Editorial

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Biographical notes: Nitaigour P. Mahalik received his Master and PhD degrees in the year 1993 and 1998, respectively. He did Postdoc research in 2002 at Gwangju Institute of Science and Technology, South Korea. He visited Moscow State Technological University, University of Western Australia, McGill University, etc. With more than 90 publications, he has been serving several journals at various capacities. He is the recipient of overseas fellowship and Brain-Korea fellowships. He works in the areas of automation and control. Presently, he is at Jordan College of Agricultural Sciences and Technology in CSU Fresno, USA. He is the Member of many professional societies.

Mo Jamshidi received the PhD degree in Electrical Engineering from the University of Illinois at Urbana – Champaign in 1971. He holds three honorary doctorate degrees and is Lutcher Brown Endowed Chaired Professor at the University of Texas System at San Antonio Campus, TX, USA. He is the Founding Director of Center for Autonomous Control Engineering (ACE) at the University of New Mexico (UNM). He is the Director of the National Consortium on System of Systems Engineering. He has over 550 technical publications including 58 books and edited volumes. He is the Founding Editor/Co-editor of five journals and one magazine.

Welcome to fourth issue of Volume 4. This volume consists of seven manuscripts.

The first paper by Laha and Chakraborty presents a simulated annealing algorithm optimal (total flow time) flow time of shop scheduling problem involving *m*-machines and *n*-jobs. Comparative study has been made with other techniques in the literature.

Kanthaswamy and Jerome, in second paper, are utilising simulated annealing algorithm, this time, for the design of the celebrated PID controllers for time-delay systems. The cost function in this algorithm is accumulated error between system's output and its reference input.

Wang and Shao, in third paper, propose a method for robust exponential stability and stabilisation of neutral system with time-varying delays. Robustness of the design has

been tested with respect to actuator failure in the system. Based on the switching strategy of average dwell time method, delay-dependent sufficient conditions for exponential stability and stabilisation of the special switched systems are established in terms of linear matrix inequalities by choosing appropriate piecewise Lyapunov–Krasovskii functional.

A fuzzy decision tree-based robust Markov game controller has been proposed for manipulator robots in fourth paper of this issue by Shah and Gopal. They have used a two-player zero-sum Markov game in their design. The authors have combined fuzzy decision trees (as functional approximator) and Q-learning to guarantee convergence of the learning process for a two-link robot manipulator.

Papakonstantinou, in fifth paper of this issue, has proposed a model-based control paradigm for vehicles cone ring transmission, which is a new traction-based transmission, developed by GIF – Gesellschaft für Industrieforschung mbH in Germany. The control paradigm produces riding quality and comfort.

Paul et al., in sixth paper, have proposed an approach to stable robust control of linear multivariable systems using coprime factorisation to represent plant perturbations. The paradigm would result a stable desired closed-loop transfer matrix is obtained as the product of an open loop transfer matrix and any proper rational transfer matrix with an arbitrary closed-loop poles placement. Other features of this controller are decoupling of robustness and stability problems and disturbance rejection. The frequency-domain approach has been compared favourably by the authors with such paradigms as H-infinity controller design through simulation.

Rathikarani and Sivakumar in the final paper of the issue have presented a design approach for optimal PI controller for a non-linear process using genetic algorithms.

This is the last issue of Volume 4 and fourth year of the journal. We hope that the readers enjoy this and all the previous issues of this volume and the journal.