

Editorial

The present special issue on electronics is the 5th one in the series "Engineering" of the Proceedings of the Estonian Academy of Sciences; similar issues were published in 1997, 2000, 2001 and 2004. It contains five papers, which represent selected topics where Estonian scientists have well established collaboration with their foreign colleagues. The issue is devoted to the 10th Baltic Electronics Conference (BEC2006).

First two papers consider and compare applications of different numerical methods for solving several calculation and modelling tasks in semiconductor heterostructures (A. Udal, R. Reeder, E. Velmre and P. Harrison, Estonian–British collaboration) and living organs and tissues (R. Gordon, T. Aarola, K. Wendel, O. Ryynanen and J. Hyttinen, Estonian–Finnish–US collaboration).

The third paper, written by R. Kurel, T. Rang and L. Poirier, introduces the results of Estonian–French collaboration in the field of simulation and analysis of processes in power electronic devices, based on the application of a new wide band-gap semiconductor material silicon carbide SiC.

Last two papers depict the results of research in the field of testing of large digital circuits and systems, which have been performed together with Swedish and other foreign colleagues. The paper written by G. Jervan, R. Ubar and Z. Peng describes a methodology, elaborated for automated testing of systems-on-chip, and the paper by P. Ellervee, J. Raik, K. Tammemäe and R. Ubar characterizes the environment, developed to accelerate fault simulation by hardware emulation on FPGA.

All the selected papers are included in the programme of BEC2006 to be held on 2–4 October 2006 in Tallinn and Laulasmaa.

Mart Min
Guest editor