

## Instructions for Authors

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This is the abstract of your paper which should be a single paragraph, not to exceed 12 lines, written in plain language that a general reader can understand.

*Key words:* matrix, differential equation, Banach space (The key words of your paper should not exceed 3 lines).

*Mathematical Subject Classification 2020:* 34L15, 34L20, 35R10.

### 1. Introduction

Papers should be written in English. Please use the JMPAG template (the files `jmpag.sty` and `template.tex`) to prepare your tex file after the paper is accepted by the JMPAG. You should put the files `jmpag.sty` and `template.tex` in the same folder to work correctly. For detailed instructions in  $\text{\LaTeX}$  see, e.g., <https://www.overleaf.com/learn> or <https://en.wikibooks.org/wiki/LaTeX>. Please open both files `template.tex` and `template.pdf` and read carefully all information in them including details proceeded by % sign (in the  $\text{\TeX}$ -file). In particular, you should set the title of the paper, names of the authors, their affiliations, addresses of affiliations, and e-mail addresses just after `\begin{document}` and before `\BeginPaper`. After the command `\BeginPaper` you may put your own macros if you need. Note that using commands of the type `\def`, the command `\renewcommand` and other `\renew...` are not allowed. Next, you should give the abstract of the paper, keywords, and the AMS Subject Classification 2020 codes: <https://mathscinet.ams.org/msc/msc2020.html>. After that you may begin the text of your paper. Please note that the footnotes are not allowed throughout the paper. Place the list of references at the end of the paper, using samples given in `template.tex`. The command `\EndPaper` is the last one before `\end{document}`. Note that you should run  $\text{\PDFLaTeX}$  procedure of compilation for the pdf-file to show up correctly. Thus you obtain the pdf-file directly without dvi-file. These are important instructions and explanations. Thank you for your cooperation.

### 2. Examples

Please note that using cross-references is **mabdatory**. It may require two  $\text{\LaTeX}$  compilations for the references to show up correctly. Please

use cross-references to all enumerated elements (equations, sections, figures, theorems, items of lists etc.) in the following way. The command `\label{name}` should be used to assign the identifier “name” to an element. The command `\ref{label-name}` or `\eqref{label-name}` references the object you have marked before, see Subsections 2.1, 2.6, and 2.5. The command `\bibitem{label-bibitem}` should be used to assign the identifier “label-bibitem” to a citation. The command `\cite{label-bibitem}` or `\cite[text]{label-bibitem}` cites the item you have marked before, see Section 5.

### 2.1. A sample of theorem.

**Theorem 2.1.** *Content of your theorem.*

*Proof.* To refer to equations and statements in your paper, use the commands `\ref{label}` and `\eqref{label}`: (2.1), (3.1), (3.3), and Lemma 2.3.  $\square$

**Theorem 2.2** (Main theorem). *Content of your theorem.*

### 2.2. A sample of lemma.

**Lemma 2.3.** *State your lemma here.*

*Proof.* Your proof statements.  $\square$

Text in definition and remark should not be slanted.

### 2.3. A sample of remark.

*Remark 2.4.* Content of your remark.

### 2.4. A sample of definition.

**Definition 2.5.** Sample: Let  $\phi_t$  be an Anosmia flow on a compact space  $V$  and  $A \subset V$  a dense set. Say that the upper Lacunae exponents are  $\frac{1}{2}$ -pinched on  $A$  if

$$\sup_{x \in A} \frac{\max\{|\bar{\lambda}| : \bar{\lambda} \text{ is a nonzero upper Lyapunov exponent at } x\}}{\min\{|\bar{\lambda}| : \bar{\lambda} \text{ is a nonzero upper Lyapunov exponent at } x\}} \leq 2. \quad (2.1)$$

**2.5. Examples of inserting figures.** The JMPAG requires graphics to be sent in jpeg, jpg, png, or pdf format. Use the `graphicx` package to embed references to your graphics directly in a  $\text{\LaTeX}$  file. The use of other packages are strictly prohibited. The jpeg, jpg, png, and pdf files will not be physically included in the  $\text{\LaTeX}$  file. Each graphic must be submitted as a separate file along with the  $\text{\LaTeX}$  document.

Your may also create graphics using `TikZ` package. Please do not use obsolete graphic packages (e.g., `picture`, `epic`, `eepic`, etc.) for creating your graphics.

Here are the examples of inserting figures (see Figures 2.1–2.3).

