

Using the Mathematical Communications template with mc.cls document class

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Abstract. This paper describes the use of the L^AT_EX mc.cls class file for typesetting articles for the journal *Mathematical Communications*.

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1. Introduction

The mc.cls document class is designed to produce papers suitable for publication in the *Mathematical Communications*. It is based on the standard article L^AT_EX2e class and is compiled with the pdf_latex engine.

The simplest way to prepare your paper is by inserting the main body of your L^AT_EX file into this template.

2. Manuscript submission

For detailed instructions on submitting the manuscript please consult the *Mathematical Communications website*.

All manuscripts should be written in English and contain the following elements:

- *Full title* (up to 150 characters). Please avoid abbreviations and formulae, where possible.
- *Short title* (not more than 50 characters including spaces).
- *Author names and affiliations.* The order of authors should match the order in the submission system. For each author add his/her affiliation which should include institution name (e.g. university and department/institute), city, state (if needed), and the country name. Include the e-mail address of each author and clearly indicate the corresponding author.
- *Abstract.* A concise abstract, containing not more than 200 words is required. Please avoid references and non-standard or uncommon abbreviations in the abstract.
- *Keywords.* The authors are required to provide 2 to 7 keywords.
- *Mathematics Subject Classification.* Include one or more [Math. Subj. Class. 2020](#) codes.
- *References.* A full list of references should be given at the end of the manuscript in alphabetical order by the first author's last name and formatted as it is in this template article. The best and simplest way to accomplish this is to use Bib_TE_X with the style-file mcaomplain.bst.

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3. The mc.cls class

The mc.cls class automatically loads the following packages: amsmath, amssymb, amsfonts, latexsym, amsthm, thmtools, pict2e, graphicx, tikz, hyperref. Additional packages can be loaded by adding commands in the designated part of the MC_template.tex file.

3.1. Standard environments

The mc.cls document class predefines the following theorem-like environments: Theorem, Lemma, Proposition, Corollary, Conjecture, Assertion, Definition, Axiom, Condition, Example, Algorithm, Assumption, Property, Problem, Remark, Note, Notation, Conclusion, Claim, Acknowledgment, and Question. Predefined is also the Proof environment.

Axiom 1. The empty set is empty.

Theorem 1. *The set $\{\emptyset\}$ is not empty.*

Corollary 1 (Existence). *There exists a nonempty set.*

Proof. The proof is trivial because of Theorem 1. □

Theorem 2 (Uniqueness). *The empty set is unique, i.e., there is only one empty set.*

Remark 1 (Murphy). What can go wrong, will go wrong.

Equations are written in the usual way

$$2 + 2 = 4. \tag{1}$$

The equation should be numbered only if it is referenced in the text, as here (1). Displayed equations should be formatted carefully, ensuring they do not exceed the page width.

3.1.1. Special mathematical fonts

Besides the “standard” Blackboard Bold

`\mathbb{A}`: ABCDEFGHIJKLMNOPQRSTUVWXYZ and the single lowercase letter `\Bbbk`: k,

the Gothic (Fraktur)

`\mathfrak{A}`: ABCDEFGHIJKLMNOPQRSTUVWXYZ, abcdefghijklmnopqrstuvwxyz,

and the calligraphic font

`\mathcal{A}`: ABCDEFGHIJKLMNOPQRSTUVWXYZ,

the mc.cls document class provides two additional calligraphic fonts

`\varmathcal{A}`: ABCDEFGHIJKLMNOPQRSTUVWXYZ,

and the following one in two font-weights

`\mathscr{A}`: ABCDEFGHIJKLMNOPQRSTUVWXYZ

and

`\mathscrB{A}`: ABCDEFGHIJKLMNOPQRSTUVWXYZ.

3.2. Tables and figures

For nice looking tables we recommend booktabs package that loads with the mc.cls class. All tables should be center-aligned, they should have a caption and they should be referenced in the text, e.g. as Table 1.

The same applies to figures. At the production stage, figures should be provided separately. The PDF format is recommended for figures, but PNG and other formats are also acceptable, provided they are of good quality.

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19	99	24
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Table 1: A sample table

4. References

The list of references should only include works that are cited in the text. Personal communications should only be mentioned in the text.

Dealing with references is best done using BibTeX with the style-file `mcaomplain.bst`, which is a slight modification of the `aomplain` bibliography style.

Ensure that the references are quoted accurately, and use the standard abbreviations for journal names (see e.g. the list of references used in Mathematical Reviews). We suggest using [MR Lookup](#) for finding bibtex entries. We encourage the use of Digital Object Identifiers (DOIs) as links in the reference list. Ensure that the references are quoted accurately and pay attention to the correct use of upper and lower case letters in reference titles.

For citing references in text use `\cite`. The references will then appear in text as follows: books [3], [2], journal paper [6], joint citations [5, 6], online resources [9], electronic journal paper [4], arXiv repository paper [1], chapter or section in a book [7] and conference proceedings paper [8]. To cite a specific page, use [3, p. 243], or for a specific theorem, use [4, Theorem 3.1].

Acknowledgements

Acknowledgements can be added here.

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Appendix A. Some Appendix

Appendices should be placed at the end of the manuscript, after the references list.