

EDITORIAL

Dear reader,

You have at your desk the issue no. 2/2011 of the journal AUTOMATIKA, which contains eight original scientific papers in the fields of control systems, digital and analog signal processing, mobile robotics and computing.

*In the first paper, **Wind Turbine Power References in Coordinated Control of Wind Farms**, Vedrana Spudić et al. propose a controller design that utilizes coordinated power control of all wind turbines to achieve the wind farm regulation requirements and to minimize the wind turbine loads. The following paper entitled **Development and Implementation of Control Algorithms for Synchronous Generator** by Igor Erceg et al. proposes a DSP based simulator for development and implementation of control algorithms, and presents design and implementation of a nonlinear control algorithm for excitation control. The latter algorithm is compared to a conventional one, and the simulation results are analyzed. In the third paper, **Task Based Bilateral Control for Microsystems Application**, Meltem Elitas et al. describe a function based design approach to formulate control of a constrained system, particularly, a bilateral system in micromanipulation applications. The authors present preliminary results concerning position tracking and force control. The paper entitled **Exploration and Mapping of Unknown Polygonal Environments Based on Uncertain Range Data** by Marija Đakulović et al. considers the problem of exploration and mapping of unknown indoor environments using laser range finder. The proposed algorithm is tested and compared to the Ekman's algorithm by simulations and experiments. In the following paper, **Perceptual Significance of Cepstral Distortion Measures in Digital Speech Processing**, Antonio Vasilijević and Davor Petrinović examine compatibility of cepstral measure with human perception for different values of parameters in the analysis. Further on, the authors analyze the usage of truncated mel cepstral vector for speech and speaker recognition. Sanda Martinčić-Ipšić et al. consider in their paper entitled **Croatian Large Vocabulary Automatic Speech Recognition procedures used for development of a Croatian large vocabulary automatic speech recognition system**. The proposed approach is based on context-dependent triphone hidden Markov models and Croatian phonetic rules. The paper entitled **Optimized Second- and Fourth- Order LP and BP Filters** by Nino Stojković et al. presents general second-order low-pass and band-pass filter sections and calculates the voltage noise spectral density and Schoeffler sensitivity for three different types of optimization. In the last, eighth paper, **A Generic Procedure for Integration Testing of ETL Procedures**, Igor Mekterović et al. work towards establishing a generic procedure for integration testing of certain aspects of ETL procedures where the procedures are treated as a black box and tested by comparing their inputs and outputs – datasets.*

Prof. Ivan Petrović, Ph.D., Editor-in-chief