

LaTeX Style Guide for the
Journal of Integer Sequences
Version 1.2

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Most authors of papers in *Journal of Integer Sequences* prepare their papers in LaTeX. Please observe the following guidelines.

1 Common Grammatical Errors

1. Avoid the passive voice. Instead of saying “In Smith’s paper [1] it is shown that all primes > 2 are odd”, say “Smith [1] showed that all primes > 2 are odd”.
2. Avoid the use of constructions, such as “don’t”, “can’t”, “isn’t”, etc.
Wrong: The number 7 is prime, since it isn’t divisible by 2, 3, 4, 5, or 6.
Right: The number 7 is prime, since it is not divisible by 2, 3, 4, 5, or 6.
3. The word “precise” is not a verb in English.
Wrong: We now precise the connection between α and β .
Right: We now make the connection between α and β more precise.
4. Use the word “expansion”, not “development”.
Wrong: Let $[a_0, a_1, \dots]$ be the continued fraction development of x .
Right: Let $[a_0, a_1, \dots]$ be the continued fraction expansion of x .
5. Use “associate with”, not “associate to”.
Wrong: We now associate x to y .
Right: We now associate x with y .
6. Use “root” for equations, and “zero” for polynomials.
Wrong: Let α be the positive root of $x^2 - x - 1$.
Right: Let α be the positive zero of $x^2 - x - 1$.
Right: Let α be the positive root of $x^2 - x - 1 = 0$.

7. Use the term “pair”, not “couple”, to denote two objects.
 Wrong: Let (α, β) be a couple of real numbers.
 Right: Let (α, β) be a pair of real numbers.
8. Always put a comma after “i.e.” and “e.g.”.
 Wrong: Let x be a minimal element i.e. an element such that if $y \leq x$ then $y = x$.
 Wrong: Let x be a prime e.g. 2.
 Right: Let x be a minimal element, i.e., an element such that if $y \leq x$ then $y = x$.
 Right: Let x be a prime, e.g., 2.
9. Avoid run-on sentences. A run-on sentence is one that expresses two thoughts in a single phrase. Fix by separating into two or more sentences, or by connecting with a semi-colon or a conjunction such as “and”.
 Wrong: Let Σ be a finite alphabet, Σ^* denote the set of all finite words over Σ .
 Right: Let Σ be a finite alphabet, and let Σ^* denote the set of all finite words over Σ .
 Wrong: Let p be a prime number ≥ 3 , then $2^p \equiv 2 \pmod{p}$.
 Right: Let p be a prime number ≥ 3 . Then $2^p \equiv 2 \pmod{p}$.
10. Avoid starting sentences or phrases with notation.
 Wrong: f maps integers to real numbers.
 Right: The function f maps integers to real numbers.
11. Avoid treating citation numbers as objects of prepositions. Treat them syntactically like footnotes.
 Wrong: In [1] it is proved that e is irrational.
 Right: Euler [1] proved that e is irrational.
12. Use colons properly. Colons should not immediately follow verbs.
 Wrong: The resulting equation is:

$$x = y^2.$$

 Right: The resulting equation is

$$x = y^2.$$

 Right: The resulting equation is as follows:

$$x = y^2.$$

2 Common LaTeX Errors

This section lists a few of the common errors made when preparing papers in LaTeX.

2.1 Variables

Usually, variables such as x , y , n , etc., should appear in the italic font. This will occur automatically if you remember to enclose your equations (even references to a single variable) in dollar signs or double-dollar signs, or use a latex equation environment.

Wrong: Let `n` be the number of integers in the list.

Right: Let n be the number of integers in the list.

2.2 Accents

Be careful to use the proper accents. The name Erdős, for example, uses a Hungarian accent, and should be formatted with `\H`.

2.3 Floor and Ceiling

Be sure to use the built-in \TeX commands `\lfloor`, `\rfloor` and `\lceil`, `\rceil`, not square brackets, when using these integer functions.

2.4 Min and Max

Be sure to use the built-in \TeX commands `\min` and `\max` when using these functions.

