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{MERAA} Mathematics in Education, Research and Applications

Guides for Authors :: Version – January 2025

Research in mathematics and related fields Education in mathematics at all types of schools Applications of mathematics in teaching, research and practice Methodology of mathematics Information technology tools in mathematics Cross-curricular relations with mathematics

Slovak University of Agriculture in Nitra, Slovakia :: Faculty of Economics and Management



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1 About the Journal

1.1 Aims & Scopes

Mathematics in Education, Research and Applications (MERAA) is a scientific, peer-reviewed, open access, online journal covering a wide range of subjects in theoretical and applied mathematics

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Topics

- Research in mathematics and related fields
- Education in mathematics at all types of schools
- Applications of mathematics in teaching, research and practice
- Methodology of mathematics
- Information technology tools in mathematics
- Cross-curricular relations with mathematics

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Journal website: http://meraa.uniag.sk

1.2 Article Types

- Peer-reviewed papers (Original Articles, Short Communications, Reviews)
- Not peer-reviewed papers (Book Reviews, News and Views)

Each peer-reviewed paper is assigned a DOI. For screening/detect of plagiarisms in submitted manuscripts the MERAA uses service Similarity Check (iThenticate).

Original Article

This type of article should be fully documented and described main goals, experimental procedures and results of original research. Total length: 7 pages or 12 600 characters. Manuscripts should be divided into the following sections (required order). Mandatory: Title; Full authors(s) name(s); Affiliations; Abstract (max 250 words, 1 paragraph); Keywords (3-5); J Classification; Introduction; Material and Methods; Results and Discussion; Conclusions; References; Corresponding author contact information. Optional section: Acknowledgements.

Short Communication

Short article focusing on original research, proposal of a new theory or concept based on existing research, new models, hypotheses, innovative methods etc. Total length: 3 pages or 5 400 characters. Manuscripts should be divided into the following sections (required order). Mandatory: Title; Full authors(s) name(s); Affiliations; Abstract (max 150 words, 1 paragraph); Keywords (3-5); J Classification; Introduction; Material and Methods; Results and Discussion; References (max. 10); Corresponding author contact information. Optional section: Acknowledgements.

Reviews

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Short articles that aim to provide overview of a particular fields or aspects of mathematical research. Total length: 2 pages or 3 600 characters. Manuscripts should be divided into the following sections (required order). Mandatory: Title; Full authors(s) name(s); Affiliations; Main text; Corresponding author contact information.

1.3 Manuscript Submitting & Editorial Process

Manuscript Submitting

Send your paper as attachment in RTF/DOC format to meraa@uniag.sk. Important note: Requirements for article preparing are available at below (Article Formating :: Help).

Editorial Process

- Manuscript registration (editor, executive board member)
- Manuscript checking by plagiarism detection software (editor, executive board member) ٠
- Checking compliance with the requirements (editor, executive board member) •
- ٠ Peer-reviewing of manuscript (reviewers)
- Communication with author(s), manuscript corrections if are required (editor) •
- Information about final status of submitted paper acceptance (editor, executive board • member)
- Online publishing •

1.4 **Peer Review**

The MERAA uses double-anonymized review (the identities of both reviewers and authors are unknown each other throughout the review process). Are removed any identifying information, such as authors' names or affiliations, from your manuscript before submission.

Submitted manuscript will be assessed by the Editor in Chief to determine suitability/relevance from the point of view the journal aims and content. If article is assessed as suitable will be sent to reviewers. Based on the results of the review process, the final decision will be taken.

1.5 **Open Access**

Papers are published under a Creative Commons Attribution 4.0 International License (CC BY 4.0).



Submitting your paper author(s) agrees with these terms and accepted the Journal License to Publish.

1.6 Archiving

MERAA as a online scientific journal is archived within the Slovak web archive under the responsibility of the University Library in Bratislava (Digitálne pramene :: https://www.webdepozit.sk/ :: MERAA records). At the same time, all articles (pre-prints, postprints) are stored in the non-public archive of the Editors.

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2 Ethics & Policies

2.1 Publishing Ethics

The ethics rules and practices of the MERAA journal (Statements and Policies) are based on the Committee on Publication Ethics (COPE) Best Practice Guidelines for Journal Editors and Code of Conduct, Best Practice Guidelines for Journal Editors, Retraction Guidelines and Ethical Guidelines for Peer Reviewers (more details – COPE Guidance at https://publicationethics.org/guidance).

2.2 Conflict of Interests

The authors declare in the statement following the Acknowledgements (Conflict the Interest) that they are not aware of any potential conflict of interests or competing interests. If such a fact exists, they will clearly state/described it.

2.3 Generative AI and AI-assisted Technologies Use

Authors must declare the use of generative AI and AI-assisted technologies in the paper for purposes other than to improve the readability and language of the text (tools to check grammar, spelling and/or references). In this case, the author must state the name of the tools/technology and the reason for use. A more detailed description of the prompts must be provided in the theoretical introduction or methodological section.

