



Instructions for Authors

EFFECTIVE DECEMBER 2020

About

Journal of the Mechanical Behavior of Materials (JMBM) publishes articles on original research, short communications and reviews covering all natural and modern engineering materials. Contributions on interdisciplinary high risk-high gain or unconventional approaches in topics spanning the whole range from condensed to soft matter mechanics are particularly welcome.

The journal focuses on the micromechanics and nanomechanics of materials, the relationship between structure and mechanical properties, material instabilities and fracture, as well as size effects and length/time scale transitions. Articles on cutting edge theory, simulations and experiments – used as tools for revealing novel material properties and designing new devices for structural, thermo-chemo-mechanical, and opto-electro-mechanical applications – are encouraged. Synthesis/processing and related traditional mechanics/materials science themes are not within the scope of **JMBM**. The Editorial Board also organizes topical issues on emerging areas by invitation.

Scope

The scope of the *Journal of the Mechanical Behavior of Materials* covers in particular the following topics:

- Metals and alloys
- Ceramics and glasses
- Soils and geomaterials
- Concrete and cementitious materials
- Polymers and composites
- Wood and paper
- Elastomers and biomaterials
- Liquid crystals and suspensions
- Electromagnetic and optoelectronic materials
- High-energy density storage materials
- Monument restoration and cultural heritage preservation materials
- Nanomaterials
- Complex and emerging materials

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Editorial policy

Unpublished material

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Conflict of interest

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Authorship should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported study. All those who have made significant contributions should be listed as co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be named in an Acknowledgement section.

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Effective December 2020, the journal requires authors to follow data sharing policy. Research data should be made widely available to the research community in order to demonstrate the robustness and validity of the research presented in the journal, to encourage replication of the results, and to provide the community with opportunities to learn. By publishing in the journal authors are required to provide a data availability statement (DAS) in their articles. Authors are encouraged to share their data but not



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Electronic submission

JMBM encourages the submission of both substantial full-length bodies of work and shorter manuscripts that report novel findings. There are no specific length restrictions for the overall manuscript or individual sections; however, we urge the authors to present and discuss their findings in a concise and accessible manner.

All submitted manuscripts must be written in English language. Manuscripts submitted under multiple authorship are reviewed on the assumption that all listed authors concur in the submission and are responsible for its content; they must have agreed to its publication and have given the corresponding author the authority to act on their behalf in all matters pertaining to publication. The corresponding author is responsible for informing the coauthors of the manuscript status throughout the submission, review, and production process.

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Publication Formats

Journal of the Mechanical Behavior of Materials considers submissions of:

- Research articles,
- Communications,
- Rapid Communications*,
- Reviews, and Commentaries
- Letters to the Editor,
- Erratum,
- Retraction Note.

*Rapid Communications are intended to present information of exceptional novelty and exciting results of significant interest to the readers. Authors are asked to provide an explanation in the cover letter why their contribution should be handled via the rapid channel.



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- Graphics files can be submitted in any of the following graphic formats: EPS; BMP; JPG; TIFF; GIF; PNG or PDF. Please note that Powerpoint files are not accepted.

Any articles that have been prepared in LaTeX will be accepted for review, but only in PDF format. Post-acceptance, text files of the revised manuscript and tables are required for use in the production. Authors should clearly indicate the location(s) of tables and figures in the text if these elements are given separately or at the end of the manuscript. If this information is not provided to the editorial office, we will assume that they should be left at the end of the text.

First-time submission of manuscripts

It is important that authors include a cover letter with their manuscript. Please explain why you consider your manuscript to be suitable for publication in *JMBM*, why your paper will inspire the other members of your field, and how will it drive research forward.

The cover letter should explicitly state that the manuscript (or one with substantially the same content, by any of the authors) has not been previously published in any language anywhere and that it is not under simultaneous consideration or in press by another journal. If related work has been submitted, then we may require a preprint to be made available. Reviewers will be asked to comment on the overlap between the related submissions.

Manuscripts that have been previously rejected, or withdrawn after being returned for modification, may be resubmitted if the major criticisms have been addressed. The cover letter must state that the manuscript is a resubmission, and the former manuscript number should be provided.

To ensure fair and objective decision-making, authors must declare any associations that pose a conflict of interest in connection with evaluated manuscripts (see Editorial Policy for details). Authors may suggest up to two referees not to use, and in such cases additional justification should be provided in the cover letter. Authors are encouraged to recommend up to five reviewers who are not members of their institution(s) and have never been associated with them or their laboratory(ies); please provide contact information for suggested reviewers. The Editors reserve the right to select expert reviewers at their discretion.



