**Instructions for Authors**

Shortcuts

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**Submission Checklist**

Please:

1. Read the [**Aims & Scope**](https://www.mdpi.com/journal/algorithms/about) to gain an overview and assess if your manuscript is suitable for this journal;
2. Use the [**Microsoft Word template**](https://www.mdpi.com/files/word-templates/algorithms-template.dot) or [**LaTeX template**](https://www.mdpi.com/authors/latex) to prepare your manuscript;
3. Make sure that issues about [**publication ethics**](https://www.mdpi.com/journal/algorithms/instructions#ethics), [**copyright**](https://www.mdpi.com/authors/rights), [**authorship**](https://www.mdpi.com/journal/algorithms/instructions#authorship), [**figure formats**](https://www.mdpi.com/journal/algorithms/instructions#figures), [**data**](https://www.mdpi.com/journal/algorithms/instructions#suppmaterials) and [**references format**](https://www.mdpi.com/journal/algorithms/instructions#references) have been appropriately considered;
4. Ensure that all authors have approved the content of the submitted manuscript.
5. Authors are encouraged to add a [**biography**](https://www.mdpi.com/journal/algorithms/instructions#biography) (optional) to the submission and post it to **[SciProfiles](https://sciprofiles.com/" \t "_blank)**.

**Manuscript Submission Overview**

**Types of Publications**

Full experimental details must be provided so that the results can be reproduced. *Algorithms* requires that authors publish all experimental controls and make full datasets available where possible (see the guidelines on [**Supplementary Materials**](https://www.mdpi.com/journal/algorithms/instructions#suppmaterials) and references to unpublished data).

Manuscripts submitted to *Algorithms* should neither be published previously nor be under consideration for publication in another journal. The main article types are listed below and a comprehensive list of article types can be found [**here.**](https://www.mdpi.com/about/article_types)

* *Article:* These are original research manuscripts. The work should report scientifically sound experiments and provide a substantial amount of new information. The article should include the most recent and relevant references in the field. The structure should include an Abstract, Keywords, Introduction, Materials and Methods, Results, Discussion, and Conclusions (optional) sections, with a suggested minimum word count of 4000 words. Please refer to the journal webpages for specific instructions and templates.
* *Review:* Reviews offer a comprehensive analysis of the existing literature within a field of study, identifying current gaps or problems. They should be critical and constructive and provide recommendations for future research. No new, unpublished data should be presented. The structure can include an Abstract, Keywords, Introduction, Relevant Sections, Discussion, Conclusions, and Future Directions, with a suggested minimum word count of 4000 words.

**Submission Process**

Manuscripts for *Algorithms* should be submitted online at [**susy.mdpi.com**](https://susy.mdpi.com/). The submitting author, who is generally the corresponding author, is responsible for the manuscript during the submission and peer-review process. The submitting author must ensure that all eligible co-authors have been included in the author list (read the [**criteria to qualify for authorship**](https://www.mdpi.com/journal/algorithms/instructions#authorship)) and that they have all read and approved the submitted version of the manuscript. To submit your manuscript, register and log in to the [**submission website**](https://susy.mdpi.com/). Once you have registered, [**click here to go to the submission form for *Algorithms***](https://www.mdpi.com/user/manuscripts/upload/?journal=algorithms). All co-authors can see the manuscript details in the submission system, if they register and log in using the e-mail address provided during manuscript submission.

**Accepted File Formats**

Authors are encouraged to use the [**Microsoft Word template**](https://www.mdpi.com/files/word-templates/algorithms-template.dot) or [**LaTeX template**](https://www.mdpi.com/authors/latex) to prepare their manuscript. Using the template file will substantially shorten the time to complete copy-editing and publication of accepted manuscripts. The total amount of data for all files must not exceed 120 MB. If this is a problem, please contact the Editorial Office [**algorithms@mdpi.com**](mailto:algorithms@mdpi.com). Accepted file formats are:

* *Microsoft Word:* Manuscripts prepared in Microsoft Word must be converted into a single file before submission. When preparing manuscripts in Microsoft Word, we encourage you to use the [***Algorithms* Microsoft Word template file**](https://www.mdpi.com/files/word-templates/algorithms-template.dot). Please insert your graphics (schemes, figures, *etc.*) in the main text after the paragraph of its first citation.
* *LaTeX:* Manuscripts prepared in LaTeX must be collated into one ZIP folder (including all source files and images, so that the Editorial Office can recompile the submitted PDF). When preparing manuscripts in LaTeX, we encourage you to use the [***Algorithms* LaTeX template files**](https://www.mdpi.com/authors/latex). You can now also use the online application **[writeLaTeX](https://www.writelatex.com/" \t "_blank)** to submit articles directly to *Algorithms*. The MDPI LaTeX template file should be selected from the **[writeLaTeX template gallery](https://www.writelatex.com/templates/mdpi-article-template/fvjngfxymnbr" \t "_blank)**.
* *Supplementary files:* May be any format, but it is recommended that you use common, non-proprietary formats where possible (see [**below**](https://www.mdpi.com/journal/algorithms/instructions#suppmaterials) for further details).

