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Editorial

The automatic analysis of signals and images together with the characterization and elaboration of their representation features is still a challenging activity in many relevant hi-tech fields as medicine, biotechnology, chemistry, and food industry. Multidimensional and multi-source signal processing can generate a number of information patterns which can be useful to increase the knowledge of several domains for solving complex problems. Furthermore, advanced signal and image manipulation allows relating specific application problems into pattern recognition problems, often implying also the development of knowledge discovery and data mining methods and other computational intelligence procedures.

Nevertheless, the amount of data produced by sensors and equipments used in biomedicine, biotechnology, chemistry, and food industry is usually quite huge and structured thus strongly pushing the need of investigating advanced models and efficient computational algorithms for automating mass analysis procedures. Accordingly, signal and image understanding approaches able to generate automatically expected outputs become more and more essential including also novel conceptual approaches and system architectures.

This issue contains selected papers from the International Conference on Mass Data Analysis of Signals and Images in Medicine, Biotechnology, Chemistry, and Food Industry, MDA (www.mda-signals.de) that is held on yearly basis.

The emphasis of this conference is on solutions for the automatic analysis and processing of mass data such as they are recently created in many processes in medicine, biotechnology, chemistry and food industry. The MDA conference deals with a various new applications in these fields and the presentation show how such kinds of problems can be solved by the recent state-of-the-art in science. This issue encloses presentations of all steps of an automatic signal/image analysis and interpretation system. It deals with signal and image acquisition as well as with topics for automatic image analysis and interpretation.

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Editor