Dear readers,

The first segment of four contributions featuring in the present issue of the AUTOMATIKA journal are the papers selected at the 10th International Conference EPE-PMC 2002, held in Cavtat, Republic of Croatia in 8–12 September 2002 (10th International POWER ELECTRONICS and MOTOR CONTROL Conference).

The aforementioned papers belong to the following units: Motion Control, Electrical Machines and Actuators, Electromagnetic Compatibility and Industrial Drive Systems. There are: one original scientific paper, two preliminary communications and one professional paper. These papers disclose: fuzzy adaptive control of an induction motor drive with fast learning features and very good tracking and regulation characteristics; application, calculation and analysis of doubly fed long stator linear motor for investigations on new railway vehicles; active filter for compensation of harmonic distortion, line neutral current and reactive power in three-phase four-wire systems; experimental analysis of acoustic noise generated by PWM controlled AC motor drives. You may find more information on the Conference EPE-PMC 2002 in the issue 3-4/2002 and nine selected papers from that Conference were published in the issue 1-2/2003 of our journal.

The second segment of the present issue of AUTOMATIKA contains three papers that have directly been sent to the editorial board:

– Z. Blažević, I. Zanchi, I. Marinović: Satellite Propagation Channel Analysis Via Ray-Tracing Simulation. Diagrams of impulse response and Doppler power spectra of satellite propagation channel are analysed using simulation methods. The contribution is a preliminary communication.

– V. Matko: Porosity Determination by Using Stochastic Method. A method and a sensor for porosity measurement of small solid rock samples with sensitive capacitive-dependent crystal have been developed; it is an original scientific paper.

– A. Šabanović, N. Šabanović, K. Jezernik: Sliding Modes in Sampled-Data Systems. Since the sliding mode application in discrete-time systems can result in unwanted oscillations of the controlled variable, a new approach in the design of sliding mode control is proposed that considerably reduces oscillations. The contribution is an original scientific paper.

»Robotics in Words and Pictures« describes the state of the art and the trends in the development of industrial robots and service robots. In the 21st century robotics is expected to become the leading branch of industry.

Global goals of research and development in the European Union are discussed under »Comments and Opinions«. The European Council issued Directives regarding these researches at the sessions in Lisbon 2000 and Barcelona 2002. These ambitious goals refer to the coming decade: realisation of the most competitive and dynamic economy in the world taking account of sustainable development and higher social sensibility.

Editor-in-chief

Prof. Borivoje RAJKOVIĆ, Ph.D