**Disclaimer: Usage of these templates is exclusively intended for submission to the journal for peer-review, and strictly limited to this purpose and it cannot be used for posting online on preprint servers or other websites.**

**Free Format Submission**

*Algorithms* now accepts free format submission:

* We do not have strict formatting requirements, but all manuscripts must contain the required sections: Author Information, Abstract, Keywords, Introduction, Materials & Methods, Results, Conclusions, Figures and Tables with Captions, Funding Information, Author Contributions, Conflict of Interest and other Ethics Statements. Check the Journal [***Instructions for Authors***](https://www.mdpi.com/journal/algorithms/instructions) for more details.
* Your references may be in any style, provided that you use the consistent formatting throughout. It is essential to include author(s) name(s), journal or book title, article or chapter title (where required), year of publication, volume and issue (where appropriate) and pagination. DOI numbers (Digital Object Identifier) are not mandatory but highly encouraged. The bibliography software package *EndNote*, [***Zotero***](https://www.zotero.org/), *Mendeley*, *Reference Manager* are recommended.
* When your manuscript reaches the revision stage, you will be requested to format the manuscript according to the journal guidelines.

**Cover Letter**

A cover letter must be included with each manuscript submission. It should be concise and explain why the content of the paper is significant, placing the findings in the context of existing work. It should explain why the manuscript fits the scope of the journal.

Any prior submissions of the manuscript to MDPI journals must be acknowledged. If this is the case, it is strongly recommended that the previous manuscript ID is provided in the submission system, which will ease your current submission process. The names of proposed and excluded reviewers should be provided in the submission system, not in the cover letter.

All cover letters are required to include the statements:

* We confirm that neither the manuscript nor any parts of its content are currently under consideration or published in another journal.
* All authors have approved the manuscript and agree with its submission to (journal name).

**Author Biography**

Authors are encouraged to add a biography (maximum 150 words) to the submission and post it to **[SciProfiles](https://sciprofiles.com/" \t "_blank)**. This should be a single paragraph and should contain the following points:

1. Authors’ full names followed by current positions;
2. Education background including institution information and year of graduation (type and level of degree received);
3. Work experience;
4. Current and previous research interests;
5. Memberships of professional societies and awards received.

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**Manuscript Preparation**

**General Considerations**

* **Research manuscripts**should comprise:
  + [**Front matter**](https://www.mdpi.com/journal/algorithms/instructions#front): Title, Author list, Affiliations, Abstract, Keywords.
  + [**Research manuscript sections**](https://www.mdpi.com/journal/algorithms/instructions#manuscript): Introduction, Materials and Methods, Results, Discussion, Conclusions (optional).
  + [**Back matter**](https://www.mdpi.com/journal/algorithms/instructions#back): Supplementary Materials, Acknowledgments, Author Contributions, Conflicts of Interest, [**References**](https://www.mdpi.com/journal/algorithms/instructions#references).
* **Review manuscripts** should comprise the [**front matter**](https://www.mdpi.com/journal/algorithms/instructions#front), literature review sections and the [**back matter**](https://www.mdpi.com/journal/algorithms/instructions#back). The template file can also be used to prepare the front and back matter of your review manuscript. It is not necessary to follow the remaining structure. Structured reviews and meta-analyses should use the same structure as research articles and ensure they conform to the [**PRISMA**](https://www.mdpi.com/editorial_process) guidelines.
* **Graphical Abstract:**

A graphical abstract (GA) is an image that appears alongside the text abstract in the Table of Contents. In addition to summarizing the content, it should represent the topic of the article in an attention-grabbing way. Moreover, it should not be exactly the same as the Figure in the paper or just a simple superposition of several subfigures. Note that the GA must be original and unpublished artwork. Any postage stamps, currency from any country, or trademarked items should not be included in it.

The GA should be a high-quality illustration or diagram in any of the following formats: PNG, JPEG, TIFF, or SVG. Written text in a GA should be clear and easy to read, using one of the following fonts: Times, Arial, Courier, Helvetica, Ubuntu or Calibri.

The minimum required size for the GA is 560 × 1100 pixels (height × width). The size should be of high quality in order to reproduce well.

* **Acronyms/Abbreviations/Initialisms** should be defined the first time they appear in each of three sections: the abstract; the main text; the first figure or table. When defined for the first time, the acronym/abbreviation/initialism should be added in parentheses after the written-out form.
* **SI Units** (International System of Units) should be used. Imperial, US customary and other units should be converted to SI units whenever possible.
* **Equations:** If you are using Word, please use either the Microsoft Equation Editor or the MathType add-on. Equations should be editable by the editorial office and not appear in a picture format.
* **Research Data and supplementary materials:** Note that publication of your manuscript implies that you must make all materials, data, and protocols associated with the publication available to readers. Disclose at the submission stage any restrictions on the availability of materials or information. Read the information about [**Supplementary Materials**](https://www.mdpi.com/journal/algorithms/instructions#suppmaterials) and Data Deposit for additional guidelines.
* **Preregistration:** Where authors have preregistered studies or analysis plans, links to the preregistration must be provided in the manuscript.
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**Front Matter**

