Author instructions for papers
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1. Introduction

In *Acta Mathematica* (henceforth abbreviated *Acta*) great care is taken when typesetting the papers, with a focus on clarity and nice and easy readability.

While revising your manuscript, please take the points below into consideration. This is *not* a requirement for acceptance, but will be greatly appreciated. However, most of these issues will have to be resolved sooner or later, and you will have more freedom to adapt the paper to your taste if you take them into account before the final submission of the accepted manuscript.

Please consult a recent issue of *Acta* to get a general idea of the style and layout. Note that changes other than typographical must be approved by the editor in charge. It is desirable that your paper is written in LaTeX, but we do not require you to adapt it to any particular style file.

2. Language

Acta publishes papers in English, French and German. The authors of papers in French and German should note that their papers will *not* get the same kind of linguistic polishing during the typesetting process as papers in English, putting an even larger responsibility for good language, with correct and consistent spelling, on the authors.

2.1. Spelling

In *Acta* both American and British spellings are accepted. The spelling should be consistent throughout a paper (this is a more common problem with joint papers). For instance do not mix non-linear and nonlinear (either one is acceptable).

2.2. Abbreviations

Such standard abbreviations as e.g., i.e. and viz., and the mathematical standard abbreviation a.e. may be used without explanation. On the other hand to write, for instance, PDE, ODE or psh (for plurisubharmonic) without explanation is not acceptable. If such abbreviations only occur a few times they should be fully spelt out. Otherwise an explanation should be given, usually at the first occurrence, such as

"... second-order ordinary differential equations (ODEs) describe ...".

Similarly, referring to the BBS theorem is not acceptable (unless it has been explained earlier what BBS stands for).

2.3. Denote

A common mistake in the mathematical literature is to use "denote" incorrectly. It is not acceptable to write "Denote $X = A \cup B$." A correct use of denote is seen in: "Let X denote the union $A \cup B$."

2.4. Theorems and numbering

Theorems, definitions, lemmas, propositions, corollaries, examples, remarks etc. should be numbered in one sequence, usually within sections. To get links within the paper it is important to use `\label` and `\ref`. When citing, e.g., a theorem it should look like "by Theorem 2.2" (it is not acceptable to omit the word "Theorem").

Equations should be numbered in a different sequence. Please use `\eqref` to refer to equations. Figures and tables are numbered in yet another sequence. Sections are referred to as, e.g., §3 (typeset here as `\S\ref{sect-math-expr}`).

2.5. References

Please cite references using `\cite`. All entries in the reference list should be cited in the text (please delete unnecessary references). The references should either be numbered, or should have short(!) alphanumerical labels.

Authors should make sure that the information in the reference list is complete. *Mathematical Reviews* (MathSciNet) and *Zentralblatt für Mathematik* contain the necessary information.

For a paper/book written in a language not using the Latin alphabet, e.g., Russian, Chinese or Japanese, the title should be translated into English, with the original language stated within parentheses. If a direct English translation exists, a reference to both it and to the original should be included in the entry.

When citing, e.g., a theorem in some other paper, the word "Theorem" should be included. For instance, "[3, 2.5]" is not acceptable, while "Theorem 2.5 in [3]" and also "[3, Theorem 2.5]" are.

2.6. Authors' names and addresses

In *Acta* at least one first name should be written in full for each author. Initials may be given for other first names. A complete postal address including zip code (if relevant) should also be provided for each author; the names of departments and universities should *not* be abbreviated.

2.7. Abstract

Please make sure that your paper begins with an abstract. The abstract will not be printed, but it will be used on the web. Each *Acta* paper is presented with abstract and bibliography on the web.

2.8. Colour figures

Acta is printed in black-and-white. If you wish to have figures printed in colour, you have to be prepared to contribute to the extra cost. In the online version colour figures will appear free of charge. If you have colour figures that will be printed in black-and-white it is important that they are clearly visible in greyscale.

3.   Mathematical expressions

3.1.   The imaginary unit i

Authors who use i for the imaginary unit somewhere in their paper should avoid also using it as an index. (In *Acta* the imaginary unit is always typeset as i, *not* as i, ι or, e.g., $\sqrt{-1}$.) If necessary please change your indices (one possibility may be to permute $i \mapsto j \mapsto k \mapsto l$). If i is used as the imaginary unit only in very few places, and is extensively used as an index, then this usage may be acceptable provided that a comment like "where i here denotes the imaginary unit" is added. To simultaneously use i to denote the imaginary unit and a function is fine, since this can hardly cause misunderstanding.

