiance data by using a Radial Basis Function neural network (RBF-NN). In the paper, the RBFNN is trained with data provided by the direct model characterised by the Radiative Transfer Equation (RTE). The results are compared to the ones computed using regularisation-based inverse solutions. In addition to synthetic data (corrupted by noise), real radiation data from the HIRS/2 (High Resolution Infrared Radiation Sounder) is used as input for the RBF to generate temperature profiles that are compared to radiosonde measured temperature profiles.