These sections should appear in all manuscript types

* **Title:** The title of your manuscript should be concise, specific and relevant. It should identify if the study reports (human or animal) trial data, or is a systematic review, meta-analysis or replication study. Please do not include abbreviated or short forms of the title, such as a running title or head. These will be removed by our Editorial Office.
* **Author List and Affiliations:** Authors' full first and last names must be provided. The initials of any middle names can be added. The PubMed/MEDLINE standard format is used for affiliations: complete address information including city, zip code, state/province, and country. At least one author should be designated as the corresponding author, and their email address and other details included at the end of the affiliation section. After acceptance, updates to author names or affiliations may not be permitted. Equal Contributions: authors who have contributed equally should be marked with a superscript symbol (†). The symbol must be included below the affiliations, and the following statement added: “These authors contributed equally to this work”. The equal roles of authors should also be adequately disclosed in the author contributions statement. Please read the criteria to qualify for authorship.
* **Abstract:** The abstract should be a total of about 200 words maximum. The abstract should be a single paragraph and should follow the style of structured abstracts, but without headings: 1) Background: Place the question addressed in a broad context and highlight the purpose of the study; 2) Methods: Describe briefly the main methods or treatments applied. Include any relevant preregistration numbers, and species and strains of any animals used. 3) Results: Summarize the article's main findings; and 4) Conclusion: Indicate the main conclusions or interpretations. The abstract should be an objective representation of the article: it must not contain results which are not presented and substantiated in the main text and should not exaggerate the main conclusions.
* **Keywords:** Three to ten pertinent keywords need to be added after the abstract. We recommend that the keywords are specific to the article, yet reasonably common within the subject discipline.

**Research Manuscript Sections**

* **Introduction:** The introduction should briefly place the study in a broad context and highlight why it is important. It should define the purpose of the work and its significance, including specific hypotheses being tested. The current state of the research field should be reviewed carefully and key publications cited. Please highlight controversial and diverging hypotheses when necessary. Finally, briefly mention the main aim of the work and highlight the main conclusions. Keep the introduction comprehensible to scientists working outside the topic of the paper.
* **Materials and Methods:** They should be described with sufficient detail to allow others to replicate and build on published results. New methods and protocols should be described in detail while well-established methods can be briefly described and appropriately cited. Give the name and version of any software used and make clear whether computer code used is available. Include any pre-registration codes.
* **Results:** Provide a concise and precise description of the experimental results, their interpretation as well as the experimental conclusions that can be drawn.
* **Discussion:**Authors should discuss the results and how they can be interpreted in perspective of previous studies and of the working hypotheses. The findings and their implications should be discussed in the broadest context possible and limitations of the work highlighted. Future research directions may also be mentioned. This section may be combined with Results.
* **Conclusions:** This section is not mandatory but can be added to the manuscript if the discussion is unusually long or complex.
* **Patents:** This section is not mandatory but may be added if there are patents resulting from the work reported in this manuscript.

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**Back Matter**

* **Supplementary Materials:** Describe any supplementary material published online alongside the manuscript (figure, tables, video, spreadsheets, etc.). Please indicate the name and title of each element as follows Figure S1: title, Table S1: title, etc.
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  For research articles with several authors, a short paragraph specifying their individual contributions must be provided. The following statements should be used "Conceptualization, X.X. and Y.Y.; Methodology, X.X.; Software, X.X.; Validation, X.X., Y.Y. and Z.Z.; Formal Analysis, X.X.; Investigation, X.X.; Resources, X.X.; Data Curation, X.X.; Writing – Original Draft Preparation, X.X.; Writing – Review & Editing, X.X.; Visualization, X.X.; Supervision, X.X.; Project Administration, X.X.; Funding Acquisition, Y.Y.”, please turn to the **[CRediT taxonomy](https://www.mdpi.com/data/contributor-role-instruction.pdf)** for the term explanation. For more background on CRediT, see [**here**](http://credit.niso.org/). "**Authorship must include and be limited to those who have contributed substantially to the work. Please read the section concerning the**[**criteria to qualify for authorship**](https://www.mdpi.com/journal/algorithms/instructions#authorship)**carefully**".
* **Data Availability Statement:** In this section, please provide details regarding where data supporting reported results can be found, including links to publicly archived datasets analyzed or generated during the study. Please refer to suggested Data Availability Statements in section “[**MDPI Research Data Policies**](https://www.mdpi.com/journal/algorithms/instructions#suppmaterials)”. You might choose to exclude this statement if the study did not report any data.
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* **References:** References must be numbered in order of appearance in the text (including table captions and figure legends) and listed individually at the end of the manuscript. We recommend preparing the references with a bibliography software package, such as [**EndNote**](http://endnote.com/), **[ReferenceManager](http://www.refman.com/" \t "_blank)** or [**Zotero**](https://www.zotero.org/) to avoid typing mistakes and duplicated references. We encourage citations to data, computer code and other citable research material. If available online, you may use reference style 9. below.
* Citations and References in Supplementary files are permitted provided that they also appear in the main text and in the reference list.

