



Guidelines for Authors

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About the journal

General

Unlike most other journals, Biomedical Sciences Instrumentation does not in general limit the length of a submission, the number of figures/tables, nor the number of references. The editors only ask that the content be succinct and to the point, including only what is necessary to allow the audience to follow the thought process of the authors.

Audience

Clinicians, engineers, scientists, and medical professionals in general. Additionally, the public that is interested in biomedical sciences, from basic physiology and physiological monitoring to medical,

engineering and biomedical education; from aviation, space and aerospace medicine to predictive medicine, machine learning & AI; from pollution monitoring to wildlife management.

Affiliation

Biomedical Sciences Instrumentation is the official journal of the International Biomedical Sciences Instrumentation Symposium and the Rocky Mountain Bioengineering Symposium. The journal is managed by the Rocky Mountain Bioengineering Symposium, Inc. (RMBS).

Publication frequency

Biomedical Sciences Instrumentation is a quarterly journal, published in January, April, July and October.

Usually, an individual issue is composed of publications on different topics, and will include publications that have completed the review and publication process by the publication deadline for that quarterly issue. Occasionally, special issues containing publications all on the same topic are published. Special issues have a Special Editor appointed by invitation from the Editor-in-Chief. If you have an idea or are interested in becoming the editor of a special issue, contact the Editor-in-Chief.

All articles receive a DOI (Digital Object Identifier) number so articles become searchable.

Topics

Biomedical Sciences Instrumentation accepts papers covering a variety of topics in biomedical sciences. Below is an extended, but by no means exclusive, list of topics (you can find the most common ones in the Categories in Step 1 of the submission process. If you cannot find the topic you want, choose the one that best approximates it, and add a note for the editor that the category you have selected is not optimal, and you would like to use a different one, specifying which one that is):

- Animal research
- Animal tracking and monitoring
- Aviation, space and aerospace medicine
- Biochemistry
- Bioinformatics
- Bioinstrumentation
- Biology and neurobiology
- Biomaterials
- Biomechanics
- Biomedical ethics
- Biomedical, medical and engineering pedagogy
- Biophysics
- Biosensors and transducers
- Cardiovascular mechanics
- Cellular and tissue engineering
- Cellular physiology
- Clinical and hospital systems engineering
- Computer graphics
- Computers in medicine
- Dental composites
- Drug delivery systems
- Economics and marketing
- Electrophysiology
- Ergonomics
- Forensic engineering
- Gait analysis
- Image, signal and data processing and analysis
- Imagery

- Kinesiology
- Machine learning & AI
- Medical devices design and regulations
- Modeling and simulation
- Neural modeling
- Neurophysiology
- Neuroscience
- Orthopaedics
- Patient monitoring
- Patient safety
- Physiological monitoring
- Physiology
- Pollution monitoring
- Predictive medicine
- Prosthetics
- Radiology and nuclear medicine
- Rehabilitation engineering
- Screening and diagnostics
- Sport and athletic training and performance
- Telemetry
- Trauma and impact
- Ultrasound
- Usability and Human Factors
- Vehicular safety
- Wildlife management
- Wound healing
- Biomedical potpourri

If the topic does not appear in this list or there are any questions, authors interested in publishing their work in Biomedical Sciences Instrumentation are encouraged to contact the Editor-in-Chief before submitting their manuscript.

Indexing

- Scopus
- Medline (from 1963 to 2015)
- EBSCO

Publication fees

There are processing fees for publishing in Biomedical Sciences Instrumentation. These fees are due before the manuscript is published. The amount of such fee and what it covers depends on the type of publication. Refer to the Publication Fees page for more information. The fees are non-refundable and will not be refunded if the submission and publication process is not completed.

Accepted types of publication

Given the broad span of interests covered by Biomedical Sciences Instrumentation, several types of traditional publications are welcome and are grouped in the journal issue upon publication (they are listed as Section in Step 1 of the submission process).

Most common accepted types of publications are:

- **Research Articles**, reporting a comprehensive work, typically at the end point of either a research project or a completed phase of a research project. Research could be theoretical (modeling) or experimental. Required formatting includes the following sections: Introduction, Materials & Methods, Results, Discussion, and Conclusions.

- **Technical Articles**, reporting an innovative method to approach including either an experimental data collection and analysis or a theoretical formulation. A technical article usually focuses on the preliminary stages of a comprehensive research project. Required formatting includes the following sections: Introduction, Materials & Methods, Preliminary Results, Relevance.
- **Review Articles**, such as literature reviews, systematic reviews, and meta-analyses. Required formatting includes: Introduction, Methods, Results, and Relevance. Review articles are typically requested from authors by invitation from the Editor-in-Chief. If you are interested in submitting a review article, contact the Editor-in-Chief.

