

Example Article for SIGMA

First Names *LASTNAME*^a and Second *COAUTHOR*^b

a) Address of First Author, Country

E-mail: email@address

URL: <http://www.home.org/~myHome/>

b) Address of Second Author, Country

E-mail: email@address

Received ???, in final form ???; Published online ???

https://doi.org/10.3842/SIGMA.202*.***

Abstract. This is an example article for the refereed online open access journal “Symmetry, Integrability and Geometry: Methods and Applications”.

Key words: ???; ???; ???; ???

2020 Mathematics Subject Classification: ???; ???; ???

1 Introduction

Symmetry, Integrability and Geometry: Methods and Applications (SIGMA)¹ is refereed online open access² journal for speedy publication in the following areas:

- geometrical methods in mathematical physics;
- Lie theory and differential equations;
- classical and quantum integrable systems;
- dynamical systems and chaos;
- exactly and quasi-exactly solvable models;
- Lie groups and algebras, representation theory;
- orthogonal polynomials and special functions;
- quantum algebras, quantum groups and noncommutative geometry;
- supersymmetry and supergravity, strings and branes;
- cosmology and quantum gravity.

Research papers are considered for publication if they have not been published previously, and are not under consideration elsewhere. We would like to remind to the authors that papers are published to be read, and the authors should compose their works with as wide audience in mind as is consistent with the maintenance of scientific quality (we, certainly, mean the qualified audience). Review papers on recent developments and comments to the published papers are particularly welcome. The authors retain ownership of the copyright with respect to their papers published in SIGMA under the terms of the Creative Commons Attribution-ShareAlike License, <http://creativecommons.org/licenses/by-sa/4.0/>.

¹SIGMA is a non-profit, volunteer-run project operated by scientists from Department of Mathematical Physics, Institute of Mathematics of National Academy of Sciences of Ukraine, 3 Tereshchenkivs'ka Str., Kyiv-4, 01024 Ukraine, <https://www.imath.kiev.ua/~appmath/>.

²Nevertheless, despite open access, we **do not charge authors for publication**, i.e., SIGMA is no-fee open-access journal.

We plan to publish papers online immediately after their accepting for publication. *The length of an article is not limited.*

Submitting a paper to the journal can be done in two way:

- submit the paper to the [arXiv](#) and send archive number to editor@sigma-journal.com or
- send zipped paper in TeX/LaTeX format by e-mail directly to editor@sigma-journal.com (with pdf- or ps-file).

After accepting the article for publication in SIGMA authors shall prepare the paper in the L^AT_EX2 ϵ format, using the style file **sigma.cls**, according to the requirements listed below (this is **mandatory**). The style file **sigma.cls** was created on the basis of the standard style article. The font size is 11pt. The following style packages are used: **amsthm**, **amsmath**, **latexsym**, **amssymb**, **epsfig**, **graphics**. Authors can use for preparation of their articles other standard style packages.

We kindly ask you do not use abbreviations for standard L^AT_EX commands!

Please address requests for additional information to editor@sigma-journal.com.

After preparation of the paper for publishing we will send the author(s) the pdf-file of the paper for final checking that should be completed in a week.

2 Displayed mathematics

The equations presented in separate lines are to be given by means of separators **equation** or their versions for numbered equations and **displaymath** of their versions for non-numbered equations. It is not allowed to use $\$ \$ \dots \$ \$$ as separators as they do not provide left-side justification adopted in SIGMA. *Only equations referred in the paper should be numbered.* Equations should be numbered through all the paper (or by sections). All references to equations are to be organized by means of the labels:

$$(a + b)^2 = a^2 + 2ab + b^2. \tag{2.1}$$

The equation (2.1) is an example of numbered equation, and the following gives an example of a non-numbered equation

$$a^2 - b^2 = (a - b)(a + b).$$

Equations set in multiple rows, as e.g. equations (2.2), (2.3) are to be typeset using separators **gather**, **gather***, **split**, **aligned** and similar to them

$$\begin{aligned} (a + b) (a^2 - ab + b^2) \\ = a^3 + b^3, \end{aligned} \tag{2.2}$$

$$(a - b) (a^2 + ab + b^2) = a^3 - b^3. \tag{2.3}$$

3 Theorem like environments

Environments for theorems, lemmas, corollaries, propositions, definitions, examples, remarks, notes and the like are defined in the **sigma.cls**.³