In the text, reference numbers should be placed in square brackets [ ], and placed before the punctuation; for example [1], [1–3] or [1,3]. For embedded citations in the text with pagination, use both parentheses and brackets to indicate the reference number and page numbers; for example [5] (p. 10). or [6] (pp. 101–105).

The reference list should include the full title, as recommended by the ACS style guide. Style files for [**Endnote**](http://endnote.com/downloads/style/mdpi) and [**Zotero**](https://www.zotero.org/styles/?q=id%3Amultidisciplinary-digital-publishing-institute) are available.

References should be described as follows, depending on the type of work:

 Journal Articles:  
1. Author 1, A.B.; Author 2, C.D. Title of the article. *Abbreviated Journal Name* **Year**, *Volume*, page range.

 Books and Book Chapters:  
2. Author 1, A.; Author 2, B. *Book Title*, 3rd ed.; Publisher: Publisher Location, Country, Year; pp. 154–196.  
3. Author 1, A.; Author 2, B. Title of the chapter. In *Book Title*, 2nd ed.; Editor 1, A., Editor 2, B., Eds.; Publisher: Publisher Location, Country, Year; Volume 3, pp. 154–196.

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7. Author 1, A.B.; Author 2, C.D.; Author 3, E.F. Title of Presentation. In *Title of the Collected Work* (if available), Proceedings of the Name of the Conference, Location of Conference, Country, Date of Conference; Editor 1, Editor 2, Eds. (if available); Publisher: City, Country, Year (if available); Abstract Number (optional), Pagination (optional).

 Thesis:  
8. Author 1, A.B. Title of Thesis. Level of Thesis, Degree-Granting University, Location of University, Date of Completion.

 Websites:  
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**Preparing Figures, Schemes and Tables**

* File for Figures and Schemes must be provided during submission in a single zip archive and at a sufficiently high resolution (minimum 1000 pixels width/height, or a resolution of 300 dpi or higher). Common formats are accepted, however, TIFF, JPEG, EPS and PDF are preferred.
* *Algorithms* can publish multimedia files in articles or as supplementary materials. Please contact the editorial office for further information.
* All Figures, Schemes and Tables should be inserted into the main text close to their first citation and must be numbered following their number of appearance (Figure 1, Scheme I, Figure 2, Scheme II, Table 1, *etc.*).
* All Figures, Schemes and Tables should have a short explanatory title and caption.
* All table columns should have an explanatory heading. To facilitate the copy-editing of larger tables, smaller fonts may be used, but no less than 8 pt. in size. Authors should use the Table option of Microsoft Word to create tables.
* Authors are encouraged to prepare figures and schemes in color (RGB at 8-bit per channel). There is no additional cost for publishing full color graphics.

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**Supplementary Materials, Data Deposit and Software Source Code**

*MDPI Research Data Policies*

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MDPI data policies are informed by [**TOP Guidelines**](https://www.cos.io/initiatives/top-guidelines) and [**FAIR Principles**](https://www.go-fair.org/fair-principles/).

Where ethical, legal or privacy issues are present, data should not be shared. The authors should make any limitations clear in the Data Availability Statement upon submission. Authors should ensure that data shared are in accordance with consent provided by participants on the use of confidential data.

Data Availability Statements provide details regarding where data supporting reported results can be found, including links to publicly archived datasets analyzed or generated during the study.

Below are suggested Data Availability Statements:

* Data available in a publicly accessible repository  
  The data presented in this study are openly available in [repository name e.g., FigShare] at [**[doi](https://www.doi.org/" \t "_blank)**], reference number [reference number].
* Data available in a publicly accessible repository that does not issue DOIs  
  Publicly available datasets were analyzed in this study. This data can be found here: [link/accession number]
* Data available on request due to restrictions eg privacy or ethical  
  The data presented in this study are available on request from the corresponding author. The data are not publicly available due to [insert reason here]
* 3rd Party Data  
  Restrictions apply to the availability of these data. Data was obtained from [third party] and are available [from the authors / at URL] with the permission of [third party].
* Data sharing not applicable  
  No new data were created or analyzed in this study. Data sharing is not applicable to this article.
* Data is contained within the article or supplementary material  
  The data presented in this study are available in [insert article or supplementary material here]

Data citation:

* [dataset] Authors. Year. Dataset title; Data repository or archive; Version (if any); Persistent identifier (e.g., DOI).

*Computer Code and Software*

For work where novel computer code was developed, authors should release the code either by depositing in a recognized, public repository or uploading as supplementary information to the publication. The name and version of all software used should be clearly indicated.

*Supplementary Material*

Additional data and files can be uploaded as "Supplementary Files" during the manuscript submission process. The supplementary files will also be available to the referees as part of the peer-review process. Any file format is acceptable, however we recommend that common, non-proprietary formats are used where possible. For more information on supplementary materials, please refer to [**https://www.mdpi.com/authors/layout#\_bookmark83**](https://www.mdpi.com/authors/layout#_bookmark83).

