

Rational Use of The Results of Mathematical Modelling

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Description:

Mathematical methods are currently used in almost all areas of human activity. The main obstacle to the successful use of the results of mathematical simulation in practical problems is the discrepancy between the simulation results and experimental data. If the specified correspondence is fulfilled, then we will assume that the simulation results are adequate for the experiment. If there is no adequacy, then the simulation results cannot be of practical value. The problem can be solved by constructing special (adequate) mathematical descriptions of physical processes (AMD). This volume is devoted to methods of constructing AMD.

What Should the Submitted Chapters Consider?

The collection will examine the following issues:

- General issues of constructing adequate mathematical descriptions of physical processes;
- Clarification and expansion of existing adequacy criteria;
- Problems of modeling the future behavior of physical processes;
- Problems of diagnostics using methods of mathematical modeling;
- Problems connected with the control of physical processes;
- Construction of adequate neural networks.

About the Editor:

Yurii Menshykov is Senior Researcher and Associate Professor at Dnipro National University, Ukraine. His research interests include the control systems, differential equations, inverse problems, and mathematical modeling. He is the author and co-author of four monographs and about 400 journal articles. His most recent publication is *Synthesis of Adequate Mathematical Descriptions of Physical Processes* (2020).

Submission Requirements:

All submissions should conform to the grammar and formatting guidelines provided by Cambridge Scholars Publishing, which can be viewed here:

<https://www.cambridgescholars.com/pages/forms-guidelines>.

Unless agreed with the Editor prior to submission, referencing should be in Chicago style.



Any work submitted for publication should be free of copyright restrictions, and a statement should be submitted in support of this.

Contributions should be scholarly based, rather than anecdotal or unverifiable.

Contributions must be wholly in English, excluding footnotes, appendices, and short extracts for translation.

While we will perform pre-press evaluations on the collection, we do not provide full copyediting services, so we ask that works are submitted to us in their final, 'ready-to-go' form.

How to Submit?

You should submit to the Editor a completed proposal form, alongside a copy of your work for their review. This submission should be made directly to the address at the top of this page.

If you have any questions about the collection, prior to your submission, please contact the Editor.

Timeline:

The schedule for submitting applications to the collection will be clarified shortly.

All works should be submitted to the Editor, at the address provided at the top of this document.

The Editor will review these personally to consider their inclusion in the work. Should the Editor approve the chapters, you will then be asked to complete an agreement for the publication of these chapters. **It is essential that this agreement is completed in order for your work to be printed.**

Once the Editor have approved the chapter, and has received your contributor agreement, these will then be sent to Cambridge Scholars as a complete collection for pre-press reviews and publication. **As such, it is essential that the work you submit to the Editor is finalized and has been thoroughly proofread.**

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