DESCRIPTION

Archives of Civil and Mechanical Engineering (ACME) publishes both theoretical and experimental original research articles which explore or exploit new ideas and techniques in three main areas: structural engineering, mechanics of materials and materials science. The aim of the journal is to advance science related to structural engineering focusing on structures, machines and mechanical systems. The journal also promotes advancement in the area of mechanics of materials, by publishing most recent findings in elasticity, plasticity, rheology, fatigue and fracture mechanics.

The third area the journal is concentrating on is materials science, with emphasis on metals, composites, etc., their structures and properties as well as methods of evaluation. In addition to research papers, the Editorial Board welcomes state-of-the-art reviews on specialized topics. All such articles have to be sent to the Editor-in-Chief before submission for pre-submission review process. Only articles approved by the Editor-in-Chief in pre-submission process can be submitted to the journal for further processing. Approval in pre-submission stage doesn't guarantee acceptance for publication as all papers are subject to a regular referee procedure. ACME does not accept manuscripts containing:

- Simulation with no experimental verification and/or which gives no new insight into the process.
- The analysis of material properties or product performance without reference to the processing which caused them or their application.

Archives of Civil and Mechanical Engineering (ACME) is an official journal of Wroclaw University of Technology.

IMPACT FACTOR

2017: 2.763 © Clarivate Analytics Journal Citation Reports 2018

ABSTRACTING AND INDEXING

Science Citation Index Expanded
Journal Citation Reports - Science Edition
EBSCOhost
Scopus
BazTech
EDITORIAL BOARD

Editor-in-chief
Zbigniew Gronostajski, Inst. of Building Sciences, Dept. of Mechanical Engineering, Wroclaw University of Technology, pl. Grunwald 11, 50-377, Wrocław, Poland, Fax: +48 71 320 34 22

Deputy Editor
Wojciech Gładysz, Fac. of Civil Engineering, Wrocław University of Technology, Wybrzeże Stanisława Wyspiańskiego 27, 50-370, Wrocław, Poland, Fax: +48 71 320 35 45

Editorial Board
Robert Arrieux, Université Savoie Mont Blanc, Annecy le Vieux, France
Gheorghe Brabie, University of Bacau, Bacău, Romania
Lesław Brunarski, INSTYTUT TECHNIKI BUDOWLANEJ (ITB), Warszawa, Poland
Edward Chlebus, Wrocław University of Technology, Wrocław, Poland
Augusto Barata Da Rocha, Instituto de Engenharia Mecânica e Gestão Industrial(Inegi), Oporto, Portugal
Leszek Demkowicz, University of Texas at Austin, Austin, Texas, USA
Kazimierz Flaga, Technical University of Cracow, Kraków, Poland
Yoshinobu Fujitani, Hiroshima International University, Kure, Hiroshima, Japan
Franciszek Grosman, Silesian University of Technology, Katowice, Poland
Mieczysław Kamiński, Wrocław University of Technology, Wrocław, Poland
Sylwester Kobielak, Wrocław University of Technology, Wrocław, Poland
Andrzej Kocański, Warsaw University of Technology, Warszawa, Poland
Wacław Kollek, Wrocław University of Technology, Wrocław, Poland
Piotr Konderla, Wrocław University of Technology, Wrocław, Poland
Zbigniew Kowal, Kielce University of Technology, Kielce, Poland
Theodor Krauthammer, University of Florida, Gainesville, Florida, USA
Ernest Kubica, Wrocław University of Technology, Wrocław, Poland
Cezary Madrya, Wrocław University of Technology, Wrocław, Poland
Ted Massalski, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA
Hartmut Pasternak, Brandenburgische Technische Universität (BTU), Cottbus, Germany
Maciej Pietrzyk, Wrocław University of Technology, Kraków, Poland
Eugeniusz Rusiński, Wrocław University of Technology, Wrocław, Poland
Hanna Suchnicka, Wrocław University of Technology, Wrocław, Poland
Edmundas Zavadauskas, Vilnus Gediminas Technical University, Vilnius, Lithuania

