

MMA-WiP Author Guidelines

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Journal name: Mechanized Mathematics and Its Applications, Works in Progress

Abbreviation: MMA-WiP

This instruction ensures authors entire flow of an article submission, editing rules and regarding polices and regulations. The official text is in Japanese. English text is provided for the convenience of the author.

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1. Submission Guideline

1.1 Introduction

Concept:

It is the explicit goal of the journal to provides a forum for research in the Mathematical and Informatic formal method based on the Mizar, a proof checker application, in an updated, timely manner. The submission rule is the same principle as of the existing journal Mechanized Mathematics and Applications (MMA). Any article must be verified or related by the Mizar proof checking system.

For the sake of keeping the immediacy of sharing information, the following criteria are required for submitting articles where an article is meant, either Regular Paper, System Development Paper, Article Paper, or Letter. A detailed explanation would appear in the next section.

Regular Paper, System Development Paper, and Article Paper:

- (1) Any Research Areas are in Scope of MMA-WiP as far as it relates to Mizar. Notion or theories proposed in the article must be codified and verified by the Mizar proof checking system.

- (2) System Development Paper on developing application which is based on an idea appeared in existing published Mizar articles is in scope. System Development Paper on developing Tools which is support for generating theorems of Mizar articles is in scope as well.
- (3) The review must be carried out in a shorter period under consideration of the rapid progress of industry technologies, and the publishing method is taken on an online basis to timely deliver.
- (4) Authors manuscript and associated Mizar articles verified by a proof checker are stored in MMA-WiP online (Article) repository that is open to the public in order to reuse coded theorems and to share for anyone could access to the latest resource of the area. The repository is owned and operated by mizar-jp.org.
- (5) Those authors whose manuscript is regarded as accepted or being under the review process, are highly encouraged to present his/her manuscripts in the annual Mizar symposium, it is frequently held during the year-end period.
- (6) It is encouraged for Authors to submit machine verified notions and theories that appeared in the MMA-WiP manuscript to the Polish journal of Formalized Mathematics (FM).
- (7) If the above submission to FM is accepted, then the coded part of the manuscript stored in MMA-WiP online repository would be erased, simply because it is able to refer to the same article in MML Library after FM would include it.

Letter:

Scope and Contents of the research area are the same as regular paper. However, the Letter aims to provide a forum among researchers in line with the following points (8)-(10).

- (8) Sharing the latest research results of informatic or formal mathematical new idea or invented notion which has been verified by Mizar.
- (9) Discussion of an article already stored in the online repository.
- (10) Journal intends to provide a forum where a proposal for an innovative idea, technical improvement, or presenting a problem regarding research topics.

1.2 Submission

The journal accepts Regular Papers, System Development Paper, Article Paper and Letters, as shown in the previous section.

All submitted manuscripts must be fulfilling the following requirements explained in the subsections from 1.2.1 to 1.2.4 would be commonly applied to either Regular Paper, System Development Papers, or Letter. Table 1 and 2 explain the specific requirements for each particular article case. It is emphasized, prior to any requirements, the ethics of being a researcher and engineer must not be compromised.

1.2.1 Originality

- Proposed notions should not be derived from existing theorems in MML in a trivial manner.
- In the case of System Development Paper, even proposed system is combined known technics, and it could be treated as new if the following criteria are met:
 - a) The same combination has not been applied,
 - b) The system itself is new, and
 - c) New findings derived from the system.
- Comply copyrights policy and it is not allowed dual submitting, the author should not, in general, publish manuscripts essentially the same contents in multiple journals.

1.2.2 Significance

- Journal expects the author's contribution would have some significance to reinforce or widen the research area.
- Impact or importance of articles would be measured potentially by estimating how much it is utilized or referred to the MML libraries.
- Regarding to system-related research, authors emphasize the advantage of their proposed software comparing existing similar systems by benchmark testing or by available technical data. In a case a system is completely new, there is no existing system one could compare, necessarily justification of its advantage is required.

