

## FOREWORD FROM THE EDITOR-IN-CHIEF

Following the discussions at the Eighth International Conference on Condition Monitoring and Machinery Failure Prevention Technologies in Cardiff, UK, as a part of the International Society for Condition Monitoring activity, preparation for publishing a special issue of the scientific journal "Modeling and Data Analysis" devoted to mathematical modeling and data analysis applications in condition monitoring, started in September 2011. Now I am pleased to introduce the results.

In this issue the following topics are considered:

- Statistical methods for synthesis and identification of hidden Markov models
- Novel algorithms for dynamic monitoring of electrocardiogram waveforms
- Application of robust statistics in vibration time histories analysis
- Applications of hidden Markov models in technical diagnostics
- Methods of acoustical signal analysis used for condition monitoring
- Methods of adaptive testing professional skills during education quality control
- Acoustic monitoring of structural and operational system conditions
- Distribution study of canonical ensemble of open strings.

I am sure that this edition will promote useful interchange of scientific knowledge between specialists in different areas of condition monitoring and will contribute to successful development of the International Society for Condition Monitoring.

I am grateful to the British Institute of Non-Destructive Testing for permission to publish some papers presented at the International Conferences on Condition Monitoring and Machinery Failure Prevention Technologies in 2009-2011.

**Lev Kuravsky**