Advisory Committee
Jan Biliszczuk, Wrocław University of Technology, Wrocław, Poland
Czesław Cempel, Poznan University of Technology, Poznan, Poland
Antoni Gronowicz, Wrocław University of Technology, Wrocław, Poland
Saleem Hashmi, Dublin City University, Co. Dublin, Ireland
Ryszard Izbicki, Wrocław University of Technology, Wrocław, Poland
Wacław Kasprzak, Wrocław University of Technology, Wrocław, Poland
Michael Ketting, Ruhr-Universität Bochum, Bochum, Germany
Michał Kleiber, Polish Academy of Sciences, Warsaw, Poland
Zdzisław Marciniak, Wrocław University of Technology, Warszawa, Poland
Kazimierz Rynkiewicz, Wrocław University of Technology, Wrocław, Poland
Zdzisław Szadkowski, Wrocław University of Technology, Wrocław, Poland
Ryszard Tadeusiewicz, AGH University of Science & Technology, Krakow, Poland
Józef Zasadziński, AGH University of Science & Technology, Kraków, Poland
Jerzy Ziółko, Uniwersytet Gdański, Gdańsk, Poland
Paweł Śniedzcyk, Wrocław University of Technology, Wrocław, Poland
GUIDE FOR AUTHORS

INTRODUCTION

Criteria for manuscripts
The Editorial Board of Archives of Civil and Mechanical Engineering takes under consideration for publication original articles with the understanding that neither the manuscript nor any part of its essential substance, tables or figures have been published previously in print form or electronically and are not under consideration by any other publication or electronic medium. Copies of any closely related manuscripts should be submitted to the Editor along with the manuscript that is to be considered by Archives of Civil and Mechanical Engineering.

Each submission packet should include the statement signed by the first author that the work has not been published previously or submitted elsewhere for review and a copyright transfer.

Categories of articles
Accepted papers are published in the following journal sections:
• Original Research Articles (not more than 30,000 characters with spaces and references)
• Review Articles (not more than 65,000 characters with spaces and references)

Prospective authors of review papers must contact the Editor-in-Chief, in order to check the subject and scope of the review.

BEFORE YOU BEGIN

Ethics in publishing
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

Declaration of interest
All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted.
2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. More information.

Submission declaration and verification
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service Crossref Similarity Check.

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

Contributors
Each author is required to declare his or her individual contribution to the article: all authors must have materially participated in the research and/or article preparation, so roles for all authors should be described. The statement that all authors have approved the final article should be true and included in the disclosure.
Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed. Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Copyright
Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (more information). Permitted third party reuse of gold open access articles is determined by the author's choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Funding body agreements and policies
Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the gold open access publication fee. Details of existing agreements are available online.

Green open access
Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our open access page for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. Find out more.

This journal has an embargo period of 12 months.
Language (usage and editing services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article
Please submit your article via http://ees.elsevier.com/acme.

Authors' Statements
Collate statements in a separate section and upload it as separate file. At a time of article submission corresponding author will be provided with a form to be filled in. Authors statements should include: Conflict of Interest, Ethical Statement, Acknowledgements and Funding Body. For more information about each statement please refer to appropriate part of Guide for Authors.

Review process
Manuscripts are evaluated on the basis that they present new insights to the investigated topic, are likely to contribute to a research progress. It is understood that all authors listed on a manuscript have agreed to its submission. The signature of the corresponding author on the letter of submission signifies that these conditions have been fulfilled.

Received manuscripts are first examined by the Editors of Archives of Civil and Mechanical Engineering. Manuscripts with insufficient priority for publication are rejected promptly. Incomplete packages or manuscripts not prepared in the advised style will be sent back to authors without scientific review. The authors are notified with the reference number upon manuscript registration at the Editorial Office. The registered manuscripts are sent to independent experts for scientific evaluation. We encourage authors to suggest the names of possible reviewers, but we reserve the right of final selection. Submitted papers are accepted for publication after a positive opinion of the independent reviewers.

Permissions
Materials taken from other sources must be accompanied by a written statement from both author and publisher giving permission to Archives of Civil and Mechanical Engineering for reproduction. Obtain permission in writing from at least one author of papers still in press, unpublished data, and personal communications.

