Rapid urbanization, population growth, motorization, and automation have increased economic activities within and between cities. The demand for increased mobility often imposes stress on the physical infrastructures, and creates mobility, safety, resilience, and sustainability challenges to the transportation systems. The solutions to such issues may be infrastructure expansion, improved infrastructure management, etc. It may also include the use of new technologies to manage travel, and new materials, construction, monitoring, and maintenance techniques to keep facilities in a state of good repair. The International Journal of Transportation Science and Technology (IJTST) is a forum for researchers to disseminate innovative research that enhances the safety, efficiency, reliability, resilience, and sustainability of person and freight transportation. IJTST welcomes technical articles that contribute to the advancement of science and technology in all modes of transportation systems. While science and technology is the main theme of this journal, articles submitted for possible publication should also address the impacts of the new science and technology on the planning, design, construction, maintenance and operations of transportation facilities, and the quality of life of the end users. The ability to link the intellectual merit of scientific research with broader impacts, and discuss implementation issues makes IJTST of interest to not only researchers, but also policy makers, practitioners, innovators, and entrepreneurs. All the articles published in IJTST have been selected through a rigorous single-blind peer-review process under the direction of the Editorial Board.

ABSTRACTING AND INDEXING

Scopus
Directory of Open Access Journals (DOAJ)
TRID, the TRIS and ITRD Database
Google Scholar
INSPEC

EDITORIAL BOARD

Editors-in-Chief
Ruey Long Cheu, The University of Texas at El Paso, United States of America
Zhongyin Guo, Tongji University, China
**Founding Editors**
Zhongyin Guo, Tongji University, China  
Chiu Liu, California Department of Transportation, United States of America  
Zhongren Wang, California Department of Transportation, United States of America

**Associate Editors**
Joseph Chow, New York University, United States of America  
Urban transport systems, Electric Mobility-as-a-Service, Sequential network design, Activity-based scheduling, Freight  
Wei (David) Fan, University of North Carolina at Charlotte, United States of America  
Connected and Autonomous Vehicles, Public Transportation  
Konstantina (Nadia) Gkritza, Purdue University, United States of America  
Climate Change, Energy  
Salvador Hernandez, Oregon State University, United States of America  
Freight, Safety, Shipping, Travel Behavior  
Xianbiao Hu, Missouri University of Science and Technology, United States of America  
Interdisciplinary Transportation, Traffic Planning and Operations  
Hui Li, Tongji University, China  
Highway Materials, Special Issues, Sustainable Infrastructure  
Jianming Ling, Tongji University, China  
Airfield Engineering, Construction Management  
Mónica Menéndez, New York University - Abu Dhabi Campus, United Arab Emirates  
Intermodal Transportation, Traffic Flow Theory  
Hualiang (Harry) Teng, University of Nevada Las Vegas, United States of America  
Rail Systems, Railway Engineering  
Eleni Vlahogianni, National Technical University of Athens, Greece  
Artificial Intelligence, Intelligent Transportation Systems  
Zhongren Wang, California Department of Transportation, United States of America  
Geometric Design, Highway Capacity  
Chi Xie, Tongji University, China  
Network Modeling, Resilience, Risk and Reliability  
Yu Zhang, University of South Florida, United States of America  
Air Transportation, Community Health