Submission of revised articles

Resubmitted manuscripts should be accompanied by a letter outlining a point-by-point response to Journal Editor's and reviewers' comments and detailing the changes made to the manuscript. A copy of the original manuscript should be included for comparison if the Journal Editor requests one. If it is the first revision, authors need to return the revised manuscript within 28 days; if it is the second revision, authors need to return the revised manuscript within 14 days. Additional time for resubmission must be requested in advance. If the above mentioned deadlines are not met, the manuscript will be treated as a new submission.

For resubmitted manuscripts, please provide us with an editable text and publication-quality figures. Supply any figures as separate high-resolution, print-ready digital versions.

In addition to the editorial remarks, authors are asked to take care that they have prepared the revised version according to the Journal's style.

Preparation of manuscripts

It is essential that contributors prepare their manuscripts according to the instructions and specifications presented below.

General rules for writing

Use simple, declarative sentences and commonly understood terms; avoid long sentences and idle words. We recommend that for clarity you use the past tense to narrate particular events in the past, including the procedures, observations, and data of the study that you are reporting. Use the present tense for your own general conclusions, the conclusions of previous researchers, and generally accepted facts. Thus, most of the Abstract, Methods, and Results should be in the past tense, and most of the Introduction and some of the Discussion should be in the present tense. Conclusions must be justified by the study; please make your argumentation complete and be self-critical as you review your drafts. Editors may make suggestions for how to improve clarity and readability, as well as to strengthen the argument.

Organization of the Manuscript

Articles should be organized into the following sections:

- Title page with Title
- Abstract
- Keywords
- Introduction
- Methods
- Results
- Discussion

Acknowledgments (if applicable, these can be included in the cover letter to facilitate double-blind review if necessary)



- References
- Figure Legends and Table Captions
- Tables
- Figures
- Supplemental data (*if applicable*)

Each of these elements is detailed below. We draw particular attention to the importance of carefully preparing the title, keywords and abstract, as these elements are indicators of the manuscript content in bibliographic databases and search engines.

Title

We suggest the title should be informative, specific to the project, yet concise (75 characters or fewer). Please bear in mind that a title that is comprehensible to a broad scientific audience and readers outside your field will attract a wider readership. Avoid specialist abbreviations and non-standard acronyms. Titles should not be presented in title case (words should not be capitalized).

Authors, Affiliations, Addresses

In the cover letter, provide the first names (or initials - if used), middle names (or initials - if used), and surnames for all authors. Affiliations should include:

- Department
- University or organization
- City
- Postal code
- State/province (if applicable)
- Country

One of the authors should be designated as the corresponding author to whom inquiries regarding the paper should be directed. It is the corresponding author's responsibility to ensure that the author list and the summary of the author contributions to the study are accurate and complete. Place an asterisk after the name of the corresponding author and provide us with a valid e-mail address.

Abstract

The abstract should not exceed 200 words. The abstract should give a summary of the content of the paper and is usually conceptually divided into: Background, Methodology, Principal Findings/Results, and Conclusions/Significance. Mention the techniques used without going into methodological detail and summarize briefly the most important items of the paper. Please do not include any citations or references to tables or figures, and avoid specialist abbreviations and symbols. Because the abstract will be published separately by abstracting services, it must be complete and understandable without reference to the text.

**Keywords**

List keywords for the work presented (maximum of 7), separated by commas. We suggest that keywords do not replicate those used in the title.

Introduction

The introduction should put the focus of the manuscript into a broader context and should supply sufficient background information to allow the reader to understand and evaluate the results without referring to previous publications on the topic. As you compose the introduction, think of readers who are not experts in this field. Include a brief review of the key literature - use only those references required to provide the most salient background rather than an exhaustive review of the topic. Relevant controversies or disagreements in the field should be mentioned so that a non-expert reader can delve into these issues further. The introduction should conclude with a brief statement of the rationale for the study, the hypothesis that was addressed or the overall purpose of the experiments reported, and should provide a comment about whether that aim was achieved.

Methods

This section should include sufficient technical information to enable the experiments to be reproduced. Protocols for new methods or significant modifications to existing methods should be included, while previously published or well-established protocols should only be referenced. Describe new methods completely and give sources of unusual chemicals, equipment, strains etc. Studies presented should comply with our recommendations for distribution of materials and data (see below). In theoretical papers comprising the computational analyses, technical details (methods, models applied or newly developed) should be provided to enable the readers to reproduce the calculations.