3 Page Formatting

Page size:A4Page orientation:portraitMargins:2.5 cm/2.5 cm/2.5 cm/2.5 cm

4 **Text Formatting** (see Template)

Basic formal structure all paper types: IMRAD.

4.1 Main text, headings, subheadings

<u>Affiliation</u> is not full postal address, indicates affiliation to an institution. Rule for affiliation: name in English in decreasing order (University, Faculty, Department...), city, country.

Corresponding Author: name without titles, full postal address and valid e-mail is required.

<u>Abstract</u>: factual and concise abstract is required. Whole text is one paragraph. Minimum range 50 (Short C.) or 100 words (Orginal P.), maximum range 150 or 250 words, respectively.

4.1.1 Font

Baseline font: Times New Roman. Default language setting: English (UK).

Each section is formatted as a single column.

For manuscript main text (exclude headings, subheadings, equations, formulas, illustrations

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Math Educ Res Appl :: Guides for Authors :: January 2025 and other special parts of text) preparing using a roman (normal) font. <u>Italic, bold, bold italic or</u> <u>underline should not be used for emphasis</u>. Use no more than three levels of subheadings.

4.1.2 Footnotes text

You might use footnotes for detailed comments.

A footnote consists of two parts: the note reference mark and the corresponding note text. Reference marks: traditional number format, not special symbols (for example asterisk).

4.1.3 Units, quantities, symbols

Use SI basic or derived units only (EN ISO 80000-1:2022. Quantities and units. Part 1: General).

Define abbreviations the first time they are used in text. For individual math symbols, Greek letters, and other special characters: insert as a symbols.

<u>In the expression for the value of a quantity</u>, the unit symbol is placed after the numerical value and a space is left (one "hard space" (Ctrl+Shift+Space) between numbers and unit symbols) between the numerical value and the unit symbol.

Symbols representing physical quantities (or variables) are italic, but symbols representing units, or labels, are roman. Sometimes there may seem to be doubt as to whether a symbol represents a quantity or has some other meaning (such as a label): a good general rule is that quantities, or variables, can be given a value, but labels cannot. Vectors, tensors and matrices are usually denoted using a bold-face (heavy) font, but they should still be italic since they are still quantities.

<u>Symbols for mathematical operators are in the Roman script</u>. Some symbols are also sometimes used to represent physical quantities: then of course they should be italic, to distinguish them from the corresponding mathematical operator.

Paper title: TNR, 14, bold Author(s): TNR, 12, bold Affiliation: TNR, 11, normal Abstract: TNR, 10, normal

Keywords: TNR, 10, normal Main

text: TNR, 12, normal Headings:

TNR, 12, bold, capitals

Subheadings: TNR, 12, bold, non-capitals

2.2 Paragraph Styles

Text (paragraph) align: Justify

Line spacing, including bibliographic references: Single (1.0)

Space between paragraphs in main text: 0 points before and 6 points after a paragraph.

Math Educ Res Appl :: Guides for Authors :: January 2025 Space between lines in headings/subheadings: 12 points, 0 points before and after, too. Single lines between heading and text (line break).

Indentation: None. Hyphens: None.

Ending pages with one-line paragraphs or with only the first line of text of a paragraph continuing on the following page (these are commonly called "orphans") is not acceptable.

Paragraphs ending pages of text must contain at least two lines of text or be moved to the top of the following page.

2.3 Reference Styles

Font size: 10 pt

Indentation: Special – first line by 1.0 cm.

Space between paragraphs: 0 points before and 3 points after a paragraph.

3 Illustrations

Illustrations include tables and figures. The goal for figures is to be assist understanding of the paper. Use the same font as the body text. Full shape of illustration is required (correct: Table, incorrect Tab.; correct: Figure, incorrect: Fig. Example: Figure 1 or Table 1).

Format of citations for all illustration types: See general requirements for citations/references. No reference is required if you have created the data and image yourself.

3.1 Tables

Tables present lists of numbers or text in columns. Do not use tables when you wish to show a trend or a pattern of relationship between sets of values. These are better presented in a figures. Tables should be prepared using a roman font, italic or bold or bold italic should not be used for emphasis.

Tables should each be presented on a portrait (not landscape) orientation. Table caption – each table has a short, one-line title in normal text above the body (please, do not insert caption into table body). Titles should identify the table as briefly as possible. Symbols, abbreviations and notes are defined immediately below the table. Tables are numbered using arabic numerals (also called hindu-arabic numerals), and they are cited in numerical order in the text. Aligning decimal numbers in cells: on the decimal point/right. Only horizontal lines are allowed; no vertical lines, boxes, or other lines may be used unless they indicate the structure of the data. Do not use shading in the table (columns/rows).

Footnotes (below the table) are used to clarify points in the one, or to convey repetitive information about entries and footnotes may also be used to denote statistical differences among groups.