1.2.3 Reliability

- Reliability of an article is guaranteed by the following manner, presented notions and ideas are translated to Mizar code and verified in the Mizar proof checking system.
- An article on a study of system development, it is not required to describe intermediate detailed test result. It is fully the author's responsibility to assure the reliabilities of their result. The followings are to be considered prior to submit a manuscript:
- References are enumerated properly completed without any particular bias.
- Technical results are evaluated by appropriate comparison with the existing system, and its result is concluded by appropriate reasoning.
- System Development article consists of three parts; theoretical presentation, computation experiment, and evaluation of the result. Justifications of the result should be done by supporting test or back-testing. However, the idea itself is excellent, and rigorous support test may not be required.
- Conditions of test/experiment must be precisely described.

1.2.4 Comprehensive

- Author’s claim and its argument must be comprehensive based on structured and clear reasoning.
- As for System Development Report, it must include technical background and its Interpretation into formal methods in order to reader could see the relation between the engineering aspect and formal method.
- For Article Paper, only the contents of files that have passed the Mizar proof checker (*.miz, *.voc) will be published. Therefore, authors are requested to remove unnecessary citations and proof steps as much as possible in the environment and body sections using the utilities provided by the Mizar support system.

(Please refer to the procedure described in <http://mizar.org/library/submit.html>)

Table.1 Criteria of Contents & Requirements for Regular Paper

Elements	Contents	Requirements (Regular Paper)
Scope	Any Research Areas is in Scope of MMA-WiP as far as it relates to Mizar	The submission rule is the same principle as of the existing journal, Mechanized Mathematics and Applications (MMA). Any article must be verified by the Mizar proof checking system. It is allowed to present a system application based on existing published Mizar articles or supporting tools for the proof checker Mizar. These articles are called “System Development Paper.”
Originality	The main result and contents of the submitted paper must be unpublished. The proposed notion should not be derived from existing theorems in MML in a trivial manner.	The proposed notion should not be derived from existing theorems in MML in a trivial manner. In the case of System Development Paper, even proposed system is combined known technics, it could be treated as new if the following criteria are met; a) The same combination has not been applied, b) System itself is new, c) Deliverables from the system provide new results.

Significance	<p>Journal expects the author's contribution would have some significance to reinforce or widen the research area.</p>	<p>The impact or importance of articles would be measured potentially by estimating how much it is utilized or referred to the MML libraries.</p> <p>In the case of System Development Paper, there is no existing system one could compare for justification of his/her presenting system, necessarily a reasoning of its advantage would be presented to persuade the audience effectively.</p>
Reliability	<p>The reliability of an article is guaranteed by the following manner, presented notions and ideas are translated to Mizar code and verified in the Mizar proof checking system.</p>	<p>In the case of System Development Paper, results can be thought to be reliable if the following information, which technologies are combined, which kind of environment and condition are deployed, are clearly described.</p>
Comprehensive	<p>The author's claim and its argument must be comprehensive based on structured and clear reasoning.</p>	<p>In the case of System Development Paper, it must include technical background and its Interpretation into formal methods in order to reader could see the relation between the engineering aspect and formal method.</p> <p>For Article Paper, only the contents of files that have passed the Mizar proof checker (****.miz, ***.voc) will be published. Therefore, authors are requested to remove unnecessary citations and proof steps as much as possible in the environment and body sections using the utilities provided by the Mizar support system.</p>

Table.2 Criteria of Contents & Requirements for Letter

(Scope and Contents are the same as Table.1)

	Requirements (Letter)	
Decision Criteria	Latest Research Report (Take advantage of quick announcement)	Discussion / Problem presentation (Object to inspire readers awareness on the problem)
Originality	Most important	Partially important
Significance	Necessary	According to the above objective
Reliability	Being verified by the Mizar proof checking system guarantees its reliability.	According to the scope/ Mizar proof checker and MML libraries or develop support tools. The problem should have generalities.
Comprehensive	Claim and its argument must be comprehensive based on structured and clear reasoning. The scope can be reduced from Regular Paper.	

