Foreword to the Thematical Issue “Actual Problems of Information Processing”

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The present thematical issue of “Automation and Remote Control” is devoted to the state-of-the-art in information processing. It is divided conventionally into three parts: “Problems of Estimation and Filtering” (no. 2, 2010), “Problems of Experimental Data Processing” and “Problems of Image Processing” (no. 3, 2010). As can be seen from their names, the research areas are not just close to each other, but also are intersecting and, all the more so, do not make up a full group of events because they do not cover every possible problem of information processing. That is why the distribution of the issue’s papers is conventional. Nevertheless, we made this subjective division of papers in the hope of facilitating to the readership the study of the material of this thematical issue, that is, we followed the conventional approach to digitalization at image processing and pattern recognition.

The present issue considers as a rule the non-classical problems of information processing that are well studied. For example, by tradition the estimation problems were considered separately for uncertain and random factors, whereas in the practical problems usually both factors are encountered. Moreover, the situation may become even more complicated if noncontrollable factors of a third type related, for example, with the expert estimates appear. The papers of the present issue pay special attention to various aspects of this problem.

The papers consider both the purely theoretical matters of information processing and the computational algorithms to solve the problems of information processing. The issue also presents extensively the applied problems of information processing related, for example, with motion of flying vehicles and modeling of portal operation. That is why we anticipate that this issue will be of interest to a wide circle of researchers engaged in the field of information processing.

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