

AUTHORS GUIDE¹

This document contains a number of points that we hope will be useful for authors in preparing their submissions to MICCAI 2018, and should be read in conjunction with the ***MICCAI Review Process*** document:

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1. CALL FOR PAPERS

MICCAI welcomes manuscripts that represent methodological innovations, from the level of fundamental mathematical formulation to the level of innovative integration, in the areas of interest of the Society. In addition, we encourage submission of performance evaluation on large datasets or first in human feasibility studies that rigorously and reproducibly demonstrate clinical relevance/viability in clinical practice or research settings. Methodological manuscripts should highlight their progress beyond the state-of-the-art while evaluation/feasibility studies will be assessed by the appropriateness of their design, the soundness of their conclusions, and the existence of prior similar studies.

Topics of interest for MICCAI include, but are not limited to:

Medical Image Computing

- Machine Learning and Artificial Intelligence
- Image Segmentation, Registration and Fusion
- Image Reconstruction and Image Quality
- Computational Anatomy and Physiology
- Microscopy and Histology Image Analysis
- Computer Aided Diagnosis
- Population Imaging and Imaging Genetics
- Applications of Big Data in Imaging
- Integration of Imaging with Non-Imaging Biomarkers
- Visualisation in Biomedical Imaging

¹ [rev 13-Mar-18] Text revised to better reflect the position of the MICCAI Board Society agreement re parallel submissions to arxiv and the implications for the review and anonymisation. Per request of MICCAI members. **Changes in red.**

Computer-Assisted Interventions

- Surgical Data Science
- Interventional Imaging Systems
- Image-Guided Interventions and Surgery
- Interventional Tracking and Navigation
- Medical Robotics and Haptics
- Surgical Skill and Work Flow Analysis
- Surgical Planning and Simulation
- Surgical Visualization and Augmented Reality
- Interventional Software and User Interfaces

We also welcome related topics from medical acquisition or devices, statistical and mathematical methods applied to imaging, computer vision, visualization, integration of imaging and non-imaging biomarkers, and application of state of the art image computing methods to clinical and biological problems, all bridging over to the more traditional MICCAI topics.

To promote equality and diversity, the MICCAI organizers particularly welcome submissions from female researchers and other underrepresented groups.

2. SUBMISSION DEADLINES

The submission process will comprise two phases:

- You will register your *intention-to-submit* by **Midnight, Pacific Time, February 23rd 2018**. This registration will require only the submission of the title, author list, and abstract of the manuscript. You will not be able to submit your *full manuscript* without registering an intention-to-submit.
- The *full manuscript* submission deadline will be **Midnight, Pacific Time, March 2nd 2018**. There will be no extension. Please see important dates on the website for further details on the review schedule.

3. MANUSCRIPT FORMAT

Papers should be submitted electronically following the [guidelines for authors](#) and [LaTeX and MS Word templates](#) available at [Lecture Notes in Computer Science](#), double blind review). Manuscripts should be up to 8-page papers for oral or poster presentation and submitted via the [Conference Management Toolkit](#). At submission time, a pre-filed [Copyright Form](#) will have to be submitted that will only be processed in case of acceptance of the manuscript. The papers will be evaluated by three external reviewers and Area Chairs for inclusion in the scientific program of MICCAI.



4. REVIEW PROCESS

The MICCAI 2018 review process is described in more detail on the MICCAI website. In the following we focus on a number of important elements to assist authors in a smooth submission and review process.

Statement of Novelty/Impact: This year we require that the authors provide a statement of novelty/impact of the contribution made by the manuscript as the main argument for its presentation at the conference. This statement will be up to 300 characters in length. It should clarify whether the main novelty/impact of the contribution is in the novelty of the proposed methodology or in the scientific/clinical impact of the conclusions or results.

Toronto Paper Matching System: By submitting a paper to MICCAI, the authors agree to the review process and understand that papers are processed by the [Toronto Paper Matching system](#) to match each manuscript to the best possible chairs and reviewers.

ReSearcher.cc: Authors are also asked to complete their Researcher.cc profile to manage any reviewing conflicts of interest. Any changes of co-authorship during the paper review process and after paper acceptance must be justified in writing to the Program Chairs.

Double-blind Review: MICCAI reviewing is double blind, in that authors do not know the names of the area chair/reviewers of their papers, and area chairs/reviewers do not know the names of the authors. Authors should avoid providing information that may identify them in the acknowledgments (e.g., co-workers and grant IDs) or in the supplementary material (e.g., titles in the movies or attached papers). Avoid providing links to websites that may identify any of the authors. Violation of any of these guidelines may lead to rejection without further review. If you need to cite a different paper of yours that is being submitted concurrently to MICCAI, you should (1) cite these papers (preserving anonymity), (2) argue in the body of your paper why your MICCAI paper is non trivially different from these concurrent submissions, and (3) include anonymized versions of those papers in the supplementary material.