**Editorial Board Members**
Soyoung Ahn, University of Wisconsin Madison, United States of America  
Ryosuke Ando, Toyota Transportation Research Institute, Japan  
Emmanouil Barmpounakis, Federal Polytechnic School of Lausanne, Switzerland  
Qing Cai, University of Central Florida, United States of America  
Gonzalo Homem de Almeida Correia, TU Delft, Netherlands  
O.A.(Sam) Elrahman, Rensselaer Polytechnic Institute, United States of America  
T F Fwa, National University of Singapore, Singapore  
Ricardo Giesen, Pontifical Catholic University of Chile, Chile  
Quanmei Gong, Tongji University, China  
S Ilgin Guler, Pennsylvania State University, United States of America  
Kevin Heaslip, Virginia Polytechnic Institute and State University, United States of America  
Tomas Horak, Czech Technical University in Prague, Czechia  
Yu-Ting Hsu, National Taiwan University, Taiwan  
Nathan Huynh, University of South Carolina, United States of America  
Konstantinos Kepaptsoglou, National Technical University of Athens, Greece  
Hooi Ling Kho, Tunku Abdul Rahman University, Malaysia  
Jiwon Kim, The University of Queensland School of Civil Engineering, Australia  
Zhen Leng, The Hong Kong Polytechnic University, Hong Kong  
Zili Li, TU Delft, Netherlands  
Yue Liu, University of Wisconsin-Milwaukee, United States of America  
Yingyan Lou, Arizona State University, United States of America  
Xiao-Yun Lu, University of California Berkeley, United States of America  
Markus Oeser, RWTH Aachen University, Germany  
Ghim Ping (Raymond) Ong, National University of Singapore, Singapore  
Yi Qi, Texas Southern University, United States of America  
Zhen (Sean) Qian, Carnegie Mellon University, United States of America  
XiaoBo Qu, Chalmers University of Technology, Sweden  
Hesham Rakha, Virginia Polytechnic Institute and State University, United States of America  
Xianming Shi, Washington State University, United States of America  
Xiang Shu, California Department of Transportation, United States of America
Ziqi Song, Utah State University, United States of America
Antony Stathopoulos, National Metsovian Polytechnic, Greece
Yiqiu Tan, Harbin Institute of Technology, China
Dawei Wang, RWTH Aachen University, Germany
Junhua Wang, Tongji University, China
Zhiwei Wang, Nanyang Technological University, Singapore
Junhua Xiao, Tongji University, China
C Y David Yang, AAA Foundation for Traffic Safety, United States of America
Guangchuan Yang, North Carolina State University, United States of America
Wilfredo Yushimoto, Adolfo Ibanez University, Chile
Jiupeng Zhang, Chang'an University, China
Hongduo Zhao, Tongji University, China
Jianlong Zheng, Changsha University of Science and Technology, China
Xuesong Zhou, Arizona State University, United States of America
GUIDE FOR AUTHORS

INTRODUCTION

Focus

The International Journal of Transportation Science and Technology (IJTST) publishes innovative, high-quality, peer-reviewed scholarly articles that contribute to the advancement of knowledge in transportation systems. The journal's interest is not in the individual technologies or methodologies per se, but is in their broader impacts on the safety, efficiency, reliability, resilience and sustainability of any person and freight transportation system. The journal's interests also include the impacts of transportation science and technology on the quality of life of the end users. Submission of articles in the topics listed under the associate editors are encouraged. Articles associated with emerging topics are equally welcomed.

Types of contributions

Research paper

Research papers report on new research findings within the scope of IJTST. Each research paper is expected to include: (1) research background, motivation, and justification; (2) a research objective or research question; (3) a comprehensive literature review; (4) an experiment methodology or analytical procedure; (5) data used, their source and quality control; (6) results and discussions; (7) conclusions, scientific contributions, impacts on a transportation system, and suggestions for future research. The description of the experiment methodology or analytical procedure, and the data should be clear enough for scholars to repeat the process and obtain the same outcome. In addition to the abovementioned parts, every research article is also assessed by the editors and peers on the level of innovation, significance of contribution, and the potential of its finding in transforming and revolutionizing a transportation system. For the last assessment criterion, other than the systems performance, this journal is particularly interested in how the finding will impact the engineering practice (such as design, maintenance and operations) and the end users' experience (in terms of safety, cost, level of service, etc.).

Overview article

Overview articles serve to introduce new science and technology from other disciplines into transportation. Each overview article introduces an emerging technology, its state-of-the-art applications in the field of origin and other domains, its initial and potential applications in transportation, and the expected impacts on transportation systems. Overview papers are assessed by editors and peers based on the following criteria: (1) timeliness of the topic; (2) clarity in explaining the concept and techniques to readers; (3) breadth and depth of literature review; (4) ability to identify and organize the applications in transportation; (4) ability to map out the future challenges and propose research needs; and (5) ability to communicate the projected impacts on a transportation system.

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 are requested to disclose any actual or potential conflict of interest including any financial, personal, or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. 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 or as part of a published lecture or academic thesis or as an electronic preprint, see 'Multiple, redundant or concurrent publication' section of our ethics policy 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, the article may be checked by the originality detection service CrossCheck.

**Submission checklist**

All authors are strongly encouraged to use this list to carry out a final check of their articles before submitting them to IJTST for review. Please check to ensure that the following items are present:

**Corresponding author:**
- E-mail address
- Full postal address

**Manuscript:**
- Section and sub-section numbers
- Line and page numbers
- Keywords
- All figures (include captions)
- All tables (include captions)
- All equations (include numbers)
- References are listed and cited in **Harvard style**, not numeric style
- All references mentioned in the Reference list are cited in the text, and vice versa
- Indicate clearly if color should be used for any figures in print

**Further considerations:**

The manuscript has been 'spell checked' and 'grammar checked'

Permission has been obtained for use of copyrighted material from other sources (including the Internet)

A competing interest statement is provided, even if the authors have no competing interest to declare

Journal policies detailed in this Author Information guide have been reviewed

For further information, visit our Support Center.