3.2.   Integrals, sums, unions and intersections

In integrals of functions, such as

$$\int_A f(x)\,dx \quad \text{and} \quad \iint_A f(x)\,dx\,dy,$$

the dx should always be included. (In *Acta* the d is set in math italic.) Also the set over which the integration is taken should be written explicitly, if this is not too cumbersome. The set may be given as a condition, as in

$$\int_{|x|<1} f(x)\,dx.$$

(An exception to this rule is that if measures and their restrictions are clearly distinguished, and it is always clear on which set every measure is defined, then the set may be omitted.)

Similarly, limits in sums, unions, intersections, etc. should be explicit, as in

$$\sum_{j=1}^{\infty} a_j \quad \text{and} \quad \bigcup_{j=1}^{k} E_j,$$

again with the exception of too cumbersome cases. (Writing $\sum_{j\geq 1} a_j$ is also acceptable, but the two possibilities should not be mixed in an arbitrary way.)

3.3.   Sequences and matrices

In *Acta* sequences are written using braces, e.g., $\{a_k\}_{k=1}^{\infty}$ (or $\{a_k\}_{k\geq 1}$). As with sums, limits should be provided. When explicit limits cannot be given (or are too cumbersome) they should at least be indicated, as in $\{a_k\}_k$.

For matrices such as $\{a_{jk}\}$ limits may be omitted (in this case (a_{jk}) is also acceptable).

3.4.   Sets

In *Acta* three ways of writing sets

$$\{x \in A : 1 < x < 2\},$$
$$\{x \in A ; 1 < x < 2\},$$
$$\{x \in A \mid 1 < x < 2\} \quad \text{(which should be typeset using \texttt{\textbackslash mid}),}$$

are used, as long as the usage is consistent. The use of a comma (,) instead of a colon (:) is not acceptable.

Abbreviating $\{x : u(x) > 0\}$ by $\{u > 0\}$ is not acceptable (the latter is a set of values u not of values x). However, if such constructions are frequent they can be accepted, provided that a comment on the abuse of notation is given. They are however acceptable, without further ado, in subscript arguments such as in $\chi_{\{u>0\}}$.

In *Acta* the standard sets are either written using boldface, **N**, **Z**, **Q**, **R** and **C**, or blackboard bold, $\mathbb{N}$, $\mathbb{Z}$, $\mathbb{Q}$, $\mathbb{R}$ and $\mathbb{C}$. The usage should be consistent.

`\setminus` ($\backslash$) should be used to denote the difference of sets, as in $A\backslash B$.

3.5. Commutative diagrams

Commutative diagrams should be set using `\xymatrix` from the `xy` package.

3.6. Parentheses

Due to the special meaning of { } in many situations, in *Acta* only ( ) and [ ] are used as ordinary parentheses without special meaning.

To increase readability unnecessary parentheses should be avoided, e.g., instead of

$$(f(x))^2 \quad \text{and} \quad a/(bc)$$

one should write

$$f(x)^2 \quad \text{and} \quad a/bc.$$

$<$ and $>$ should not be used as parentheses, instead `\langle` and `\rangle` should be used as in $\langle x, y \rangle$ (which can be typeset as `\langle x,y\rangle`).

3.7. `\forall` ($\forall$) and `\exists` ($\exists$)

In *Acta* the use of `\forall` ($\forall$) and `\exists` ($\exists$) is not acceptable, with the sole exception of articles dealing with formal logical expressions (when no alternative exists).

3.7.1. `\cdot` ($\cdot$)

If *Acta* the use of `\cdot` ($\cdot$) for ordinary multiplication between complex numbers should be avoided, with an obvious exception for expressions like $2 \cdot 3$.

3.8. ℓ

In *Acta* the use of ℓ is accepted, however not as an index or a summation variable, so in

$$\sum_{l=1}^{n}(2l+1) \quad \text{and} \quad a_l$$

one should use the usual l.

3.8.1. Mappings

Mappings such as $x \mapsto x^2$ should be written using $\mapsto$ (`\mapsto`) and not $\to$.

3.9. Restrictions

In *Acta* the restriction of f to the set A is written as $f|_A$.

3.10. Proofs and $\square$

Proofs can be set in several ways, but the preferable way is to use the `proof` environment. Most proofs start with "*Proof.*" or, e.g., "*Proof of Theorem* 1.1.", in which case it should end with a $\square$. The $\square$ should not be used for anything else but to end such proofs. For a proof making up a whole (sub)section with a title such as "Proof of Theorem 1.1", no $\square$ should be used.

If a proof follows soon after the statement of the result it should start with "*Proof.*"