2.5 Mod

Draw a distinction between the use of “mod” as a function of two arguments, mapping $a \bmod b$ to the least non-negative residue of a modulo b , and “mod” as an equivalence relation. For the first, use the \TeX command `\bmod`. For the second, use the \TeX command `\pmod` for displayed equations; for in-line equations write something like

$$x \equiv a \pmod{b},$$

which typesets as follows: $x \equiv a \pmod{b}$.

2.6 Quote marks

Do not enclose words in ordinary quotation marks "like this". This results in the following ugly output:

”like this”

Instead, use the left-quote and right-quote symbols, ‘ ‘like this’ ’, which gives the correct

“like this” .

2.7 Proper use of `\ldots` and `\cdots`

Be sure to use `\ldots` and `\cdots` properly. The rule is as follows: you should use `\ldots` if the center of mass of the items on either side is below the middle of the line — for example, if the items on either side are commas. You should use `\cdots` if the center of mass of the items on either side is in the middle of the line — for example, if the items on either side are alphabet symbols. For example:

Wrong: Consider the product $a_1 a_2 \dots a_n$. (Here we used `\ldots`.)

Right: Consider the product $a_1 a_2 \cdots a_n$. (Here we used `\cdots`.)

Wrong: Consider the sequence a_1, a_2, \dots, a_n . (Here we used `\cdots`.)

Right: Consider the sequence a_1, a_2, \dots, a_n . (Here we used `\ldots`.)

2.8 Proper punctuation of case statements

Please punctuate case statements as follows:

$$f(x) = \begin{cases} 1, & \text{if } x \text{ is irrational;} \\ 0, & \text{otherwise.} \end{cases}$$

3 Definitions

Terms that are being defined should be in a special font, such as italic or slant.

For example,

A flern is a 3-dimensional hypersquare.

4 Theorems

Use the `\begin{theorem}` ... and `\end{theorem}` commands for theorems, lemmas, propositions, etc. Theorems should be numbered.

5 Tables

Tables should be centered on the page, using the `center` environment.

6 Abstract

Every paper should have a short abstract of 50 to 200 words. The abstract should be free of symbols whenever possible, and should not contain citations to the bibliography.

7 Citations

Use citations syntactically like footnotes, not as objects of prepositions. Avoid saying things like “In [1] we find the following result.” Instead, say “Jones [1] proved the following result.” Use the LaTeX command `\cite`.

Please use the following examples when preparing citations. Pay careful attention to punctuation and the use of roman, italic, and bold fonts. In particular, notice that page ranges should be separated by two hyphens in LaTeX: write `123--145`, not `123-145`.

Please use the standard *Mathematical Reviews* abbreviations for journal names, with the exception that for particularly obscure journals you may provide the entire name.

The *Mathematical Reviews* journal abbreviation list can be found here:

<http://www.ams.org/msnhtml/serials.pdf>

7.1 Article citation

1. J. Chan and F. E. Smith, An article about Chan-Smith numbers, *J. of Chan-Smith Numbers* **13** (1998), 123–124.

Provide the volume, but **not** the issue number, unless the issue number is required to uniquely specify the paper. Note that words in article titles should not be capitalized, with the following exceptions: the first word, proper nouns, and German nouns.

7.2 Book citation

2. A. Alces, *Introduction to Moose Theory*, Springer, 1995.

Note that words in book titles should be capitalized, with the exception of very short unimportant words, such as “to”, “of”, “and”, etc. Do not include the ISBN number.

7.3 Article in Conference Proceedings or Book

3. B. Franklin, The public library as an aid to research, in G. Washington and T. Jefferson, eds., *Public Libraries in the United States*, Addison-Wesley, 2001, pp. 16–32.

8 Other Issues

Please be sure that your paper contains a list of *key words and phrases* and the appropriate *2000 Mathematics Subject Classifications*. (A list of all these classifications can be found at <http://www.ams.org/msnhtml/classification.pdf>.)