ArXiv: We realize that with the increase in popularity of publishing technical reports and arXiv papers, sometimes the authors of a paper may be known to the reviewer. ~~The authors are discouraged to make arXiv submissions of their MICCAI papers prior to MICCAI paper acceptance decisions.~~ To avoid this, reviewers are not allowed to attempt to identify reviewers based on arXiv submissions or other publicly available technical reports. ArXiv papers are not considered prior work since they have not been peer-reviewed. Therefore, citations to these papers are not required and reviewers should not penalize a paper that fails to cite an arXiv submission. If the review process reveals that breaching of anonymity resulted **solely** from existence of an arXiv submission, the PC **cannot** reject the paper **solely** on this ground.

Dual/Double Submissions: By submitting a manuscript to MICCAI, authors acknowledge that their work has not been previously published or accepted for publication in substantially similar form in any peer-reviewed venue including journal, conference, workshop, or archival forums. Furthermore, no paper substantially similar in content has been or will be submitted to another conference or workshop during the review period (Feb 23, 2018 – Jun 4, 2018). The authors



also attest that they did not submit substantially similar submissions to MICCAI 2018. Violation of any of these conditions will lead to rejection. The goals of the dual submission policy are (i) to have exciting new work be published for the first time at MICCAI, and (ii) to avoid duplicating the effort of reviewers. Our policy is based upon the following particular definition of “publication”. A publication, for the purposes of the dual submission policy, is defined to be a written work longer than four pages that was submitted for review by peers for either acceptance or rejection, and, after review, was accepted. In particular, this definition of publication does not depend upon whether such an accepted written work appears in a formal proceedings or whether the organizers declare that such work “counts as a publication”. Note that such a definition does not consider university technical reports, which are typically not peer reviewed. However, this definition of publication does include peer-reviewed workshop papers, even if they do not appear in a proceeding, if their length is more than 4 pages including citations. Given this definition, any submission to MICCAI should not have substantial overlap with prior publications or other concurrent submissions. As a rule of thumb, the MICCAI submission should contain less than 20 percent of material from previous publications. An extended version of a paper submitted to MICCAI (with sufficiently new material) can be submitted to a journal any time after the MICCAI's submission deadline (even before a final decision on the paper is sent to the authors). An author submitting an extended version of a MICCAI paper to a journal needs to ensure that the paper (a) satisfies all submission requirements of the intended journal and (b) does not violate any copyright with Springer. Authors may also wish to notify the MICCAI Program Chairs of their journal submission. Note that a Technical Report (departmental, arXiv.org, etc.) that is put up without any form of direct peer-review is NOT considered a publication and is therefore allowed, but should NOT be cited. Likewise, mention of the work under review in a presentation is NOT considered a violation.

Plagiarism: We will be actively checking for plagiarism. Plagiarism is a serious offence that consists of using wordings or results of someone else’s publication without giving credit or providing appropriate referencing. Reviewers and Area Chairs can recognize such acts of plagiarism, and are asked to refer these to the MICCAI Organizing Committee who will investigate and in severe cases refer these on to the MICCAI Society for determining further action.

Publication: All accepted papers will be made available by Springer’s Lecture Notes in Computer Science not earlier than two weeks before the conference. Authors wishing to submit a patent understand that the paper's official public disclosure is two weeks before the conference or whenever the authors make it publicly available, whichever is first. The conference considers papers confident until published two weeks before the conferences, but notes that multiple organizations will have access during the review and production processes, so those seeking patents should discuss filing dates with their IP council. The conference assumes no liability for early disclosures. MICCAI papers are subject to the standard [LCNS Copyright Agreement](#). Papers submitted to MICCAI must not be discussed with the media until they have been officially accepted for publication. Violations of the embargo will result in the paper being removed from the conference and proceedings.

Attendance responsibilities: The authors agree that if the paper is accepted, at least one of the authors will register for the conference and present the paper there. At point of paper



acceptance, we will notify authors on how to obtain the necessary invitation letter for visa applications to help expedite this process.

5. SUPPLEMENTARY MATERIAL

Authors may optionally upload supplementary material, which may not fit in the PDF size limit and which may include: videos to showcase results/demo of the proposed approach/system, images and other results in addition to the ones in the paper, anonymized related submissions to other conferences and journals, and appendices or technical reports containing extended proofs and mathematical derivations that are not essential to the understanding of the submitted paper. MICCAI encourages authors to submit videos using an MP4 codec such as DivX contained in an AVI. Also, please submit a README text file with each video specifying the exact codec used and a URL where the codec can be downloaded.