**BEFORE YOU BEGIN**

**Copyright**

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

**Open Access**

This is an open access journal: all articles will be immediately and permanently free for everyone to read and download. Peer review under responsibility of China Geology.

**Access Rights**

All articles published open access will be immediately and permanently free for everyone to read, download, copy and distribute.

**User Rights**

Permitted third party reuse is defined by the following user license: **Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND):** Allows users to copy and distribute the Article, provided this is not done for commercial purposes and further does not permit distribution of the Article if it is changed or edited in any way, and provided the user gives appropriate credit (with a
link to the formal publication through the relevant DOI), provides a link to the license, and that the licensor is not represented as endorsing the use made of the work. The full details of the license are available at https://creativecommons.org/licenses/by-nc-nd/4.0/.

Author Rights
For open access publishing, this journal uses a copyright transfer agreement. Authors will transfer copyright to China Geology Editorial Office, China Geological Survey, but will have the right to share their article in the same ways permitted to third parties under the relevant user license, as well as certain scholarly usage rights.

Role of the Funding Source
Authors 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. Elsevier has established a number of agreements with funding bodies, which allow authors to comply with their funder's open access policies. Details of existing agreements are available online.

Language
Usage and editing services
Write the 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.

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 that 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').

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's Editor-in-Chief. To request such a change, the Editor-in-Chief 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-in-Chief consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor-in-Chief 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-in-Chief will result in a corrigendum.

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

Elsevier Researcher Academy
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide the authors through the process of writing for research and going through peer review. Authors should feel free to use these free resources to improve your submission and navigate the publication process with ease.
PREPARATION

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 prescribed in the General Format of the Manuscript. Most formatting codes will be removed and replaced when copy editing 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. Use only one grid for each individual table. 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. See also the section on Electronic artwork. To avoid unnecessary errors, authors are strongly advised to use the ‘spell-check' and ‘grammar-check' functions of the word processor.

Article structure

Subdivision - numbered sections

Divide the article into clearly defined and numbered sections and sub-sections 1 (then 1.1, 1.2,...), 2, etc. The Abstract, Acknowledgements and References are not included in section numbering. Use this numbering also for internal cross-referencing. Any subsection may be given a brief heading. Each heading should not be more than one line.

Introduction

Provide an adequate background, state the objective of the work or research question, and outline of the remaining sections. Avoid a detailed literature survey or a summary of the results.

Literature review

Survey the past efforts on the same topic that involved the use of same/related methods, equipment, and data. Provide critiques to justify your decisions.

Material and methods

Describe the experiment in sufficient detail 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 modification to an existing method should also be described.

Data

The description of data should include data collection, data processing, and quality control.

Theory/calculation

A Theory section should extend, but not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

Results

Results should be clear and concise.

Discussions

The authors should highlight the significance of the results, and elaborate on the implications of existing practice. A combined Results and Discussion section is often appropriate. Comparison with past results is encouraged but the authors should avoid extensive citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section. The Conclusions section should also include statements of scientific contributions, impacts on a transportation system and recommendations for future research.

General format of manuscript

Manuscripts submitted for review shall follow the general formatting requirements:
Paper size: U.S. letter size (preferred) or A4
Margin: 1 inch or 25mm from all edges
Line spacing: Single space between lines in the same paragraph. Do not leave a blank line between 2 paragraphs. Leave a blank line before and after section and sub-section headers, equations, figures and tables.

Indentation: Begin every paragraph with an indentation
Font size: 12 for standard text
Font type: Times Roman preferred
Paper length: Not more than **22 pages**, all inclusive
Layout: Single column (2 column style is not acceptable)
Figures and Tables: Embedded between paragraphs when first cited in the text. Each figure or table, including caption, must not occupy more than 1 page.
Manuscripts not conforming to any of the above requirements may be deemed unresponsive and will be returned to the corresponding author without review.

**Section, line and page numbers**

Number the sections, from Introduction to Conclusions, by numbers (1, 2, 3,…). If a section is divided into sub-sections, all the sub-sections must be numbered (e.g., 2.1, 2.2, 2.3,…). All submitted manuscripts must have line numbers that appear on every page, along the left margin. The lines should be numbered consecutively from 1 on top of the title page, increase continuously until the last page. Do not start every page with line number 1. All pages must also come with page numbers, starting with 1 on the title page. The page number can appear on either the right top corner or the center bottom or right bottom of every page. The section, line and page numbers are important for the editors and reviewers to refer to specific parts of the manuscript when communicating with the authors. Manuscripts without section, page or line numbers may be returned to the corresponding authors without review.