Additionally, the following are also accepted:

- **Case Studies**, in-depth, detailed examination of a particular case (or cases) within a real-world context, which are typical of clinical-based research in biomedical sciences. Case studies are typically used to come up with hypotheses, generate theories, formulate concepts, and to explain outcomes in individual cases, which is something that quantitative methods are less equipped to do.
- **Short Communications**, intended to introduce new techniques that improve instrumentation within the biomedical sciences. This article type is not for preliminary or case studies.
- **Book Reviews**, similar to a review article, focusing on an individual book and its relevance in the biomedical sciences and education fields. Book reviews are usually requested from authors by invitation from the Editor-in-Chief. If you are interested in submitting a book review, contact the Editor-in-Chief. For ethical reasons, an author cannot self-promote its own book in such a review.
- **Perspective Pieces**, presenting the author's viewpoint on existing problems, fundamental concepts, or prevalent notions on a specific topic, and proposing and supporting a new hypothesis, or discussing the implications of a newly implemented innovation. Perspective pieces may also focus on current advances and future directions on a topic and may include original data as well as personal opinion. Perspective pieces are usually short peer-reviewed articles of around 2000-3000 words with few tables and figures, if required.
- **Opinion Articles**, presenting the author's viewpoint on the strengths and weaknesses of a hypothesis or scientific theory. Opinion articles are generally based on constructive criticism and should be backed by evidence. As such, they do not contain unpublished or original data. These articles promote scientific discourse that challenges the current state of knowledge in a particular field. Opinion articles formatting is relatively short, usually around 2000-2500 words, at least five references, and one or two summary/generalized figures or tables.
- **Commentary**, drawing attention to or present a criticism of a previously published article, book, or report, explaining why it is interesting and how it might be illuminating for readers, using the findings as a call to action or to highlight a few points of wider relevance to the field.

Commentaries do not include original data and are heavily dependent on the author's perspective or anecdotal evidence from the author's personal experience to support the argument. Commentaries are invited by Editors and are written by reviewers or experts in the field. Commentaries formatting is relatively short, usually around 1000-1,500 words, and contain a few references, and one or two summary/generalized tables and figures.

- **Letters to the Editor**, commenting on papers previously published in Biomedical Sciences Instrumentation, with the goal of stimulating a conversation between authors and readers of the journal. Letters to the editor are usually followed by an author's rebuttal. If the interest warrants it, a special edition may be published covering the original letter, the rebuttal, and invited commentaries/opinions.

Templates

We are accepting ONLY camera-ready documents:

- **Format:** pdf
- **Paper size:** Letter (NOT A4)
- **Left and right margins:** 0.75"
- **Top and bottom margins:** 1.13"
- No header nor footer

To help prepare the submissions, we have created templates you can use: download and extract them, select the one that applies to your manuscript, and replace the text with your content. If you cannot find the template you need, contact the Editor in Chief.

When creating the pdf of your submission, make sure you include all fonts you used, or it will not be camera ready (check the appropriate option in the pdf generator software you are using).

Submissions that do not follow the corresponding template will be administratively rejected, but can be resubmitted once the format has been fixed.

It is up to the authors to recommend a **Section/Category** combination that the work should be published; this may be changed by the Editorial Board during the production process step.

References must follow the IEEE standard.

Publication process

For additional information visit <https://docs.pkp.sfu.ca/learning-ojs/en/authoring>.

Submission process

You need to create an account and be logged in to submit a paper, to interact with the reviewers, and, if accepted for publication, to approve the final version of your paper.

To submit a new paper, you need to go through 5 steps, accessible in the submission section/My Queue tab. To begin, click New submission (required items are marked with a red *):

1. **Start** (providing preliminary information about your submission)

- Select the type of paper you want to submit in the drop-down menu of the Section (e.g., research article, letter to the editor, ...).
- Check which category (topic) is covered in your paper.
- Make sure you have completed all the submission requirements by checking each item as you complete them.
- Add any comments to the editor (this constitutes the cover letter of your submission, so enter any relevant information you want the editor to consider when reviewing your submission).
- Read and, if you agree, accept the copyright statement.
- Read and, if you agree, accept the privacy statement.
- Click **Save and continue** to proceed (note: if you do not agree to the copyright or privacy statements, you will not be able to proceed with your submission).

2. **Upload Submission**

- The Camera ready manuscript.
- The Copyright Assignment.
- The Publication fee receipt (due before the manuscript is published).
- Click **Add file** to upload (you can upload multiple files at once, as well as drag-and-drop files). Make sure the following required documents are uploaded at a minimum and specify each file type.
- Click **Save and continue** to proceed.

