

SUBMISSION CHECKLIST

Carefully review each item listed below before submitting your article. Article submissions that do not follow the guidelines below will be returned to draft or immediately rejected.

1. The manuscript should be prepared in a double column, single-spaced format using a required IEEE Access template. A Word or LaTex file and a PDF file are both required upon submission. The content on each file must match exactly. File sizes should not exceed 40MB. Download IEEE Access Templates for [Microsoft Word](#) and [LaTex](#).
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11. Authors must define abbreviations and acronyms the first time they are used in the article, even if they have already been defined in the abstract. Acronyms and abbreviations can have multiple meanings so it is important that these are clearly defined.
12. You must select a minimum of 3 (and a maximum of 10) manuscript keywords upon submission . Be sure the keywords are as accurate as possible to ensure a relevant Associate Editor is matched to manage the peer review of your article.
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All article types undergo the same rigorous peer review.

RESEARCH ARTICLE

This is a classic research article that has a hypothesis, investigation, solution, model, physical experiment and/or simulation and a result that is of value to the community within that area of expertise.

TOPICAL REVIEW

This is a review of an emerging area within the journal's scope that performs a technical and critical review of other articles. Calculations are performed and conclusions are drawn on the strengths and weaknesses. The conclusion can also discuss future challenges. An article that is descriptive, without a framework, and instead expounds a particular topic should be this type.

THEORY

This is a scholarly article that uses mathematical methods to develop new theoretical results of importance to the field.

SURVEY

A survey article analyzes, summarizes, systemizes, and presents fresh conclusions from a large number of recently published scholarly articles. A review article that has a well-defined framework for selecting and excluding papers and draws an overall conclusion from the body of those papers should be this type. An example of this would be a Systematic Literature Review (SLR).

PERSPECTIVE

This category of article is an in-depth viewpoint article intended to bring together a big picture in a fast-evolving landscape of technological development. It will typically be a topic where there is community uncertainty and/or disagreement. Since IEEE Access does not have a page limit, publishing perspective articles will allow more technical discussion. This category of article will typically be written by a leading authority in an area.

APPLIED RESEARCH

This article describes challenges and practical solutions for topics within the journal's scope. Quantitative results for validation of the approach are expected.

NEGATIVE RESULT

This is a non-trivial theoretical or experimental negative or null result that does not support a hypothesis. Provided that the research question posed is meaningful and the study is rigorously conducted, this type of article has value to the engineering community.

METHODS

This article will report the development of new or improved fabrication or manufacturing technique, or a new experimental, measurement or mathematical technique. Applied research articles focus on practical systems, while here the focus is on methods.

TUTORIAL

This is a pedagogical article to assist readers to learn and familiarize themselves with a topic. The topic may be an emerging one that is not well understood in the community, or a difficult traditional topic that can benefit from an up to date exposition. The topic should not be one that is well understood or well represented in textbooks. The article must add to the

existing literature to benefit the readership. The objectives and prerequisite background required by the reader should be clearly identified in the introduction. The references should cite both background material and advanced material for the reader to dig deeper.

STANDARDS

This article summarizes and expounds new or revised IEEE standards. This can also be a scholarly discussion paper for new IEEE standards or a critique of existing IEEE standards with recommendations.

COMMENT

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REPLY

A reply article is submitted by the authors of a published paper in response to a Comment article. *Please note that we only allow one Comment and one Reply in response. We do not allow subsequent Comments and Replies.*

DEBATE

There are topics within the scope of IEEE Access where there is disagreement between experts. A debate paper will be a scholarly technical research paper that makes the case for a particular position. The EIC may invite an opposing debate paper to create balance. A perspective article looks at the big picture, whereas a debate paper is highly technical.

EXPOSITION

This is an expository scholarly article that does not produce a new result but revisits a complicated or poorly understood result and elucidates it with a fresh approach. It is a very technical article that digs into theory and interpretation. As opposed to a tutorial article, which is a "how" article, an exposition article is more of a "why" article.

META-ANALYSIS

A meta-analysis is a statistical analysis that combines the results of multiple published scientific studies addressing the same question. A meta-analysis concludes by identifying effects that are statistically significant across the many studies. Such a paper not only can provide an estimate of the unknown common truth, but also has the potential to contrast results from different studies and identify sources of disagreement among these results, patterns among study results or other interesting results that may come to light in the context of multiple studies.

UNSOLVED PROBLEM

This is a technical scholarly article that investigates a tough problem that is not yet solved. The article is not able to solve it either. The article's analysis concludes with identifying a clear set of open questions that the community needs to work on in order to make further progress. Papers such as this are expected to add clarity to complex issues and create a roadmap of questions for researchers to follow.