

Software article

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Algorithms for Molecular Biology

Criteria

Software articles should describe a tool likely to be of broad utility that represents a significant advance over previously published software (usually demonstrated by direct comparison with available related software).

The software application/tool described in the manuscript must be available for testing by reviewers in a way that preserves their anonymity. If published, software applications/tools must be freely available to any researcher wishing to use them for non-commercial purposes, without restrictions such as the need for a material transfer agreement. Because weblinks frequently become broken, *Algorithms for Molecular Biology* strongly recommends that all software applications/tools are included with the submitted manuscript as additional files to ensure that the software will continue to be available.

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Algorithms for Molecular Biology strongly encourages that all datasets on which the conclusions of the paper rely should be available to readers. We encourage authors to ensure that their datasets are either deposited in publicly available repositories (where available and appropriate) or presented in the main manuscript or additional supporting files whenever possible. Please see Springer Nature's [information on recommended repositories](#). Where a widely established research community expectation for data archiving in public repositories exists, submission to a community-

endorsed, public repository is mandatory. A list of data where deposition is required, with the appropriate repositories, can be found on the [Editorial Policies Page](#).

Preparing your manuscript

The information below details the section headings that you should include in your manuscript and what information should be within each section.

Please note that your manuscript must include a 'Declarations' section including all of the subheadings (please see below for more information).

Title page

The title page should:

- present a title that includes, if appropriate, the study design e.g.:
 - "A versus B in the treatment of C: a randomized controlled trial", "X is a risk factor for Y: a case control study", "What is the impact of factor X on subject Y: A systematic review"
 - or for non-clinical or non-research studies: a description of what the article reports
- list the full names, institutional addresses and email addresses for all authors
 - if a collaboration group should be listed as an author, please list the Group name as an author. If you would like the names of the individual members of the Group to be searchable through their individual PubMed records, please include this information in the "Acknowledgements" section in accordance with the instructions below
- indicate the corresponding author

Abstract

The Abstract should not exceed 350 words. Please minimize the use of abbreviations and do not cite references in the abstract. The abstract must include the following separate sections:

- **Background:** the context and purpose of the study
- **Results:** the main findings
- **Conclusions:** a brief summary and potential implications

Keywords

Three to ten keywords representing the main content of the article.

Background

The Background section should explain the relevant context and the specific issue that the software described is intended to address.

Implementation

This should include a description of the overall architecture of the software implementation, along with details of any critical issues and how they were addressed.

Results

This should include the findings of the study including, if appropriate, results of statistical analysis which must be included either in the text or as tables and figures. This section may be combined with the Discussion section for Software articles.

Discussion (if appropriate)

The user interface should be described and a discussion of the intended uses of the software, and the benefits that are envisioned, should be included, together with data on how its performance and functionality compare with, and improve, on functionally similar existing software. A case study of the use of the software may be presented. The planned future development of new features, if any, should be mentioned.

Conclusions

This should state clearly the main conclusions and provide an explanation of the importance and relevance of the case, data, opinion, database or software reported.

Availability and requirements

Lists the following:

Project name: e.g. My bioinformatics project

Project home page: e.g. <http://sourceforge.net/projects/mged>

Operating system(s): e.g. Platform independent

Programming language: e.g. Java

Other requirements: e.g. Java 1.3.1 or higher, Tomcat 4.0 or higher

License: e.g. GNU GPL, FreeBSD etc.

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List of abbreviations

If abbreviations are used in the text they should be defined in the text at first use, and a list of abbreviations should be provided.

Declarations

All manuscripts must contain the following sections under the heading 'Declarations':

- Ethics approval and consent to participate
- Consent for publication
- Availability of data and material
- Competing interests
- Funding
- Authors' contributions
- Acknowledgements
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Ethics approval and consent to participate

Manuscripts reporting studies involving human participants, human data or human tissue must:

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Data availability statements can take one of the following forms (or a combination of more than one if required for multiple datasets):

- The datasets generated and/or analysed during the current study are available in the [NAME] repository, [PERSISTENT WEB LINK TO DATASETS]
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- All data generated or analysed during this study are included in this published article [and its supplementary information files].
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- The data that support the findings of this study are available from [third party name] but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of [third party name].
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monitoring and prediction system (GIDMaPS) data sets. figshare. 2014.
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All financial and non-financial competing interests must be declared in this section.

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Acknowledgements

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Complete book, authored

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Online document

Doe J. Title of subordinate document. In: The dictionary of substances and

their effects. Royal Society of Chemistry. 1999.
<http://www.rsc.org/dose/title of subordinate document>. Accessed 15 Jan 1999.

Online database

Healthwise Knowledgebase. US Pharmacopeia, Rockville. 1998.
<http://www.healthwise.org>. Accessed 21 Sept 1998.

Supplementary material/private homepage

Doe J. Title of supplementary material. 2000.
<http://www.privatehomepage.com>. Accessed 22 Feb 2000.

University site

Doe, J: Title of preprint. <http://www.uni-heidelberg.de/mydata.html> (1999).
Accessed 25 Dec 1999.

FTP site

Doe, J: Trivial HTTP, RFC2169. <ftp://ftp.isi.edu/in-notes/rfc2169.txt> (1999).
Accessed 12 Nov 1999.

Organization site

ISSN International Centre: The ISSN register. <http://www.issn.org> (2006).
Accessed 20 Feb 2007.

Dataset with persistent identifier

Zheng L-Y, Guo X-S, He B, Sun L-J, Peng Y, Dong S-S, et al. Genome data from sweet and grain sorghum (*Sorghum bicolor*). GigaScience Database. 2011. <http://dx.doi.org/10.5524/100012>.

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