**Essential Title Page Information**

**Title**

Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. Each title must not be more than 144 characters including spaces.

**Author names and affiliations**

Please clearly indicate the given first and last names of each author exactly as they should appear in the published article. Check that all the names are accurately spelled. Nick name, if desired, must be enclosed between parentheses. Present the authors’ affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author’s name and in front of the appropriate address.

**Corresponding author**

Clearly indicate who will handle correspondence at all stages of refereeing and publication, as well as post-publication, with a superscript asterisk ‘*’ next to the name. This responsibility includes answering any future query. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author. Use a corporate, institution or professional email address, not a personal email address. Only the email address of the corresponding author will appear in the published article.

**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 the corresponding 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.

**Abstract**

An abstract of not more than 250 words is required. The abstract should state briefly the purpose of the research, the methodology used, 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, reference must be avoided. Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined when they are first mentioned in the abstract.
Graphical Abstract

Although a graphical abstract is optional, its use is encouraged, as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: minimum of 531 1328 pixels (h w) or proportionally more. The image should be readable at a size of 5 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF, or MS Office files. Authors can view Example Graphical Abstracts on our information site. Authors can make use of Elsevier's Illustration Services to ensure the best presentation of their images and in accordance with all technical requirements.

Highlights

Highlights are a short collection of bullet points that convey the core findings of the article. Highlights are optional and should be submitted in a separate editable file in the online submission system. Use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). Authors can view example Highlights on our information site.

Keywords

Immediately after the Abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes. Keywords are used by internet search engines and therefore to increase the visibility and citations of your published article, standard and commonly used words should be used as keywords.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article, after the Conclusion but before References. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Funding Sources

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill and Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding. If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Math formulae

Type math equations in equation editors and not paste equations as graphical images. Place every equation in a separate line. The numerator and denominator in an equation should be stacked. When presenting simple formulae in line with normal text, 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 all equations that have to be displayed separately from the text. Enclosed equation numbers in brackets, e.g., (1). When referring to an equation in the text, use Equation (1) or Eq. (1) instead of only the number.

Footnotes
Footnotes should only be used when it is necessary and cannot be avoided. 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**

A detailed guide on electronic artwork is available. Authors are urged to visit this site

**Color artwork**

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, authors submit usable color figures, Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, authors will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of artwork.

**Illustration services**

Elsevier's WebShop offers Illustration Services to authors preparing to submit a manuscript but concerned about the quality of the images accompanying their article. Elsevier's expert illustrators can produce scientific, technical and medical-style images, as well as a full range of charts, tables and graphs. Image 'polishing' is also available, where our illustrators take your image(s) and improve them to a professional standard. Please visit the website to find out more.

**Figures**

Figures should be placed next to the relevant text in the article, between 2 paragraphs. Each figure should not occupy more than one page. Ensure that each figure has a caption. A caption should comprise a brief title (not on the figure itself). Figure caption should be placed below each figure, centered between the left and right margins. Begin each caption with 'Fig' followed by a period '.', the figure number, and another period '.' before the description. Type the description like an English sentence that begins with an upper case letter and ends with a period. For example, Fig. 1. Fundamental diagram of traffic flow.

**Tables**

Please submit tables as editable text and not as images. Tables should be placed next to the relevant text in the article, between 2 paragraphs. Each table should not occupy more than one page. 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 does not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells. Each table must be accompanied by a table caption. Table captions should be place above each table, in two lines of text, left justified. The first line begins with "Table", followed by the table number. The second line is the description. Type the description like an English sentence that begins with an upper case alphabet and ends with a period. For example

Table 1

Level of service criteria for roundabouts.

**References**

**Citation in text**

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). 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.

**Reference links**
Online links to the cited sources help reviewers to speed up the review process. In order to allow Elsevier's copy editor to create links to abstracting and indexing services, such as Scopus, CrossRef, and PubMed, please ensure that data provided in the references are correct. Please note that incorrect names, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged. A DOI is guaranteed never to change. It is a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is:


Format of such citations should be in the same style as all other references in the paper.

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.