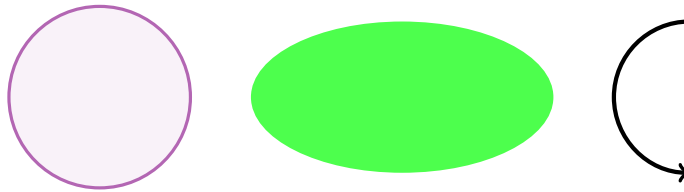


Fig. 2.1: Here is the caption of your figure

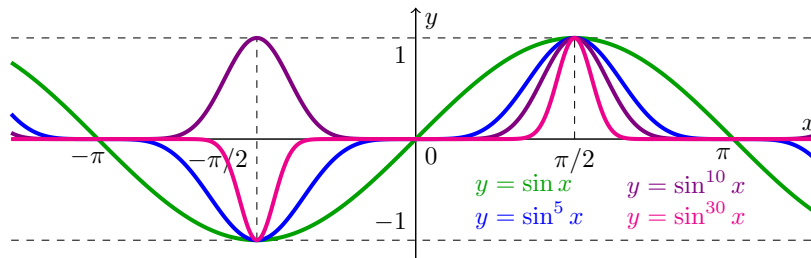


Fig. 2.2: Here is the caption of your figure

**2.6. Samples of enumerated lists.** For creating enumerated lists, **only** the package `enumitem` should be used. Please use the commands: `\arabic*`, `\Roman*`, `\roman*`, `\Alph*`, or `\alph*`, with appropriate symbols of the point, parentheses, or braces. Below we give some examples of enumerated lists.

Arabic numerals:

1. Your first item.
2. Your second item.
3. Your third item.

You may create labels and use the command `\ref{label}` to cite these items, e.g., **2**.

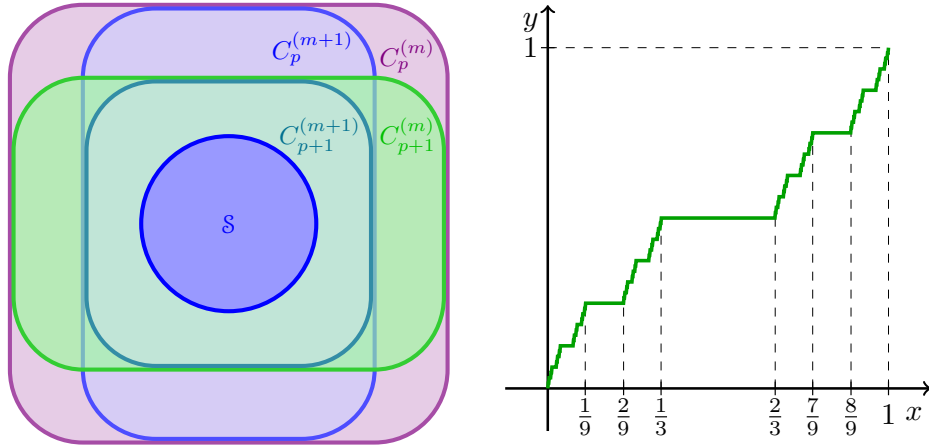
Roman numerals:

- (i) your first item;
- (ii) your second item;
- (iii) your third item.

You may create labels and use the command `\ref{label}` to cite these items, e.g., **(ii)**.

An alphabetical list:

- A) your first item;
- B) your second item;
- C) your third item.



(a) Here is the caption of your figure (a) (b) Here is the caption of your figure (b)

Fig. 2.3: Here is the caption of your figures

You may create labels and use the command `\ref{label}` to cite these items, e.g., [B](#)).

A list with sublists:

1. Your first item:
  - a) your first subitem;
  - b) your second subitem;
  - c) your third subitem.
2. Your second item.
3. Your third item:
  - (I) your first subitem;
  - (II) your second subitem;
  - (III) your third subitem;
  - (IV) your forth subitem.

You may create labels and use the command `\ref{label}` to cite these items, e.g., [1c](#))

### 3. How to align math formulas

To create your formulas, use the environments `gather`, `align`, `multline`, `aligned`, `split`, and others except the obsolete environment `eqnarray`. Please note that the number of a multiline formula should be placed at the end of its last line. Do not use the brace “{” to couple several formulae but type them separately (with its own number for every of them if it is necessary).

**Theorem 3.1.** *Content of your theorem.*

In the proof below, we would like to show you how to align the math formulas:

*Proof of Theorem 3.1.* Please refer to the following example and align your math formulas:

$$\begin{aligned}
 \theta_\varepsilon \wedge d\theta_\varepsilon^{n-1} &= (\theta_0 + \varepsilon\alpha) \wedge (d(\theta_0 + \varepsilon\alpha))^{n-1} \\
 &= (\theta_0 + \varepsilon\alpha) \wedge (d\theta_0)^{n-1} + \theta_0 \wedge d\theta_0^{n-1} - \varepsilon d(\alpha \wedge \theta_0 \wedge d\theta_0^{n-2}) \\
 &\quad + \theta_0 \wedge d\theta_0^{n-1} + \varepsilon\alpha \wedge d\theta_0^{n-1} \\
 &= \theta_0 \wedge d\theta_0^{n-1} - \varepsilon d(\alpha \wedge \theta_0 \wedge d\theta_0^{n-2}), \tag{3.1}
 \end{aligned}$$