Theorem 3.1. *This is an example of theorem.*

Proof. The text of a proof of the Theorem 3.1. ■

³The numeration can be changed using environments defined in the preamble of this source.

Theorem. *This is an example of unnumbered theorem.*

Lemma 3.2. *This is an example of lemma.*

Proof. Example of particular case proof ends with an equation:

$$a \implies b, \quad b \implies c. \quad \blacksquare$$

Corollary 3.3. *This is an example of corollary.*

Proposition 3.4. *This is an example of proposition.*

Definition 3.5. This is an example of definition.

Example 3.6. This is an example.

Remark 3.7. This is an example of remark.

Note 3.8. This is an example of note.

4 About figures

If a paper contains pictures, then it is necessary to submit together with the paper text the relevant files in the formats `eps`, `pdf`, `jpg`, `bmp`, containing high quality images. Font size of legends at the pictures should not exceed 10pt. Please use the packages `graphics` or `epsfig` for incorporation of pictures.

5 About references

The references should be presented according to the examples given [1, 2, 3, 4, 5, 6, 7]; usage of BibTeX is welcome (see `example.bib`, `sigma.bst`). Note that the full name of the reference cited should be given together with complete publishing data⁴ and it is not desirable to join a few references as single item. Also we would like to ask you to indicate DOI and arXiv numbers for the reference you cited if they are available. The order of references should be determined in the alphabetical order. Every reference given in the bibliography should be cited in the text! All citations of the references are to be organized by means of the labels (e.g. `\cite{Olver1986}`).

A First appendix

We kindly ask the authors to give all technical details of paper in the form of Appendices.

Acknowledgements

The text of acknowledgements to funds, colleagues, referees, etc. should be typed at the end of the paper, before references.

⁴You can use free MathSciNet <https://mathscinet.ams.org/mathscinet-mref>, inSPIRE <https://inspirehep.net/> tools for creating and verifying references.

References

- [1] Calogero F., The discrete-time goldfish, unpublished.
- [2] Harrison B.K., The differential form method for finding symmetries, *SIGMA* **1** (2005), 001, 12 pages, [arXiv:math-ph/0510068](#).
- [3] Kajiwara K., Masuda T., Noumi M., Ohta Y., Yamada Y., Point configurations, Cremona transformations and the elliptic difference Painlevé equation, in Théories asymptotiques et équations de Painlevé, *Sémin. Congr.*, Vol. 14, Soc. Math. France, Paris, 2006, 169–198, [arXiv:nlin.SI/0411003](#).
- [4] Olver P.J., Applications of Lie groups to differential equations, *Graduate Texts in Mathematics*, Vol. 107, Springer-Verlag, New York, 1986.
- [5] Patera J., Orbit functions of compact semisimple Lie groups as special functions, in Proceedings of Fifth International Conference “Symmetry in Nonlinear Mathematical Physics” (June 23–29, 2003, Kyiv), *Proceedings of Institute of Mathematics, Kyiv*, Vol. 50, Part 1, Editors A.G. Nikitin, V.M. Boyko, R.O. Popovych, I.A. Yehorchenko, Institute of Mathematics, Kyiv, 2004, 1152–1160.
- [6] Perelman G., The entropy formula for the Ricci flow and its geometric applications, [arXiv:math.DG/0211159](#).
- [7] Witten E., Anti de Sitter space and holography, *Adv. Theor. Math. Phys.* **2** (1998), 253–291, [arXiv:hep-th/9802150](#).