3.2 Figures

Figures are visual presentations of results, including graphs, diagrams, photos, drawings, schematics, maps, etc. Graphs are inserted in text as images, not as generated objects (from Microsoft Excel). Figures should each be presented on a portrait (not landscape) orientation.

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Figure caption – each figure has a short, one-line title in normal text below the body (please, do not insert caption into a figure body). Symbols, abbreviations and notes are defined immediately below the figure body, too.

Footnotes (below the figure) are used to clarify points in the one, or to convey repetitive information about entries and footnotes may also be used to denote statistical differences among groups.

Examples:

Head	Head	Head
Text	0.154	0.258
Text	1.150	1.140

 Table 1
 Text, text, text, text, text, text, text, text (Table caption/title)

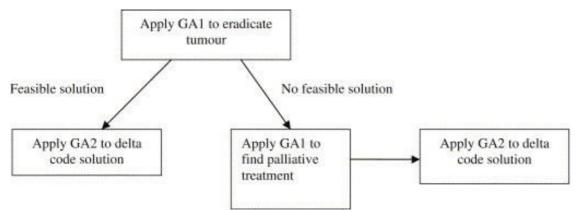


Figure 1 Optimisation process using two genetic algorithms, GA1 and GA2 (McCall, 2005, p. 218)

4 Equations/formulas/special symbols

Equations, formulas or special symbols do not insert as images! If the desired math is too complex or not available as individual characters, then use Equation Editor. Please number all display equations, consecutively.

Example;

$$B^{n}(t) = \frac{\langle n \rangle}{\langle n \rangle} \cdot t^{i} \cdot (1-t)^{n-i}$$

$$B^{n}(t) = \frac{\langle n \rangle}{\langle n \rangle} \cdot t^{i} \cdot (1-t)^{n-i}$$

$$\cup \eta$$

Cambria math

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5 Citations/References

Citations and references are each numbered as they appear in the text, tables or figure legends. The list of references is arranged alphabetically and then numbered (numbers in square brackets).

Citations in text

Every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text.

Indicate references by number(s) in square brackets in line with the text. Example: "... algebras can also be considered as the analogues of Nazarov's affine Wenzl algebras [25]. This is one of our motivations to introduce these algebras. Another motivation originates from super Schur-Weyl dualities [7, 32]..."

References formatting

Author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged, DOI must be write as active link (on the Insert tab, click Hyperlink) in form: https://doi.org/10.xxxxx/xxxxx. Missing data will be highlighted at proof stage for the author to correct. All references must be written in English (translated to English) and original language of the referenced publication must be indicated in brackets at the end of text.

i. Reference to a print journal:

[1] Rui, H. & Su, Y. (2015) Affine walled Brauer algebras and super Schur-Weyl duality. *Advances in Mathematics*, 285(5), 28-71.

ii. Reference to an online journal with DOI:

[1] Rui, H. & Su, Y. (2015) Affine walled Brauer algebras and super Schur–Weyl duality. *Advances in Mathematics*, 285(5), 28-71. doi:https://doi.org/10.1016/j.aim.2015.07.018

iii. Reference to an online journal without DOI:

[1] Rui, H. (2013) Brauer algebras. Advances in Mathematics, 285(5), 28-71. Retrieved 2016-12-21 from http://www.odvancesinmath/2013/rui-1254.html

iv. Reference to a book:

[1] Strunk W Jr. & White, E.B. (2000). The Elements of Style. 4 ed. New York: Longman.

[2] Turaev, V. (1989). *Operator invariants of tangles and R-matrices*. Moscow: Izd. Akad. Nauk SSSR (in Russian).

v. Reference to a chapter in an edited book:

[1] Mettam, G.R. & Adams, L.B. (2009). How to prepare an electronic version of your article. Jones, B.S. & Smith, R.Z. (eds.). *Introduction to the Electronic Age*. New York: E-Publishing Inc., 281–304.

vi. Reference to a paper from proceedings/book of papers etc.:

Math Educ Res Appl :: Guides for Authors :: January 2025 [1] Mettam, G.R. & Adams, L.B. (2009). How to prepare an electronic version of your article. *Electronic Age in Scholarly Communication : Proceedings from International Scholarly Conference in London, 15-17 August 2009.* Coventry: PubHouse, 281–304.

vii. Reference to an online book with DOI:

[1] Shiraldi, G. R. (2001). *The post-traumatic stress disorder sourcebook: A guide for healing, recovery, and growth [Adobe Digital Edition Version]*. doi:https://doi.org/10.1036/10071393722

viii. Reference to an online book without DOI:

[1] Shiraldi, G. R. (2001). The post-traumatic stress disorder sourcebook: A guide for healing, recovery, and growth [Adobe Digital Edition Version]. Retrieved 2016-12-21 from http://www.stressdisorders.org/10071393722

Note: Journal names should be abbreviated according to the List of Title Word Abbreviations (http://www.issn.org/services/online-services/access-to-the-ltwa/)