*Unpublished Data*

Restrictions on data availability should be noted during submission and in the manuscript. "Data not shown" should be avoided: authors are encouraged to publish all observations related to the submitted manuscript as Supplementary Material. "Unpublished data" intended for publication in a manuscript that is either planned, "in preparation" or "submitted" but not yet accepted, should be cited in the text and a reference should be added in the References section. "Personal Communication" should also be cited in the text and reference added in the References section. (see also the MDPI reference list and citations style guide).

*Remote Hosting and Large Data Sets*

Data may be deposited with specialized service providers or institutional/subject repositories, preferably those that use the DataCite mechanism. Large data sets and files greater than 60 MB must be deposited in this way. For a list of other repositories specialized in scientific and experimental data, please consult databib.org or re3data.org. The data repository name, link to the data set (URL) and accession number, doi or handle number of the data set must be provided in the paper. The journal [**Data**](https://www.mdpi.com/journal/data) also accepts submissions of data set papers.

*References in Supplementary Files*

Citations and References in Supplementary files are permitted provided that they also appear in the reference list of the main text.

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**Research and Publication Ethics**

**Research Ethics**

**Research Involving Human Subjects**

When reporting on research that involves human subjects, human material, human tissues, or human data, authors must declare that the investigations were carried out following the rules of the Declaration of Helsinki of 1975 ([**https://www.wma.net/what-we-do/medical-ethics/declaration-of-helsinki/**](https://www.wma.net/what-we-do/medical-ethics/declaration-of-helsinki/)), revised in 2013. According to point 23 of this declaration, an approval from the local institutional review board (IRB) or other appropriate ethics committee must be obtained before undertaking the research to confirm the study meets national and international guidelines. As a minimum, a statement including the project identification code, date of approval, and name of the ethics committee or institutional review board must be stated in Section ‘Institutional Review Board Statement’ of the article.

Example of an ethical statement: "All subjects gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee of XXX (Project identification code)."

For non-interventional studies (e.g. surveys, questionnaires, social media research), all participants must be fully informed if the anonymity is assured, why the research is being conducted, how their data will be used and if there are any risks associated. As with all research involving humans, ethical approval from an appropriate ethics committee must be obtained prior to conducting the study. If ethical approval is not required, authors must either provide an exemption from the ethics committee or are encouraged to cite the local or national legislation that indicates ethics approval is not required for this type of study. Where a study has been granted exemption, the name of the ethics committee which provided this should be stated in Section ‘Institutional Review Board Statement’ with a full explanation regarding why ethical approval was not required.

A written informed consent for publication must be obtained from participating patients. Data relating to individual participants must be described in detail, but private information identifying participants need not be included unless the identifiable materials are of relevance to the research (for example, photographs of participants’ faces that show a particular symptom). Patients’ initials or other personal identifiers must not appear in any images. For manuscripts that include any case details, personal information, and/or images of patients, authors must obtain signed informed consent for publication from patients (or their relatives/guardians) before submitting to an MDPI journal. Patient details must be anonymized as far as possible, e.g., do not mention specific age, ethnicity, or occupation where they are not relevant to the conclusions. A [**template permission form**](https://res.mdpi.com/data/mdpi_patient_consent_form-2021.docx) is available to download. A blank version of the form used to obtain permission (without the patient names or signature) must be uploaded with your submission. Editors reserve the right to reject any submission that does not meet these requirements.

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If the study reports research involving vulnerable groups, an additional check may be performed. The submitted manuscript will be scrutinized by the editorial office and upon request, documentary evidence (blank consent forms and any related discussion documents from the ethics board) must be supplied. Additionally, when studies describe groups by race, ethnicity, gender, disability, disease, etc., explanation regarding why such categorization was needed must be clearly stated in the article.

**Ethical Guidelines for the Use of Animals in Research**

The editors will require that the benefits potentially derived from any research causing harm to animals are significant in relation to any cost endured by animals, and that procedures followed are unlikely to cause offense to the majority of readers. Authors should particularly ensure that their research complies with the commonly-accepted '3Rs [1]':

* Replacement of animals by alternatives wherever possible,
* Reduction in number of animals used, and
* Refinement of experimental conditions and procedures to minimize the harm to animals.

Authors must include details on housing, husbandry and pain management in their manuscript.

For further guidance authors should refer to the Code of Practice for the Housing and Care of Animals Used in Scientific Procedures [2], American Association for Laboratory Animal Science [3] or European Animal Research Association [4].

If national legislation requires it, studies involving vertebrates or higher invertebrates must only be carried out after obtaining approval from the appropriate ethics committee. As a minimum, the project identification code, date of approval and name of the ethics committee or institutional review board should be stated in Section ‘Institutional Review Board Statement’. Research procedures must be carried out in accordance with national and institutional regulations. Statements on animal welfare should confirm that the study complied with all relevant legislation. Clinical studies involving animals and interventions outside of routine care require ethics committee oversight as per the American Veterinary Medical Association. If the study involved client-owned animals, informed client consent must be obtained and certified in the manuscript report of the research. Owners must be fully informed if there are any risks associated with the procedures and that the research will be published. If available, a high standard of veterinary care must be provided. Authors are responsible for correctness of the statements provided in the manuscript.