1.3 Definition of Public Publications

In this guideline, Public Publications mean those magazines or books which can be available at the domestic or internal market and those journals which include refereed paper and issued by academic societies or institutes. Authors are allowed to submit articles that have been appeared in other published material rather than give a definition of the publication and deem to be no potential copyright violation as a new article. However, the author should clarify the fact with a copy of its evidence. Those material which has been appeared in a conference sponsored or co-sponsored by MMA-WiP are not necessary to attach.

1.4 Copyright

1.4.1 Copyright ownership

All copyrights, whether inside or outside Japan (hereinafter including all rights provided for in Articles 21 through 28 of the Copyright Law of Japan) for the papers submitted to the MMA-WiP shall in principle belong to the mizar-jp.org site as from the time when the manuscript is registered in MMA-WiP online repository. By electrically submitting the manuscript to MMA-WiP, it is regarded that the author agrees on copyright policy stated in this Author Guidelines.

For the method of transferring copyright when electronic submission is not possible, the author should contact the Society's Editorial Committee.

Rights of Authors:

Authors have other rights rather than transferred copyright.

- (a) Authors have other rights, such as a patent.
- (b) Authors may use their materials partially to compile their publication list.
- (c) Authors may distribute copies of materials for non-commercial purposes, such as classroom teaching.
- (d) Authors shall comply with domestic copyright law.

1.4.2 Exception for Submission to other publication

Authors may not submit an article which is essentially same content as MMA-WiP has received to other academic societies, the journal of Formalized Mathematics (FM), and Mizar Mathematical Library (MML) are the exception, those Papers for which the final manuscripts were received by MMA-WiP. In the case a decision is made not to publish in MMA-WiP as reject, MMA-WiP will return the copyright for such paper to the author.

1.4.3 Notes regarding copyrights transfer

- (a) In order to comply with copyright, you should obtain written consent from licensor to reprint without charge if required.
- (b) An article should include all coauthor's name who contributor essentially.
- (c) A consent or approval should be obtained prior to submission from an appropriate person who has the authority of the author's affiliate, if necessary.

1.5 Publishing translation papers

Authors are granted to publish their own English translation of an accepted paper in Mechanized Mathematics and Its Applications (MMA).

2. Preparation manuscript

2.1 Important notices

The purpose of MMA-WiP is to become quickly and widely known as the results of new research, development, and applications that contribute to the science and technology of Mizar proof checking system and MML libraries. Since valuable and exciting information for readers should be published in the journal quickly and recognized efficiently, authors make manuscripts with following in mind.

- (1) Notion or theories proposed in the article must be codified and verified by Mizar proof checking system.
- (2) Not only experts but also non-experts can understand the significance of contents and results.
- (3) Manuscripts should be concisely presented without irrelevant content. The author must make sufficient elaboration to avoid typographical errors.
- (4) Contents should be written logically without a gap in explanation. The validity of the prerequisite assumption and condition for the paper should be considered enough. Moreover, its generality should be shown.
- (5) The current status of the related field would be summarized. The position of the paper there would be appeared.
- (6) The author would expressly represent which part is creativity or originality or significance in the paper.

2.2 Language

Only Japanese or English language is considered for publication. Mizar article must be codified into Mizar language and verified by Mizar proof checking system. For Article Paper, the language of the text must be English.

2.3 Manuscript style and number of pages

Manuscript style and the number of pages for paper and letter are shown in following Table.3 and 4, respectively.

Table 3. Manuscript style and number of pages for Regular Paper and System Development paper

Manuscript Style	Title	The paper title must be able to image the work.
	Abstract	The contents of the paper are accurately summarized. About 100 words. For Article Paper, the language of the text should be English. A one-page abstract describing the contents of the paper should be included as a cover page (required). A Japanese abstract may also be included.
	Introduction	It should be concisely written and can be easily understood, such as the concept, purpose, reason, method, conclusion. Necessity/significance of the research, the current status / the position of the research in related fields, the purpose and the scope of the research, and the point of the originality should be represented without a body of the paper.
	Conclusion	Achievements against purpose, assertions of study, and future works should be summarized.
	Length of manuscript	The number of pages must be 8(min)-16(max). However, the maximum number of pages for an article is not set for Article Paper.

