

## Instruction for Authors

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### SCOPE

**Demonstratio Mathematica** is a fully peer-reviewed, open access, electronic journal publishing works of wide significance, originality and relevance in the area of functional analysis and approximation theory.

The journal provides the readers free, instant and permanent access to all content worldwide; and the authors with extensive promotion of published articles, long-term preservation, no space constraints and quick publication after article acceptance.

The coverage includes:

- Topological linear spaces and related structures
- Normed linear spaces and Banach spaces; Banach lattices
- Geometry of Banach spaces
- Inner product spaces and their generalizations, Hilbert spaces
- Linear function spaces and their duals
- Distributions, generalized functions, distribution spaces
- Functional equations
- Stochastic equations
- Special functions
- Ordinary and partial (linear and nonlinear) differential equations
- (linear and nonlinear) integral equations
- Calculus of variations and variational problems
- Complementarity problems
- Measures, integration, derivative, holomorphy (all involving infinite-dimensional spaces)
- Topological algebras, normed rings and algebras, Banach algebras
- Commutative Banach algebras and commutative topological algebras
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- Selfadjoint operator algebras ( $C^*$ -algebras, von Neumann ( $W^*$ -) algebras, etc.)
- General theory of operators
- Fixed point theory and its applications
- Methods of category theory in functional analysis
- Miscellaneous applications of functional analysis
- Fuzzy functional analysis
- Non-Archimedean functional analysis
- Other (nonclassical) types of functional analysis
- Nonlinear functional analysis
- Approximation with orthogonal polynomials
- Approximation with fuzzy number
- Approximation with real functions
- Approximation in harmonic analysis
- Multivariate approximation
- Stochastic approximation
- Approximation by positive operators
- Generalized convexity and inequalities in approximation
- Abstract approximation theory
- Constructive approximation

- Fourier approximation
- Approximation theory in the complex domain
- Trigonometric approximation and interpolation
- Numerical approximation
- Interpolation theory
- Iteration theory
- Optimization theory
- Frames: vector frames and fusion frames
- Sampling theory
- Harmonic analysis
- and other related topics

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- Communication / Note – This format is intended for the presentation of brief observations that do not warrant full-length papers. An empirical report resulting from analysis of collected data to address one or more research questions and/or hypotheses.

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We accept submission of text, tables and figures as separate files or as a composite file. For your initial submission, we recommend you upload your entire manuscript, including tables and figures, as a single PDF file.

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The abstract should not exceed 300 words. The abstract should give a summary of the content of the paper. Mention the techniques used without going into methodological detail and summarize briefly the most important items of the paper. Please do not include any citations or references to tables or figures, and avoid specialist abbreviations and symbols. Because the abstract will be published separately by abstracting services, it must be complete and understandable without reference to the text.

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Research papers and review articles should follow a strict structure. Generally, a standard scientific paper is divided into:

- title page with:
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### **Published papers**

[1] C. Mariconda and G. Treu, *Non-occurrence of the Lavrentiev phenomenon for a class of convex non-autonomous Lagrangians*, Open Math. **18** (2020), 1–9, DOI: <https://doi.org/10.1515/math-2020-0001>.

[2] L. A. Kurdachenko, N. N. Semko, and I. Ya. Subbotin, *The Leibniz algebras whose subalgebras are ideals*, *Open Math.* **15** (2017), no. 1, 92–100, DOI: <https://doi.org/10.1515/math-2017-0010>.

### Accepted papers

[3] C. Mariconda and G. Treu, *Non-occurrence of a gap between bounded and Sobolev functions for a class of nonconvex Lagrangians*, *J. Convex Ana.* **27** (2020), no. 4, (to appear).

### Preprints

[4] C. Bonnafé and M. J. Dyer, *Semidirect product decomposition of Coxeter groups*, arXiv preprint (2008), <https://arxiv.org/abs/0805.4100>.

### Electronic journal articles

[5] M. J. Barany, *How Math Got Its 'Nobel'*. Available: <https://www.nytimes.com/2014/08/10/opinion/sunday/how-math-got-its-nobel-.html>

### Books and book chapters

[6] N. Gigli (ed.), *Measure Theory in Non-Smooth Spaces*, De Gruyter Publishing Group, 2017.

[7] J. Sambrook and D. Russell, *Molecular Cloning – A Laboratory Manual*, 3rd ed., New York: Cold Spring Harbor Laboratory Press, 2001.

[8] G. Buttazzo and M. Belloni, *A survey on old and recent results about the gap phenomenon in the calculus of variations*, in: R. Lucchetti and J. Revalski (eds), *Recent Developments in Well-Posed Variational Problems, Mathematics and its Applications*, vol. 331, Springer, Dordrecht, 1995, pp. 1–27.

### Theses

[9] A. J. Agutter, *Analysis of Sigma Factors in S. Aureus* (PhD thesis), Edinburgh: Edinburgh University, 1995.

### Conference proceedings

[10] J. Smith and P. Brown, *Reference style guide*, Proceedings of Biochemical Society Conference, Paper presented at Biochemical Society Conference, (Warszawa, Poland), 2007, July 11-13, Warsaw: Versita, pp. 1335-1791.

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