

# Open research issues on Advanced Control Methods: Theory and Application

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*Abstract* - We are going to report here about state of the art works on advanced control methods both from the theoretical and practical point of view. A variety of algorithmic approaches (genetic algorithms, svm, etc.) and applicative domains (nuclear power plants, rotating machinery, etc.) are reported to illustrate the extension of the advanced control methods research area.

*Keywords* - control methods (methodology and applications), svm, feedback control, simulation.

## Introduction

The format of special issues hosted in WSEAS Transactions on Systems is well proved and continues to develop over time [1-16]. The main aim of this special issue "Advanced control methods" is the presentation of state of the art contributions in the field originating from our community of authors. The hosted works explore the following topics:

- 1) combination of Support Vector Machines and Genetic Algorithms applied on a data originating from a Nuclear Power Plant monitoring system [17];
- 2) robust feedback control for magnetic levitation systems by using mixed sensitivity design method for controller synthesis [18];
- 3) use of simulation techniques to build decision support systems [19];
- 4) a novel approach to reduce vibration in rotating machinery and its control system [20];
- 5) continuous-time adaptive control systems for nonlinear processes dealing with different feedback sources [21].

## Conclusions

Finally before diving into the collected research works [17-21], let us remember the reader that WSEAS Transactions on Systems has broad spectre of Special Issues, e.g. [1-16]. This is has the objective of creating an active and contributing research community around the journal and to present their latest efforts which have achieved wide interest among its

members. As a reader of the journal you are invited to take inspiration by the presented papers and to consider to submit your future works to the journal itself.  
Enjoy your reading!

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