5th International conference on

Big Data Analysis and Data Mining

Rome, Italy

June 20-21
2018

Workshop on
Some untraditional approaches to the processing of periodic signals, their analysis and estimating specific peculiarities

Overview:

The periodic (harmonic and FM) signals are widely used. We will treat their as time-series. These time-series must often be processed, or filtered to extract some information of interest. Traditionally, this filtering has been linear. Certainly, linear filters have a sound theoretical basis and have been extensively studied. Unfortunately, linear filters suffer from poor performance in many applications. We are focused on the processing of periodic signals by the order filters and the studying of their characteristics based on cluster analysis. A model of a periodic signal will be treated as the numerical sequence $Y=\{y1,..., yN\}$, which reflects the behavior of some real process in a discrete time $t1,..., tN$, where $ti – ti-1 =Dt = const, i=2,..., N$. Order filters belong to the class statistic selection filters, where the filter output is restricted to be one of the input samples. Because of nonlinearity of such filters, the analytical studying their behavior is very complicated. At the same time, restrictions of the processing of periodic signals by such filters exist. Therefore, the approach of adapting Weighted Oder Filters (WOS) and the using of the method of statistical trials for selecting the most effective project of the WOS filters (Data Mining, Intelligent Processing) is drawing attention. As for estimating specific peculiarities of periodic signals, the attention is paid to the cluster analysis and to the method of statistical trials also.

Who Should Attend:

- Data Base engineers
- Scientists/Researchers
- Professors
- President/Vice president
- Chairs/Directors
- Data Scientists
- Students
- Experts and Delegates
- Big Data DevOps Engineers
- Big Data Architects
- Software Engineers

GROUP DISCOUNTS AVAILABLE

Invitation to the workshop

The workshop invites all people who are experienced or just interested in world dynamics, computer science, networking, artificial intelligence, algorithm design, parallel and distributed computing, experimental, industrial and military robotics, infrastructure management and protection, analysis and management of social systems, collective psychology, also those dealing with advanced mission planning, simulation and command and control in both civil and defense areas.

About the workshop leader

Znak Vladimir Ilich is currently working as a senior researcher at the institute of computational mathematics and mathematical geophysics of the Siberian branch of RAS. He completed his Ph.D. in the Sevastopol instrument-making institute, Sevastopol in 1980. His research interests includes signal processing, estimation of signal parameters and characteristics, computational mathematics, applied statistics, computational technologies, development of algorithms and computer programs, formal logic. He is has 100 publications including inventor's certificates