

## Editorial

Traditionally, already since 1997, a special issue of an Estonian engineering journal, since 2008 titled the Estonian Journal of Engineering, has been published next year after the occurrence of a biennial Baltic Electronics Conference. The papers of this issue of the Estonian Journal of Engineering are based on the papers, presented at the IEEE 12th International Baltic Electronics Conference BEC2010, held in Tallinn on 4–6 October 2010.

The first paper by our guest scientist from Greece, Athanasios Giannitsis, clarifies the possibilities for micro-fabrication of biomedical laboratory-on-a-chip type microfluidic devices and suggests rational technologies for different task-driven solutions.

The second paper by scientists from the Technomedicum at TUT and Linköping University deals with monitoring problems in medical dialysis, solved by the aid of optoelectronic methods.

Modelling of special semiconductor structures – silicon carbide (SiC) polytypic heterojunctions – is discussed in the third paper by Toomas Rang et al.

Next, Mihkel Tagel et al from the Department of Computer Engineering together with the guest professor Thomas Hollstein from Germany developed a method for the system-level optimization of timing-sensitive network-on-a-chip type computing microdevices. In the final paper, Toivo Paavle, our collaborator from industry, analyses the efficiency of different short chirp signal type excitations, implemented in instruments for spectral analysis of time-variable dynamic systems.

In this year, also the papers of the next issue of the Estonian Journal of Engineering will be devoted to the problems, discussed at BEC2010.



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