Table 4. Manuscript style and number of pages for Letter

Manuscript Style	Title	It encourages that the content of the Letter is generally understood.
	Abstract	
	Introduction	
	Conclusion	
	Length of manuscript	The number of pages must be 4(min)-8(max)

2.4 Manuscript Format

Manuscript format for Paper and Letter submitted to the MMA-WiP (hereinafter referred to as “Papers”) is exhibited in this chapter.

2.4.1 Manuscript preparation

All manuscript should be prepared using the LaTeX style file or MS-Word Template for the MMA-WiP provided by the MMA-WiP as a general rule. The MMA-WiP LaTeX Style File and MS-Word Template are available from the following MMA-WiP site; <http://mizar-jp.org/journal/MMA-WiP>

Please follow the instructions below when preparing the manuscript using the MMA-WiP LaTeX Style File or MS-Word Template.

- (1) Figures and photographs should be electronically included in the manuscript.
- (2) The MMA-WiP LaTeX Style file and MS-Word Template distributed should not be modified.

2.4.2 Manuscript Structure

The manuscript should consist of the following contents (1)-(16) in the order as specified below. Please format a manuscript in reference to a sample image PDF file of the published paper included in the template file.

- (1) Type of manuscript: Regular Paper, System Development Paper, Article Paper, or Letter
- (2) Japanese title (for Japanese paper only)
- (3) English title
- (4) Name(s) of the author(s) in Japanese (for Japanese paper only)
- (5) Name(s) of author(s) in English
- (6) Affiliation(s) and address(es) in Japanese (for Japanese paper only)
- (7) Affiliation(s) and address(es) in English
- (8) The mailing address of the corresponding author
- (9) Mizar Version, MML Version (not necessary for a letter)
- (10) Abstract (in English. about 100-200 words for a paper, within 100 words for a letter)
- (11) Already appearance or in submission elsewhere (if any)
- (12) Body of the manuscript (citation at least one Mizar article or MML, for a paper)
- (13) Acknowledgments (if any)
- (14) References
- (15) Mizar article information (for a paper)
- (16) The abstract file of Mizar article in (15) written by listing style. For Article Paper, only the contents of files that have passed the Mizar proof checker (****.miz, ***.voc) will be published.

2.4.3 Body of the manuscript

The body of the manuscript should be written in the following order.

Section:1 *****

Subsection:1.1 *****

2.4.4 References

- (1) References are not only the author's own related papers but also written by other papers. Any supplementary materials of the papers cannot be attached at submission.
- (2) All references should be numbered and listed at the end of the main text, and the numbers should be noted in the main text with a parenthesized number in superscript, where the reference is made in the main text.
- (3) Committee report or company report which are not published in the general public should not be included in the references.
- (4) Papers in submission elsewhere are not appropriate.
- (5) In principle, references are written in English. In the case that Japanese reference is cited in Japanese paper, Japanese and English titles should be written. The names of all authors must be listed. Do not omit the title of the paper. Japanese author names should be full names. For more detail, please see the distributed template file.

2.4.5 Program list, Mizar article, Figures, Photographs, and Tables

- (1) The program list and Mizar article should be full page width beyond the body width and written inline in the text.
- (2) The title of the program list and Mizar article (MML identifier, serial numbers of theorem or definition) should be written in English and left-justified at the top of the list.
- (3) Figures, photographs, and tables should be fitted as figure and table style respectively, and body width, and written inline in the text.
- (4) The title of figures, photographs, and tables should be left-justified at the bottom.
- (5) All legend in the figure, photographs, and tables must be in English.
- (6) The number of program list, Mizar article figures, photographs, and tables must be a serial number.

2.4.6 Attachment of verified Mizar article and support files

Notion or theories proposed in the article must be codified and verified by the Mizar proof checking system. The author should create the abstract file and pre-load file, store them into a designated folder, and finally submit it with the manuscript.

