

Guest Editorial.

2008 marked the 50th year of the Turkish National Member Organization (TOK) of the International Federation of Automatic Control (IFAC). Towards this recognition, the 16th National IFAC Symposium on Automatic Control, TOK'08, had been organized as an anniversary celebration. International attendance and high academic level was well-promoted. Previous and current IFAC presidents, Prof. Dr. Wook Hyun Kwon and Prof. Dr. Alberto Isidori, honored the symposium with their contributions. Eminent scientists from Turkey and beyond, Prof. Dr. Frank Allgöwer, Prof. Dr. Georgi Dimirovski, Prof. Dr. Atilla Bir, Prof. Dr. Yaman Arkun, Prof. Dr. Nejat Olgaç, Prof. Dr. Kemal Özgören, among others, gave the symposium spectrum from the antique history of automatic control to the most recent developments. Cengiz Celep from SMC-ENTEK, Mustafa Naymanlar from ENOSAD and Özcan Kahramangil from ASELSAN presented an overview of Industrial Applications of Automatic Control.

Papers from Turkey and abroad, 150 in all, including 11 plenary session papers, were orally presented, in addition to 28 papers presented in two poster sessions during this significant symposium. A special jury attended student presentations and awarded candidates having excellent peer review with Best Student Contribution Awards. The symposium attendance was 241, including 11 international participants. Presentations were organized in 4 plenary and 32 parallel sessions.

This Special Issue, presenting selected and invited papers from TOK'08, is one of the most important objectives of the symposium organization. Reviewers for these articles have been carefully selected among international authorities in their respective fields. Final versions of thirteen papers published in this Special Issue have been accepted after meticulous peer review procedures. All of these articles meet international requirements for novelty and meaningful contribution to the science. Indeed, two contributions deserve special attention:

- “Robust Feedback Design for Nonlinear Systems: A Survey” by Prof. Dr. Alberto Isidori. This paper presents an excellent overview of the state of the art of Nonlinear Systems Control.
- “Optimal Control of Drug Administration in Cancer Treatment” by M. Itik, M. U. Salamcı and S. P. Banks, was awarded the “Best Student Contribution Award” during TOK'08.

The support and recommendations of the reviewers are highly appreciated. We thank them for the time and effort they provided during peer review. We would like to express our sincere gratitude to the Editor-in-Chief Prof. Dr. Sadık Kara for his precious and continuing support, and former Editor-in-Chief Prof. Dr. Kemal Leblebicioğlu for his encouragement. We thank technical editor Erol Kılıç as well as Dale Allen Ross for English editing, Abdullah Can and Meral Esi for Typing and Figures preparation, and the staff at the TÜBİTAK for their assistance to the development of this Special Issue.

We hope that the reader will enjoy and benefit from this Special Issue, with its snapshot of state-of-the-art and the quality of scientific work in Turkey in the dynamic field of Automatic Control.

Guest Editors

Prof. Dr. İbrahim Eksin¹,

Prof. Dr. Ahmet Kuzucu²,

Assoc. Prof. Dr. M. Turan Soylemez¹

¹Department of Control Engineering, Istanbul Technical University, İstanbul, TURKEY.

²Department of Mechanical Engineering, Istanbul Technical University, İstanbul, TURKEY.