If ethical approval is not required by national laws, authors must provide an exemption from the ethics committee, if one is available. Where a study has been granted exemption, the name of the ethics committee that provided this should be stated in Section ‘Institutional Review Board Statement’ with a full explanation on why the ethical approval was not required.

If no animal ethics committee is available to review applications, authors should be aware that the ethics of their research will be evaluated by reviewers and editors. Authors should provide a statement justifying the work from an ethical perspective, using the same utilitarian framework that is used by ethics committees. Authors may be asked to provide this even if they have received ethical approval.

MDPI endorses the ARRIVE guidelines ([**arriveguidelines.org/**](https://arriveguidelines.org/)) for reporting experiments using live animals. Authors and reviewers must use the ARRIVE guidelines as a checklist, which can be found at [**https://arriveguidelines.org/sites/arrive/files/documents/ARRIVE%20Compliance%20Questionnaire.pdf**](https://arriveguidelines.org/sites/arrive/files/documents/ARRIVE%20Compliance%20Questionnaire.pdf). Editors reserve the right to ask for the checklist and to reject submissions that do not adhere to these guidelines, to reject submissions based on ethical or animal welfare concerns or if the procedure described does not appear to be justified by the value of the work presented.

1. NSW Department of Primary Industries and Animal Research Review Panel. Three Rs. Available online: [**https://www.animalethics.org.au/three-rs**](https://www.animalethics.org.au/three-rs)
2. Home Office. Animals (Scientific Procedures) Act 1986. Code of Practice for the Housing and Care of Animals Bred, Supplied or Used for Scientific Purposes. Available online: [**https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/388535/CoPanimalsWeb.pdf**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/388535/CoPanimalsWeb.pdf)
3. American Association for Laboratory Animal Science. The Scientific Basis for Regulation of Animal Care and Use. Available online: [**https://www.aalas.org/about-aalas/position-papers/scientific-basis-for-regulation-of-animal-care-and-use**](https://www.aalas.org/about-aalas/position-papers/scientific-basis-for-regulation-of-animal-care-and-use)
4. European Animal Research Association. EU regulations on animal research. Available online: [**https://www.eara.eu/animal-research-law**](https://www.eara.eu/animal-research-law)

**Research Involving Cell Lines**

Methods sections for submissions reporting on research with cell lines should state the origin of any cell lines. For established cell lines the provenance should be stated and references must also be given to either a published paper or to a commercial source. If previously unpublished *de novo* cell lines were used, including those gifted from another laboratory, details of institutional review board or ethics committee approval must be given, and confirmation of written informed consent must be provided if the line is of human origin.

An example of Ethical Statements:

The HCT116 cell line was obtained from XXXX. The MLH1+ cell line was provided by XXXXX, Ltd. The DLD-1 cell line was obtained from Dr. XXXX. The DR-GFP and SA-GFP reporter plasmids were obtained from Dr. XXX and the Rad51K133A expression vector was obtained from Dr. XXXX.

**Research Involving Plants**

Experimental research on plants (either cultivated or wild) including collection of plant material, must comply with institutional, national, or international guidelines. We recommend that authors comply with the [**Convention on Biological Diversity**](http://www.cbd.int/convention/) and the [**Convention on the Trade in Endangered Species of Wild Fauna and Flora**](http://www.cites.org/).

For each submitted manuscript supporting genetic information and origin must be provided. For research manuscripts involving rare and non-model plants (other than, e.g., *Arabidopsis thaliana, Nicotiana benthamiana, Oryza sativa*, or many other typical model plants), voucher specimens must be deposited in an accessible herbarium or museum. Vouchers may be requested for review by future investigators to verify the identity of the material used in the study (especially if taxonomic rearrangements occur in the future). They should include details of the populations sampled on the site of collection (GPS coordinates), date of collection, and document the part(s) used in the study where appropriate. For rare, threatened or endangered species this can be waived but it is necessary for the author to describe this in the cover letter.

Editors reserve the rights to reject any submission that does not meet these requirements.

An example of Ethical Statements:

*Torenia fournieri* plants were used in this study. White-flowered Crown White (CrW) and violet-flowered Crown Violet (CrV) cultivars selected from ‘Crown Mix’ (XXX Company, City, Country) were kindly provided by Dr. XXX (XXX Institute, City, Country).

*Arabidopis* mutant lines (SALKxxxx, SAILxxxx,…) were kindly provided by Dr. XXX , institute, city, country).

**Clinical Trials Registration**

*Registration*

MDPI follows the International Committee of Medical Journal Editors (ICMJE) [**guidelines**](http://www.icmje.org/recommendations/browse/publishing-and-editorial-issues/clinical-trial-registration.html) which require and recommend registration of clinical trials in a public trials registry at or before the time of first patient enrollment as a condition of consideration for publication.

Purely observational studies do not require registration. A clinical trial not only refers to studies that take place in a hospital or involve pharmaceuticals, but also refer to all studies which involve participant randomization and group classification in the context of the intervention under assessment.