It also can be aligned in the following way:

$$\begin{aligned}
 \theta_\varepsilon \wedge d\theta_\varepsilon^{n-1} &= (\theta_0 + \varepsilon\alpha) \wedge (d(\theta_0 + \varepsilon\alpha))^{n-1} \\
 &= (\theta_0 + \varepsilon\alpha) \wedge (d\theta_0)^{n-1} + \theta_0 \wedge d\theta_0^{n-1} - \varepsilon d(\alpha \wedge \theta_0 \wedge d\theta_0^{n-2}) \\
 &\quad + \theta_0 \wedge d\theta_0^{n-1} + \varepsilon\alpha \wedge d\theta_0^{n-1} \\
 &= \theta_0 \wedge d\theta_0^{n-1} - \varepsilon d(\alpha \wedge \theta_0 \wedge d\theta_0^{n-2}), \tag{3.2}
 \end{aligned}$$

Here is other example if the math expression in [ ] exceeds one line:

$$\begin{aligned}
 \int_0^T |u_0(t)|^2 dt &\leq \delta^{-1} \left[ \int_0^T (\beta(t) + \gamma(t)) dt \right. \\
 &\quad \left. + T^{\frac{2(p-1)}{p}} \left( \int_0^T |\dot{u}_0(t)|^p dt \right)^{\frac{2}{p}} + T^{\frac{2(p-1)}{p}} \left( \int_0^T |\dot{u}_0(t)|^p dt \right)^{\frac{2}{p}} \right]. \tag{3.3}
 \end{aligned}$$

Please use the `displaystyle` if your formulas fully occupy a paragraph, while use `textstyle` among the text.

For two equations:

$$\begin{aligned}
 A &= \theta_0 \wedge d\theta_0^{n-1} - \varepsilon d(\alpha \wedge \theta_0 \wedge d\theta_0^{n-2}), \\
 B &= \theta_1 \wedge d\theta_1^{n-1} - \varepsilon d(\alpha \wedge \theta_1 \wedge d\theta_1^{n-2}).
 \end{aligned}$$

Please align your formulas nicely according to the above examples. Thanks.  $\square$

## 4. References

A sample of the references you may find below. Please put your references in alphabetical order. For abbreviations of names of journals, use the list: <https://mathscinet.ams.org/msnhtml/serials.pdf>

## 5. Citations

We use the package `cite` for creating citations. For citing use the command `\cite{label}` or `\cite[text]{label}`, e. g., [3], [2–6, 8, 9], or [7, Chapter 1].

**Acknowledgments.** We would like to thank you for *following the instructions above* very closely in advance. It will definitely save us lot of time and expedite the process of your paper’s publication.

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## References

- [1] V.D. Ouellete, *Schur complements and statistics*, Linear Algebra Appl. **36** (1981), 187–295.
- [2] J. Schur, *Über Potenzreihen, die in Inneren des Eihitskreises beschränkt sind*, J. Reine Angew. Math. **147** (1917), 205–232 (German).
- [3] Y. Benoist, P. Foulon, and F. Labourie, *Flots d’Anosov a distributions stable et instable differentiables*, J. Amer. Math. Soc. **5** (1992), 33–74 (French).
- [4] P. Hoffmann, *Torsion Cycles and Set Theoretic Complete Intersection*, Ph.D. thesis, Washington University in St. Louis, 2006.
- [5] SARS Expert Committee, *SARS in Hong Kong: From Experience to Action*, Report of Hong Kong SARS Expert Committee, 2003. Available from: <https://www.sars-expertcom.gov.hk/english/reports/reports.html>.
- [6] J. Serrin, *Gradient estimates for solutions of nonlinear elliptic and parabolic equations*, Contributions to Nonlinear Functional Analysis (Eds. E.H. Zarantonello and B. Pataşhau), Academic Press, 1971, 33–75.
- [7] J. Smoller, *Shock Waves and Reaction-Diffusion Equations*, Springer-Verlag, New York, 1994.
- [8] J.L. Lions, *Quelques méthodes de résolution des problèmes aux limites non linéaires*, Dunod et Gauthiers-Villars, Paris 1969 (French).
- [9] M. Entov, L. Polterovich, and F. Zapolsky, *Quasi-morphisms and the Poisson bracket*, preprint, <https://arxiv.org/abs/math/0605406>.
- [10] A. Teplinsky, *Herman’s theory revisited*, preprint, <https://arxiv.org/abs/0707.0078>.

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