3. **Enter Metadata:**

- The following are mandatory:
 - The Title of your paper (broken down into prefix, title, and subtitle).
 - The abstract (up to 250 words – may not be required depending on the type of publication).
 - The list of all the authors (contributors), specifying their name, email address, country, and their role (author or translator). By default the author who is completing the submission is considered the corresponding author (primary contact). If this is not the case, make sure you specify who is. Furthermore, if you want the names to be included in the list of authors, check the corresponding box.
 - Up to 6 keywords, clicking **Enter** after each one (the word or phrase will be formatted as a keyword).
 - The supporting or funding agencies (if none, enter **None**), clicking **Enter** after each one.
 - The list of references (if none, enter **None**) as they appear in the References section of the paper and formatted according to the IEEE standard. Click **Enter** after each one. If available include the DOI #.
- Click **Save and continue** to proceed.

4. Confirmation

- Once you are satisfied with your submission click **Finish Submission** to upload it to the journal
- Confirm that you want to submit. Your submission is now complete and the editor has been notified of your submission.

5. Next

- At any time, you can review the status of your submission: it will go from the **Submission** stage to the **Review** stage, and if accepted, to the **Copyediting** and **Production** stages before being published.
- You (as well as your co-authors) will receive a notification email that your paper has been submitted. If you do not see the email in your inbox, please check your spam/junk/advertising/promotion folder or log back in and check the status of your submission.

NOTE: once you complete a submission, you cannot make changes to it. If you want to replace the file you submitted or make other changes to the submission, you will need to contact the editor through the **Pre-Review Discussions** tool.

Review process

The peer-review process of Biomedical Sciences Instrumentation usually involves two reviewers per manuscript. If there is no agreement among them, an additional reviewer is usually involved to help the editor make a decision. Reviewers have:

- **1 week** to accept or decline to review a paper.
- Once reviewers have accepted to review, they have **2 weeks** to complete it.

Once the review process has been completed, you will be notified via email by the editor of their decision. After receiving the email with the decision, login to your dashboard, select the manuscript you have been notified about, and **Within the Review tab** of the manuscript, you will see a copy of the **Editorial Decision** under **Notifications** (click on the link to view it).

Based on the information in the editor's message, you must now prepare your revisions.

Once you're ready to upload the revised file, scroll down the page and find the panel for Revisions. Use the Upload a File link to upload your revised manuscript and responses to reviewer's comments. For relevant documents, choose that you are uploading a revision of an existing file via the drop-down menu. Then, upload the revised file and click **Continue**. Review file details and click **Continue**. Check the file details and click **Continue**. If you have any additional files to upload, do so now. Otherwise, click **Complete**. Your revised file is now visible in the Revisions panel. The editor will receive a

notification about the new file(s) being uploaded. Additionally you can inform the editor via the **Review Discussion** panel:

- Select the **Add Discussion link**.
- Select the users you want to notify under **Participants**.
- Add a subject line and a message.
- Click **OK** to send the message (once sent it will appear in the **Review Discussions** panel).

You will receive an email that your revisions have been accepted and notifications will appear on your dashboard. The notifications show up in order of date, meaning the most recent one will be on the bottom. Click on it to open the message (which is the same as the email you would have also received).

If the editor's decision is to resubmit for review, you will need to log in and select the article in your submissions page. The resubmission is done in the review stage, there is no need to start a new submission. At the review stage you will need to do two things to resubmit once you have revised your document:

- Upload the new file in the revisions section. To upload a new file click on **Upload file**. A new window will open allowing you to upload your file(s). For relevant documents, choose that you are uploading a revision of an existing file via the drop-down menu.
- Add a discussion to notify the editor that you have re-submitted.

The peer review process will be repeated, and you will likely receive additional revisions to make. Once these are completed and accepted, you will then be moved to the next stage.

Copyediting process

The next step in the workflow is to inspect your submission files that have been copyedited.

You will receive an email indicating that files are available. To see them, login to the journal and go to your dashboard. You can see your entry in the **My Authored** panel. Select the **Copyediting link** to go to the full submission record, including the notification in the **Copyediting Discussions** panel. Click on the linked discussion to open it, read the message, and open the attached file. Respond to the copyeditor indicating any required changes or your approval. If needed, you could attach a revision.

Your role in the copyediting process is now complete and you can wait for the request to proofread the final galley before publication.

Production Process

The next step in the workflow is to inspect your submission files that have been converted into galley.

You will receive an email indicating that files are available. To see them, login to the journal and go to your dashboard. You can see your entry in the **My Authored** panel. Select the **Production link** to go to the full submission record, including the notification in the Production Discussions panel. Click on the

linked discussion to open it, read the message, and open the attached file. Once you have read the attached file, you can respond to the Layout Editor indicating any required changes or your approval.