Authors are strongly encouraged to pre-register clinical trials with an international clinical trials register and cite a reference to the registration in the Methods section. Suitable databases include [**clinicaltrials.gov**](https://clinicaltrials.gov/), [**the EU Clinical Trials Register**](https://www.clinicaltrialsregister.eu/) and those listed by the World Health Organisation [**International Clinical Trials Registry Platform**](https://www.who.int/clinical-trials-registry-platform).

Approval to conduct a study from an independent local, regional, or national review body is not equivalent to prospective clinical trial registration. MDPI reserves the right to decline any paper without trial registration for further peer-review. However, if the study protocol has been published before the enrolment, the registration can be waived with correct citation of the published protocol.

*CONSORT Statement*

MDPI requires a completed CONSORT 2010 [**checklist**](https://www.mdpi.com/data/consort-2010-checklist.doc) and [**flow diagram**](https://www.mdpi.com/data/consort-2010-flow-diagram.doc)as a condition of submission when reporting the results of a randomized trial. Templates for these can be found here or on the CONSORT website ([**http://www.consort-statement.org**](http://www.consort-statement.org/)) which also describes several CONSORT checklist extensions for different designs and types of data beyond two group parallel trials. At minimum, your article should report the content addressed by each item of the checklist.

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**Sex and Gender in Research**

We encourage our authors to follow the [**‘Sex and Gender Equity in Research – SAGER – guidelines’**](https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-016-0007-6) and to include sex and gender considerations where relevant. Authors should use the terms sex (biological attribute) and gender (shaped by social and cultural circumstances) carefully in order to avoid confusing both terms. Article titles and/or abstracts should indicate clearly what sex(es) the study applies to. Authors should also describe in the background, whether sex and/or gender differences may be expected; report how sex and/or gender were accounted for in the design of the study; provide disaggregated data by sex and/or gender, where appropriate; and discuss respective results. If a sex and/or gender analysis was not conducted, the rationale should be given in the Discussion. We suggest that our authors consult the full [**guidelines**](https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-016-0007-6) before submission.

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**Borders and Territories**

Potential disputes over borders and territories may have particular relevance for authors in describing their research or in an author or editor correspondence address, and should be respected. Content decisions are an editorial matter and where there is a potential or perceived dispute or complaint, the editorial team will attempt to find a resolution that satisfies parties involved.

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The editors of this journal enforce a rigorous peer-review process together with strict ethical policies and standards to ensure to add high quality scientific works to the field of scholarly publication. Unfortunately, cases of plagiarism, data falsification, image manipulation, inappropriate authorship credit, and the like, do arise. The editors of *Algorithms* take such publishing ethics issues very seriously and are trained to proceed in such cases with a zero tolerance policy.

Authors wishing to publish their papers in *Algorithms* must abide to the following:

* Any facts that might be perceived as a possible conflict of interest of the author(s) must be disclosed in the paper prior to submission.
* Authors should accurately present their research findings and include an objective discussion of the significance of their findings.
* Data and methods used in the research need to be presented in sufficient detail in the paper, so that other researchers can replicate the work.
* Raw data should preferably be publicly deposited by the authors before submission of their manuscript. Authors need to at least have the raw data readily available for presentation to the referees and the editors of the journal, if requested. Authors need to ensure appropriate measures are taken so that raw data is retained in full for a reasonable time after publication.
* Simultaneous submission of manuscripts to more than one journal is not tolerated.
* The journal accepts exact translations of previously published work. All submissions of translations must conform with our [**policies on translations**](https://www.mdpi.com/ethics#10).
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Plagiarism includes copying text, ideas, images, or data from another source, even from your own publications, without giving any credit to the original source.

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All MDPI submissions are checked for plagiarism using the industry standard software iThenticate. If plagiarism is detected during the peer review process, the manuscript may be rejected. If plagiarism is detected after publication, an investigation will take place and action taken in accordance with our policies.

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Authors should not preferentially cite their own or their friends’, peers’, or institution’s publications.

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During the submission process, please suggest five potential reviewers with the appropriate expertise to review the manuscript. The editors will not necessarily approach these referees. Please provide detailed contact information (address, homepage, phone, e-mail address). The proposed referees should neither be current collaborators of the co-authors nor have published with any of the co-authors of the manuscript within the last five years. Proposed reviewers should be from different institutions to the authors. You may identify appropriate Editorial Board members of the journal as potential reviewers. You may suggest reviewers from among the authors that you frequently cite in your paper.

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**English Corrections**

To facilitate proper peer-reviewing of your manuscript, it is essential that it is submitted in grammatically correct English. Advice on some specific language points can be found [**here**](https://www.mdpi.com/authors/english-editing).

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**Preprints and Conference Papers**

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Expanded and high-quality conference papers can be considered as articles if they fulfill the following requirements: (1) the paper should be expanded to the size of a research article; (2) the conference paper should be cited and noted on the first page of the paper; (3) if the authors do not hold the copyright of the published conference paper, authors should seek the appropriate permission from the copyright holder; (4) authors are asked to disclose that it is conference paper in their cover letter and include a statement on what has been changed compared to the original conference paper. *Algorithms* does not publish pilot studies or studies with inadequate statistical power.