Results

This section should provide statistical analyses of all of the experiments that are required to support the conclusions of the paper. Reserve extensive interpretation of the results for the Discussion section. Details of experiments that are peripheral to the main thrust of the article and that detract from the focus of the article should not be included. Present the results as concisely as possible in text, table(s), or figure(s) (see below). Avoid extensive use of graphs to present data that might be more concisely presented in the text or tables. Graphs illustrating methods commonly used need not be shown except in unusual circumstances. Limit photographs to those that are absolutely necessary to show the experimental findings. Number figures and tables in the order in which they are cited in the text, and be sure to cite all figures and tables. Styles and fonts should match those in the main body of the article. Large datasets, including raw data, should be submitted as supporting files. The section may be divided into subsections, each with a concise subheading.

Discussion

The Discussion should provide an interpretation of the results in relation to previously published work and to the experimental system used. It should not contain extensive repetition of the Results or reiteration of the Introduction. This section should spell out the major conclusions of the work along



with some explanation or speculation on the significance of these conclusions. The discussion should be concise and tightly argued.

Footnotes/Endnotes

We encourage authors to restrict the use of footnotes. If necessary, please make endnotes rather than footnotes. A footnote/endnote may include:

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Information concerning research grant support should appear in a separate **Funding information** section at the end of the paper, not in a footnote. Acknowledgements of the assistance of colleagues or similar notes of appreciation should also appear in the Acknowledgements section, not in footnotes.

Acknowledgments

This section should describe recognition of personal assistance: people who contributed to the work, but do not fit the criteria for authors should be listed along with their contributions. You must ensure that anyone named in the acknowledgments agrees to being so named.

Author's statements

This section should describe:

- any funding information, including the role of the study sponsor(s), if any, in study design, collection, analysis, and interpretation of data, writing the paper and decision to submit it for publication;
- authors contribution;
- conflict of interest;
- Data Availability Statement (*if applicable*).

Please refer to Author's Statement document at the journal website (<https://www.degruyter.com/journal/key/JMBM/html>)

References

Because all references will be linked electronically to the papers they cite, proper formatting of the references is crucial. A complete reference should give the reader enough information to find the relevant article. Please pay particular attention to spelling, capitalization and punctuation.

References to unpublished or submitted work, unpublished conference presentations, personal communications, patent applications and patents pending, computer software, databases, and websites should be referred to as such only in the body of the text. These should be kept to a minimum. The examples are as follows:

(J. Smith, unpublished data),

(J. Smith and P. Brown, submitted for publication),



(J. Smith, personal communication),

(J. Smith and P. Brown, presented at the 4th Symposium on Food Microbiology, Overton, IL, 13 - 15 June 1989),

(J. C. Odell, April 1970, Process for batch culturing, U.S. patent 484,363,770),

(J. Smith, 20 June 1999, Australian Patent Office),

Published or accepted ('in press') manuscripts, books and book chapters, and theses should be included in the reference list. References to published meeting abstracts should be kept to a minimum.

For all references, list the first six authors; add "et al." if there are additional authors. Standard abbreviations of journal names according to Thomson Scientific should be used (<http://mjl.clarivate.com/cgi-bin/jrnlst/jloptions.cgi?PC=master>).

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Published papers

Halpern SD, Ubel PA, Caplan AL. Solid-organ transplantation in HIV-infected patients. *N Engl J Med.* 2002;347(4):284-7.

Rose ME, Huerbin MB, Melick J, Marion DW, Palmer AM, Schiding JK, et al. Regulation of interstitial excitatory amino acid concentrations after cortical contusion injury. *Brain Res.* 2002;935(1-2):40-6.

Ellingsen AE, Wilhelmsen I. Sykdomsangst blant medisin- og jusstudenter. *Tidsskr Nor Laegeforen.* 2002;122(8):785-7. Norwegian.

Mansharamani M, Chilton BS. The reproductive importance of P-type ATPases. *Mol Cell Endocrinol.* 2002;188(1-2):22-5. Corrected and republished from: *Mol Cell Endocrinol.* 2001;183(1-2):123-6.

Unpublished material/Forthcoming and preprints

Tian D, Araki H, Stahl E, Bergelson J, Kreitman M. Signature of balancing selection in Arabidopsis. *Proc Natl Acad Sci U S A.* Forthcoming 2002.