Data references

This journal encourages authors to cite underlying or relevant datasets by 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 'special issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference Formatting

The Harvard system of references is used. References should conform to the following style. Where applicable, author(s) name(s), journal title/ book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. Journal names should be abbreviated according to the List of Title Word Abbreviations. References should be arranged according to the following examples:


Research Data

This journal encourages and enables authors to share data that supports research publication where appropriate, and enables authors to interlink the data with the 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 authors 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 authors can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If authors are sharing data in one of these ways, they 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 authors have made your research data available in a data repository, they 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, authors 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, authors 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 the authors 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, authors 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 the authors 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, the authors 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**

Submission to this journal proceeds totally online. The EDITORIAL MANAGER online submission system guides the authors stepwise through the process of entering your article details and uploading your files. The authors will be guided stepwise through the creation and uploading of the various files. Prepare at least the following files in Word document format: Cover letter Title page (may be copied from page 1 of the manuscript file) Manuscript file (maximum 22 pages, use of the template is strongly recommended) Conflict of Interest statement (Acknowledgements and Declarations, may be copied from the manuscript file) Although the contents of the title page and the conflict of interest statement have appeared in the manuscript file and count towards the 22-page limit, the authors are required to prepare a separate title page and a separate conflict of interest statement and upload them during the submission process.

The submitting author is required to answer a series of questions to confirm that: Funding source has been acknowledged. The materials have not been published or being considered for publication elsewhere. All authors have read and approved the manuscript. The manuscript has section, page and line numbers. A4 of letter size paper has been used with 25 mm or 1 inch margins on all edges. The texts are types in single space, with font Times Roman font size 12 or equivalent. The lines are numbered from 1 at the top of the title page and increased continuously to the end. The full name and affiliation of all the authors have been provided in the title page. Only the email address of the corresponding author is will be published and it must be a professional mail box. In addition, the submitting author is required to enter (type) separately a statement of intellectual contribution and a statement of broader impacts.

The online submission system automatically converts and combines all source files to a single Adobe Acrobat PDF version of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF at submission for the review process, these source files are needed for further processing after acceptance. All correspondence, including notification of the Editor-in-Chief’s decision and requests for revision, takes place by e-mail.
Peer Review Policy

This journal operates a single blind review process. All contributions will be initially assessed by an Editor-in-Chief and an Associate Editor for suitability to the journal. This suitability determination includes contents, language, format and plagiarism checks. Contributions found to be unsuitable will be returned to the corresponding author without review. A suitable submission is then sent by an Associate Editor to a minimum of two independent reviewers. Upon receiving the review comments, the Associate Editor recommends the publication decision (reject, revise, or accept) to the Editor-in-Chief. The Editor-in-Chief makes the final decision.

Revision

Authors of manuscripts that have received the "revise" publication decisions are invited to re-submit the revised manuscripts for further consideration. The revised manuscript should be accompanied by an Author Response Statement, which contains (1) the point-by-point replies to all the review comments; and (2) all the changes that have been made between the original and the revised versions of the manuscript. The authors are strongly encouraged to use the template provided by this journal when typing the Author Response Statements. They are not expected to agree with all comments. Quite often, the review comments are contradictory. If an author disagrees with a review comment, he/she should provide a good explanation supported with data, evidence, or a reference. The decision to send the revised submission for another round of review, and the selection of the reviewers will be made by the Editor-in-Chief and the Associate Editor. For external re-review cases, the Associate Editor recommends the publication decision (reject, revise or accept) to the Editor-in-Chief. The Editor-in-Chief makes the final decision. For manuscripts that have minor revisions, the Editor-in-Chief and the Associate Editor may make publication decisions (reject, revise, or accept) without an external review.

After Acceptance

Proofs

One set of page proofs (as PDF files) will be sent by e-mail to the corresponding author or, a link will be provided in the e-mail so that authors can download the files themselves. Elsevier now provides authors with PDF proofs, which can be annotated; for this the corresponding author will need to download the free Adobe Reader, version 9 (or higher). Instructions on how to annotate PDF files will accompany the proofs (also given online). The exact system requirements are given at the Adobe site. If the authors do not wish to use the PDF annotations function, they may list the corrections (including replies to the Query Form) and return them to Elsevier in an e-mail. Please list the corrections quoting section, page and line numbers. If, for any reason, this is not possible, then mark the corrections and any other comments (including replies to the Query Form) on a printout of the proof and scan the pages and return via e-mail. 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-in-Chief. Elsevier will do everything possible to get the article published quickly and accurately. 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 the authors responsibility.

Offprints

The corresponding author will be notified and will receive a link to the published version of the open access article on ScienceDirect. This link is in the form of an article DOI link, which can be shared via email and social networks. 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. Authors requiring printed copies of multiple articles may use Elsevier Webshop's 'Create Your Own Book' service to collate multiple articles within a single cover.

Errors in published works

When an author discovers a significant error or inaccuracy in his/her own published work, the corresponding author should promptly notify the Editor-in-Chief and cooperate with the Editor-in-Chief to retract or correct the paper.
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.

© Copyright 2018 Elsevier | https://www.elsevier.com