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* Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
* Drafting the work or revising it critically for important intellectual content; AND
* Final approval of the version to be published; AND
* Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Those who contributed to the work but do not qualify for authorship should be listed in the acknowledgments. More detailed guidance on authorship is given by the [**International Council of Medical Journal Editors (ICMJE)**](http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html).

Any change to the author list should be approved by all authors including any who have been removed from the list. The corresponding author should act as a point of contact between the editor and the other authors and should keep co-authors informed and involve them in major decisions about the publication. We reserve the right to request confirmation that all authors meet the authorship conditions.

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* Adequacy of reviewer comments and author response;
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All authors must disclose all relationships or interests that could inappropriately influence or bias their work. Examples of potential conflicts of interest include but are not limited to financial interests (such as membership, employment, consultancies, stocks/shares ownership, honoraria, grants or other funding, paid expert testimonies and patent-licensing arrangements) and non-financial interests (such as personal or professional relationships, affiliations, personal beliefs).

Authors can disclose potential conflicts of interest via the online submission system during the submission process. Declarations regarding conflicts of interest can also be collected via the [**MDPI disclosure form**](https://mdpi-res.com/data/mdpi-disclosure-form.pdf). The corresponding author must include a summary statement in the manuscript in a separate section “Conflicts of Interest” placed just before the reference list. The statement should reflect all the collected potential conflicts of interest disclosures in the form.

See below for examples of disclosures:

Conflicts of Interest: Author A has received research grants from Company A. Author B has received a speaker honorarium from Company X and owns stocks in Company Y. Author C has been involved as a consultant and expert witness in Company Z. Author D is the inventor of patent X.

If no conflicts exist, the authors should state:

Conflicts of Interest: The authors declare no conflicts of interest.

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**Editorial Procedures and Peer-Review**

*Initial Checks*

All submitted manuscripts received by the Editorial Office will be checked by a professional in-house *Managing Editor* to determine whether they are properly prepared and whether they follow the ethical policies of the journal. Manuscripts that do not fit the journal's ethics policy or do not meet the standards of the journal will be rejected before peer-review. Manuscripts that are not properly prepared will be returned to the authors for revision and resubmission. After these checks, the *Managing Editor* will consult the journals’ *Editor-in-Chief* or *Associate Editors* to determine whether the manuscript fits the scope of the journal and whether it is scientifically sound. No judgment on the potential impact of the work will be made at this stage. Reject decisions at this stage will be verified by the *Editor-in-Chief*.

*Peer-Review*

Once a manuscript passes the initial checks, it will be assigned to at least two independent experts for peer-review. A single-blind review is applied, where authors' identities are known to reviewers. Peer review comments are confidential and will only be disclosed with the express agreement of the reviewer.

In the case of regular submissions, in-house assistant editors will invite experts, including recommendations by an academic editor. These experts may also include *Editorial Board Members* and Guest Editors of the journal. Potential reviewers suggested by the authors may also be considered. Reviewers should not have published with any of the co-authors during the past three years and should not currently work or collaborate with any of the institutions of the co-authors of the submitted manuscript.

*Optional Open Peer-Review*

The journal operates optional open peer-review: *Authors are given the option for all review reports and editorial decisions to be published alongside their manuscript. In addition, reviewers can sign their review, i.e., identify themselves in the published review reports.* Authors can alter their choice for open review at any time before publication, but once the paper has been published changes will only be made at the discretion of the *Publisher* and *Editor-in-Chief*. We encourage authors to take advantage of this opportunity as proof of the rigorous process employed in publishing their research. To guarantee impartial refereeing, the names of referees will be revealed only if the referees agree to do so, and after a paper has been accepted for publication.

*Editorial Decision and Revision*

All the articles, reviews and communications published in MDPI journals go through the peer-review process and receive at least two reviews. The in-house editor will communicate the decision of the academic editor, which will be one of the following:

* *Accept after Minor Revisions*:  
  The paper is in principle accepted after revision based on the reviewer’s comments. Authors are given five days for minor revisions.
* *Reconsider after Major Revisions*:  
  The acceptance of the manuscript would depend on the revisions. The author needs to provide a point by point response or provide a rebuttal if some of the reviewer’s comments cannot be revised. A maximum of two rounds of major revision per manuscript is normally provided. Authors will be asked to resubmit the revised paper within a suitable time frame, and the revised version will be returned to the reviewer for further comments. If the required revision time is estimated to be longer than 2 months, we will recommend that authors withdraw their manuscript before resubmitting so as to avoid unnecessary time pressure and to ensure that all manuscripts are sufficiently revised.
* *Reject and Encourage Resubmission*:  
  If additional experiments are needed to support the conclusions, the manuscript will be rejected and the authors will be encouraged to re-submit the paper once further experiments have been conducted.
* *Reject*:  
  The article has serious flaws, and/or makes no original significant contribution. No offer of resubmission to the journal is provided.

All reviewer comments should be responded to in a point-by-point fashion. Where the authors disagree with a reviewer, they must provide a clear response.

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*Production and Publication*

Once accepted, the manuscript will undergo professional copy-editing, English editing, proofreading by the authors, final corrections, pagination, and, publication on the [**www.mdpi.com**](https://www.mdpi.com/) website.

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