See the template file representing the folder arrangement of support files and attachment method by ZIP compression archive.

3. Process for Initial Submission of a Manuscript and Review Process

3.1 Process for Initial Submission of a Manuscript

Authors and Mizar-JAPAN contact concerning submission, receipt, review, resubmission, evaluation, and submission of the final manuscript of papers by the only email. Email address is listed on the following MMA-WiP site; <http://mizar-jp.org/journal/MMA-WiP>

3.2 Submission

Information specified in the template must be provided. Then, the manuscript (and support files as Mizar article) should be compressed and sent ZIP archive file. If the paper or the article has been previously published in printed publications other than the released publications and is non-problematic with respect to copyright laws, the published manuscript must be attached to the manuscript submitted to the MMA-WiP.

3.3 Receipt, Review, Resubmission, and Evaluation

The committee of MMA-WiP will email receipt confirmations and inquiries about the submitted paper.

- (1) The paper and article submitted are confirmed the registration information by the committee of MMA-WiP, and the author will receive an acknowledgment receipt with a paper ID. However, when a paper or an article deviates significantly from the instructions described in these guidelines, the paper or the article will not be accepted. Furthermore, any replacement of the papers and articles would be rejected once they submitted. Any change and addition of the authors would also be rejected once they submitted.
- (2) The paper and article submitted will be reviewed in accordance with the “Rules for review criteria” by one or two or more reviewers. Based on the comments of the reviewers, the editor in chief evaluates the paper and article and reports the results to the chairperson of the Editorial Affairs Committee. The chairperson of the Editorial Affairs Committee, in the committee of MMA-WiP, based on this evaluation report, decides acceptance or rejection as categorized below, and then notify the author accordingly.

Evaluation A: Accept

Evaluation B: Publish with minor revision. (Accept after minor revision)

Evaluation C: Refer back to the authors for clarifications before the decision on acceptance.

(Review after major revision)

Evaluation D: Not to be published. (Reject)

- (3) The author who received Evaluation B or C from reviewers should revise a manuscript and must submit a revised manuscript with a response to the reviews and requirements within two months after receipt of the evaluation report. All corrected places in revised manuscripts should be highlighted or written in red for easy identification. In addition, the author should clarify the contents and locations of corrections per each inquiry from reviewers. Papers may be regarded as withdrawn by authors when authors do not submit a revised manuscript within two months after receipt of the evaluation report. Submission of the revised manuscript after the completion of withdrawal procedures is considered as a new submission, and receipt, review, and evaluation will be treated in the same way as the initial submission.
- (4) Notification of acceptance will be sent to the author if the submitted manuscript is Evaluation A, and accepted for publication in MMA-WiP.
- (5) Notification of rejection will be sent with reasons for the rejection if the manuscript decided to be Evaluation D. If unable to accept the reason for rejection, authors can file a written opposition up to two times.
- (6) Paper screening procedure follows the steps described above, and the committee of MMA-WiP shall not be held responsible for any liabilities incurred.
- (7) Paper and article submitted to the MMA-WiP must not be submitted to other journals.

3.4 Procedures Following Acceptance

3.4.1 Submission of Final Manuscript

The author who receives the notification of acceptance must register the necessary information (only when instructed by the committee of MMA-WiP) and submit the final manuscript. The following final manuscript data should be stored in a compressed folder and sent to the MMA-WiP.

- (1) A set of manuscript data files (LaTeX, MS-Word and all other files)
- (2) Support files (e.g., Mizar article)
- (3) Typeset example for the paper (PDF file)

3.4.2 Proof-reading by the author

As a general rule, the author will be asked to proof-read the final copy only once.

4. Article-Processing Charge and Publication Fee

It is free of Article-Processing Charge and Publication Fee.

Revision record:

September 18, 2019	Drafting
September 24, 2019	Editorial Committee approval 1st edition
April 7, 2020	Drafting 1st edition in English
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