The authors should refer to the contents of the supplementary material appropriately in the paper. Note that while reviewers will be encouraged to look at it, they are not obliged to do so. Experience has shown that reviewers tend to rely primarily on the main paper, due to their substantial load and tight review timeline. The paper should therefore be self-sufficient.

Please note that:

- All supplementary material must be self-contained and zipped into a single file. The following formats are allowed: avi, doc, docx, mp4, pdf, wmv. CMT imposes a 100MB limit on the size of this file. Note that you can update the file by uploading a new one (the old one will be deleted and replaced).
- The paper for review (PDF only) must be submitted first before the supplementary material (PDF or ZIP only) can be submitted.
- Please make sure that the supplementary material directly supports the paper as submitted prior to the paper deadline. ONLY results generated by the algorithm/approach/system reported in the submitted version are allowed. Material based on improvements made following the paper deadline is not admissible.
- Do not submit a newer version of the paper as supplementary material. A newer version of the paper or portion thereof, with description of an improved algorithm/approach/system or even one spelling or typo correction, is not allowed.



6. REBUTTAL GUIDE

Your rebuttal is addressed to the Area Chairs only. Reviewers will not see it and will not be able to change their reviews.

The goal of the rebuttal is to inform the Area Chairs of major misunderstandings, in your opinion, in the reviewers' assessment, or of incorrect statements in the reviews. An effective rebuttal focuses only on major critiques. It is not helpful to try to address every minor point in the reviews. By prioritizing and focusing on the major concerns, and by grouping multiple reviewer comments that generally pertain to the same issue into a few major categories, you are demonstrating to the Area Chair that you understand the high level messages that were provided in the reviews.

It is useful to summarize or rephrase the criticism before you address it, as long as it is clear what comment(s) you are responding to. While the room for rebuttal is limited, if properly utilized by condensing the response down to the essentials, this is an effective way to let the Area Chairs know that you understood the reviewer's concerns and have valid answers to the questions raised in the reviews, or else to establish that certain reviewer comments were false or unsubstantiated.

An effective rebuttal addresses reviewers' criticisms by explaining where in the paper you had provided the requisite information, perhaps further clarifying it.

It is not helpful to promise to expand your paper to address all the questions raised by the reviewers. The process does not allow you to change an article substantially, and in all likelihood you don't have sufficient room to add to the paper. These promises are likely to not be taken seriously.

A good rebuttal is polite. Being confrontational does not bring any added value to the paper. You should point out however if you feel you have received a review which was not courteous or made false or unsubstantiated arguments that you can succinctly refute.

7. REPRODUCIBLE RESEARCH

MICCAI is committed to [reproducible research](#). In MICCAI 2018, we invite reviewers and authors to improve the reproducibility of our research along three directions: open data, open implementations, and appropriate evaluation design and reporting. Where possible, we invite authors to use open data or to make their data and code available for open access by other researchers.

MICCAI welcomes manuscript highly innovative and ground-breaking methods, systems or technologies for which evaluation and performance assessment is potentially limited to proof of concepts or small-size validation studies. Authors and reviewers are encouraged to consider, argue and justify whether a particular paper falls in this category.

MICCAI also welcomes translational manuscripts whose main contribution is to demonstrate the (relative) impact or clinical value of one or more existing techniques, or to adapt/adopt state-of-the-art methods to a new problem or context. These manuscripts should be underpinned by an appropriate evaluation design and protocol representing best practices in image analysis, machine learning, and statistical design.

The following books provide pointers to the state of the art in performance analysis and statistical methods that should cover most of the algorithms and evaluation designs relevant to the MICCAI community.

1. Altman DG (1991) [Practical Statistics for Medical Research](#), Chapman and Hall/CRC (London UK).
2. Bland M (2015) [Introduction to Medical Statistics \(4th Ed\)](#), Oxford University Press (Oxford UK).
3. Japkowicz N, Shah M (2011) [Evaluating Learning Algorithms: A Classification Perspective](#), Cambridge University Press (New York, NY).
4. Klette R, Stiehl HS, Viergever MA, Vincken, KL (Eds.) (2000) [Performance Characterization in Computer Vision](#) (Computational Imaging and Vision Series), Kluwer Academic Publisher (Dordrecht, The Netherlands).
5. Susan-Young S, Driggers RG, Jacobs EL (2008) [Signal Processing and Performance Analysis for Imaging Systems](#), Artech House (Norwood, MA).

The following article contains a check list that can be used as a self-assessment of your manuscript:

6. Duchesne S, Jannin P. Proposing a manuscript peer-review checklist. *Neuroimage*. 2008 Feb 15;39(4):1783-7.

Finally, we include a recent article on the benefits of a double blind peer review process:

7. Tomkins A, Zhang M, Heavlin WD (2017). Reviewer bias in single- versus double-blind peer review. *PNAS* 14(48): 12708–12713.