Disclaimer
Every effort is made by the Editor-in-Chief and the Editorial Board of Archives of Civil and Mechanical Engineering to see that no inaccurate or misleading data, opinion or statement appear in the Archives of Civil and Mechanical Engineering. However, they wish to make it clear that the data and opinions appearing in the articles and advertisements herein are the responsibility of the contributor, sponsor or advertiser concerned. Accordingly, the Editor-in-Chief and the Editorial Board accept no liability whatsoever for the consequences of any such inaccurate of misleading data, opinion or statement. Every effort is made to ensure that drug doses and other quantities are presented accurately. Nevertheless, readers are advised that methods and techniques involving drug usage and other treatments described in Archives of Civil and Mechanical Engineering, should only be followed in conjunction with the drug or treatment manufacturer's own published literature in the readers own country.

PREPARATION

Peer review
This journal operates a double blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.
**Double-blind review**

This journal uses double-blind review, which means the identities of the authors are concealed from the reviewers, and vice versa. More information is available on our website. To facilitate this, please include the following separately:

*Title page (with author details):* This should include the title, authors' names, affiliations, acknowledgements and any Declaration of Interest statement, and a complete address for the corresponding author including an e-mail address.

*Blinded manuscript (no author details):* The main body of the paper (including the references, figures, tables and any acknowledgements) should not include any identifying information, such as the authors' names or affiliations.

**Use of word processing software**

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

**Article structure**

*Subdivision - unnumbered sections*

Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'.

*Introduction*

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

*Material and methods*

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

*Results*

Results should be clear and concise.

*Discussion*

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

*Conclusions*

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

**Essential title page information**

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lowercase superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
• **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

• **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

**Acknowledgements**
List those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article or proof reading the article, etc.).

**Abstract**
A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Abstract should be included in the Blinded Manuscript. The abstract should not exceed 250 words.

**Keywords**
Immediately after the abstract, provide a maximum of 5 keywords avoiding general and plural terms and multiple concepts (avoid, for example, "and", "of"). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

**Abbreviations**
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

**Units**
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

**Math formulae**
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

**Footnotes**
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

**Artwork**
**Electronic artwork**
**General points**
• Make sure you use uniform lettering and sizing of your original artwork.
• Embed the used fonts if the application provides that option.
• Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Provide captions to illustrations separately.
• Size the illustrations close to the desired dimensions of the published version.
• Submit each illustration as a separate file.
A detailed guide on electronic artwork is available. 
**You are urged to visit this site; some excerpts from the detailed information are given here.**

**Formats**
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format. Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

- EPS (or PDF): Vector drawings, embed all used fonts.
- TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

Color artwork
Please make sure that artwork files are in an acceptable format (TIFF, EPS or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color on the Web (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. Please indicate your preference for color: in print or on the Web only. For further information on the preparation of electronic artwork, please see https://www.elsevier.com/artworkinstructions.

Figure captions
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References
Citation in text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web references
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.
**Reference management software**

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal’s style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Other software that can be used for reference management: RefWorks (http://www.refworks.com), BibTeX (http://www.bibtex.org), ProCite (http://www.procite.com).

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link: http://open.mendeley.com/use-citation-style/archives-of-civil-and-mechanical-engineering

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

**Reference style**

The references should be based on the readily available texts published in the latest and major journals mainly written in English.

Each one of the cited references must be discussed individually and demonstrate their significance to your work. Please describe in one or two sentences what they claim, what evidence they provide to support their claim.

Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

Model of reference to a journal publication:
Abbreviated first names, last name, full paper title, full journal name, volume (number) (year of publication) first and last page.

*Examples:*

Reference to a journal publication:

Reference to a book:

Reference to a chapter in an edited book:

Reference to a conference:

Reference to a dataset:

**Supplementary material**

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file.

Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**Research data**

This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.
Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

**Mendeley Data**
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.

**Data statement**
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

**Submission checklist**
The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

**Ensure that the following items are present:**
One author has been designated as the corresponding author with contact details:
- E-mail address
- Full postal address
- Phone numbers

All necessary files have been uploaded, and contain:
- Keywords
- All figure captions
- All tables (including title, description, footnotes)

Further considerations
- Manuscript has been 'spell-checked' and 'grammar-checked'
- References are in the correct format for this journal
- All references mentioned in the Reference list are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Web)

For any further information please visit our customer support site at http://service.elsevier.com.

**AFTER ACCEPTANCE**
**Online proof correction**

Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**

The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier’s Webshop. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**

Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.