Alvarez R. Near optimal neural network estimator for spectral x-ray photon counting data with pileup. arXiv:1702.01006v1 [Preprint]. 2017 [cited 2017 Feb 9]: [11 p.]. Available from: <https://arxiv.org/abs/1702.01006>

Bar DZ, Atkatsk K, Tavarez U, Erdos MR, Gruenbaum Y, Collins FS. Biotinylation by antibody recognition-A novel method for proximity labeling. *BioRxiv* 069187 [Preprint]. 2016 [cited 2017 Jan 12]. Available from: <https://www.biorxiv.org/content/10.1101/069187v1>

Electronic journal articles



Aboud S. Quality improvement initiative in nursing homes: the ANA acts in an advisory role. *Am J Nurs* [Internet]. 2002 Jun [cited 2002 Aug 12];102(6):[about 1 p.]. Available from: <https://ovidsp.tx.ovid.com> Subscription required.

Books and book chapters

Murray PR, Rosenthal KS, Kobayashi GS, Pfaller MA. *Medical microbiology*. 4th ed. St. Louis: Mosby; 2002.

Gilstrap LC 3rd, Cunningham FG, VanDorsten JP, editors. *Operative obstetrics*. 2nd ed. New York: McGraw-Hill; 2002.

Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. *The genetic basis of human cancer*. New York: McGraw-Hill; 2002. p. 93-113.

Theses

Borkowski MM. *Infant sleep and feeding: a telephone survey of Hispanic Americans* [dissertation]. Mount Pleasant (MI): Central Michigan University; 2002.

Conference proceedings

Harnden P, Joffe JK, Jones WG, editors. *Germ cell tumours V. Proceedings of the 5th Germ Cell Tumour Conference*; 2001 Sep 13-15; Leeds, UK. New York: Springer; 2002.

Conference paper

Christensen S, Oppacher F. An analysis of Koza's computational effort statistic for genetic programming. In: Foster JA, Lutton E, Miller J, Ryan C, Tettamanzi AG, editors. *Genetic programming. EuroGP 2002: Proceedings of the 5th European Conference on Genetic Programming*; 2002 Apr 3-5; Kinsdale, Ireland. Berlin: Springer; 2002. p. 182-91.

Newspaper articles

Tynan T. Medical improvements lower homicide rate: study sees drop in assault rate. *The Washington Post*. 2002 Aug 12;Sect. A:2 (col. 4).

Figures and figure legends

Authors may use photographs, schemes, diagrams, line graphs and bar charts to illustrate their findings. Figures should be suitable for onscreen viewing and desktop printing. High resolution images should be provided on request or on manuscript acceptance. The figures and their lettering should be clear and easy to read. We remind the authors that it is not acceptable scientific conduct to modify any separate element within an image. Figures should be numbered consecutively using Arabic numerals and referred to in the text by number. Each figure legend should have a concise title and should provide enough information so that the figure is understandable without frequent reference to the text.

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Equations

In-line equations should be typed as text. The use of graphics programs and 'equation editors' should be avoided.

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Please keep abbreviations to a minimum. In addition to abbreviations for Systeme International d'Unités (SI) units of measurement, other common units (e.g., bp, kb, and Da), and chemical symbols for the elements, should be used without definition. Non-standard abbreviations should not be used unless they appear at least three times in the text. List all non-standard abbreviations, acronyms and symbols in alphabetical order, along with their expanded form, at the beginning of the text. Define them as well upon first use in the text.

Supplemental material

We encourage authors to submit essential supplementary files that additionally support the authors' conclusions along with their manuscripts (the principal conclusions should be fully supported without referral to the supplemental material). Supplemental material will always remain associated with its article and is not subject to any modifications after publication. The decision to publish the material with the article if it is accepted will be made by the Editor. Supporting files of no more than 10 MB in may be submitted in a variety of formats, but should be publication-ready, as these files will be published exactly as supplied. Material must be restricted to large or complex data sets or results that cannot be readily displayed because of space or technical limitations. Material that has been published previously is not acceptable for posting as supplemental material.

Supporting files should fall into one of the following categories:

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If the software required for users to view/use the supplemental material is not embedded in the file, you are urged to use shareware or generally available/easily accessible programs. To prevent any



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All pages must be numbered consecutively. The whole text (including legends, footnotes, and references) should be formatted double-spaced with no hyphenation and automatic word-wrap (no hard returns within paragraphs). Please type your text consistently, e.g. take care to distinguish between '1' (one), 'I' (capital I) and 'l' (lower-case L) and '0' (zero) and 'O' (capital O), etc. Manuscript pages should have line numbers. The font size should be no smaller than 12 points.

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Outline of the production process

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Electronic proofs

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