Annual symposium & contest

Biomedical Sciences Instrumentation offers to the published authors a venue to disseminate their work: the annual International Biomedical Sciences Instrumentation Symposium. This is held in conjunction with the annual Rocky Mountain Bioengineering Symposium, typically in April of each year. During the symposium, authors of papers published in the last year of the journal have the choice of podium or poster presentations. For more information, visit the official website of the annual symposium.

Prior to the annual symposium, an invitation to present will be sent to the corresponding authors of all published papers with instructions on how to declare your 'Intent to Present'. Presenters must register for the annual symposium to present.

Furthermore, at the annual symposium, Biomedical Sciences Instrumentation awards the best published papers: using the results of the first review round of a submission, the papers are ranked and the authors of the best ones are recognized at the award ceremony taking place at the end of the annual symposium. For more information about the Contest, refer to its official rules posted on its website.

Peer Review Policies

All work published in Biomedical Sciences Instrumentation is peer reviewed. The editors oversee the peer review process and up to three independent experts in the specific field covered by the work in question conduct the reviews in accordance with the highest standards of scholarship and analytic and critical assessment. The specific format of the peer-review process depends on the type of work presented. Refer to the specific instructions for more information.

Review procedures

All work submitted to Biomedical Sciences Instrumentation undergoes these general steps:

- Administrative review for identification of the type of publication and conformance to specific formatting guidelines and submission requirements (within 1 week of submission): if these guidelines are not met, the corresponding author is notified of the nonconformity and required either to perform corrective actions before the review process is resumed or withdraw the submission.
- Peer review (within 2 months of submission): Reviewers in the topic area are recruited and reviewers are required to carefully evaluate the work and provide unbiased feedback to both the

authors and the editors. Depending on the type of work, up to three reviewers might be involved.

- Decision notification: based on the recommendation of the reviewers, the work is:
 - **Accepted for publication.**
 - **Accepted with minor revisions.**
 - **Accepted with major revisions.**
 - **Declined.**

Editorial decisions to accept or reject a manuscript are final. If the work is accepted with revisions and if the authors decide to implement the changes/corrections suggested by the reviewers, the work will undergo a second round of peer review, prior to being accepted for publication or declined if authors do not appropriately address reviewer suggestions.

If you would like to become a reviewer for this journal, contact the Editor in Chief.

Ethics Statement

Biomedical Sciences Instrumentation has always been committed to ethical and transparent management.

Editors and peer reviewers are expected to adhere to the current standards of fairness, integrity, impartiality, confidentiality and respect outlined in the Committee on Publication Ethics' Guidelines for Peer Reviewers.

Authors are asked to respect the following non-exhaustive list of principles of ethical publishing:

1. **Originality:** Work should be original and not have been published elsewhere. Papers must be free of plagiarized and self-plagiarized material. The inclusion of previously published passages or sections constitutes self-plagiarism unless the content has been significantly revised, reorganized or reworded and the original source is acknowledged.
2. **Authorship.** All those who made a significant contribution to the work should be listed as co-authors. Naming a person as a co-author also implies approval of the final version of the manuscript and consent to its submission. The author who made the most significant contribution to the paper is to be listed as first author. All other contributors should be acknowledged in the appropriate section of the manuscript
3. **Transparency.** Authors must disclose any potential conflict of interest (not just pertaining to themselves, but also any family members). If the project has received research funding, the granting body must be acknowledged. Papers must also properly acknowledge the work of others. Publications and other writings that have informed the work or otherwise drawn upon must be cited by clearly identifying the original source.

4. **Respect.** Work must not contain content or material that is hostile, libelous or derogatory.

Privacy Statement

The names and email addresses entered in this journal site will be used exclusively for the stated purposes of this journal and will not be made available for any other purpose or to any other party. The full Privacy Policy is available via the link on the bottom of this page.

Copyright Notice

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Permitted use Agreement: IAE permits author reuse of all or part of the submitted, accepted and published work in a thesis or dissertation that the Author is required to submit to satisfy the criteria for a degree from an accredited academic granting institution. Authors may reuse figures, tables, artwork, illustrations, and data from submitted and published work in which IAE holds copyright for teaching, training, presentation at conferences and seminars (with proper citation of the published work). Authors using the aforementioned materials in subsequent publications or on personal or university networks must have written permission from IAE and provide appropriate citation to the published work.

Authors may send a copy of the work to colleagues and the manuscript must include the IAE copyright and ISSN and/or ISBN information. The recipient should be informed that further distribution of any version of the work is not permitted.

A digital file of the work can be posted on websites and repositories only if it is mandated by the Author's funding agency.

The Copyright Assignment must be completed at the time of the initial submission.