## Draft: Recommended Practices to Ensure Conference Content Quality

Prepared in a cooperative effort by:

- Elsevier
- IEEE
- IET

These recommended practices are presented as follows:

1. Purpose
2. Background
3. Definitions
4. Principles
5. Rights and Obligations

### 1. Purpose

The use of trustworthy, high-quality scholarly research benefits both its author and the global information community. These recommended practices have been developed to provide guidelines that will help maintain an equitable balance of the interests of all participants in ensuring high quality, scholarly conference proceedings content.

1.1 These recommended practices were developed to stand as an ideal toward which the development of high quality, scholarly conference content should strive. Our intention is that these same recommended practices will contribute toward awareness and understanding of how these issues affect the global information community in the development and dissemination of high quality, scholarly conference content.

1.2 It is expected that these recommended practices will be widely adopted by the global information community in conference content development, particularly as a point of reference for commercial and non-commercial conference proceedings publishers.

1.3 These recommended practices provide a set of guiding principles from which high quality, scholarly conference proceedings content will be measured by the global information community, and in particular commercial and non-commercial conference proceedings publishers.

1.4 Acceptance of these recommended practices will help facilitate full disclosure and transparency for the ultimate benefit of the global information community.

## 2. Background

The growth in the total number of technical conferences, the increasing volume of papers being submitted to and presented at individual conferences, and the ubiquity of conference content as facilitated by technology and the evolution of academia and research, has surfaced quality risks that are perceptible and measurable.

Variously called 'articles' or 'papers', original research as conference proceedings content is published by commercial and non-commercial publishers. It is included in permanent repositories or in various forms within research discovery databases, and it is used to further progress in all fields of learning and scholarly dissemination.

The presence of low-quality papers in a conference proceedings publication will degrade the value and reputation of the author, conference, the proceedings' publishers, any repository it is part of, and the interests of all participants in ensuring high quality, scholarly conference proceedings content. The aim of this recommended practices document is to consider these issues from the point of view of conference proceedings publishers, and to bring forward best practices that will help to ensure that high quality, scholarly conference content continues to be developed, published and disseminated within the global information community for its own ultimate benefit.

## 3. Definitions within the Context of these Recommended Practices

- A **conference** is a meeting conducted for and by researchers to present and discuss their latest work. Conferences provide an important channel for the exchange of information between researchers, coupled with the publication of a record of the research presented at the conference.

- **Conference proceedings** are a collection of articles or papers and ancillary content (e.g., copyright page, keynote address, table of contents, author index) published as a record of what was presented at a conference. The proceedings may be published and distributed as printed volumes or in other formats (e.g., electronic) either before the conference begins or after it has concluded. Conference proceedings are intended to contain the contributions presented by the participants in attendance at the conference, and are the historical record of the work presented to fellow researchers at the conference.

- **Principles** are a collective set of standards and practices that guide professional and ethical obligations that the global information community (and in particular, commercial and noncommercial conference proceedings publishers) adopt to ensure that the conference proceedings content they publish and disseminate is of the highest quality and will remain useful.

- An **article** or **paper** is a written description of current original research findings.

- An **abstract** communicates the purpose and findings of the research paper in a succinct manner.

- A **Call for Papers** is a form of communication used to recruit authors to submit articles or papers to a conference. The Call for Papers (CFP) lists the conference's areas of interest, and tells prospective authors how to submit their abstracts or papers for review.

- **Quality** is the degree of appropriateness, excellence, and scientific soundness of the conference proceedings.

- An **obligation** is what is owed to an individual or group of individuals based upon a guiding set of principles.

- **Plagiarism** is the reuse of someone else's prior ideas, processes, results, or words without explicitly acknowledging the original author and source.

- **Machine-generated documents** are articles or papers that were created through the use of a software program that generates research papers, including graphs, figures, and citations. The papers are generally identifiable by the presence of random, semi-nonsensical, context-free grammar throughout.

- **Right** is what commercial or non-commercial conference proceedings publisher is allowed to do based upon the principles outlined in this recommended practices document, for the purpose of ensuring that the conference proceedings content they publish is of the highest quality.

- **Information community** is the global universe of individuals and organizations who are involved in any aspect of the flow of scholarly and scientific communication. The members of this community are stakeholders in the effectiveness and quality of the dissemination of scholarly research (e.g., authors, commercial and non-commercial conference proceedings publishers, repositories, research discovery and/or abstract and indexing databases, and scholarly research information seekers).

## 4. Principles

The guiding principles noted here are intended to provide a flexible framework that commercial and non-commercial conference proceedings publishers shall adopt to ensure that the conference proceedings content they publish is of the highest quality and will remain useful. Publishers who see fit to adopt these principles may also choose to add their own additional explanatory information as appendices to the main Recommended Practices to clarify issues that are particular to themselves.

While there is no one set of guidelines or standards that can or will ensure high quality conference proceedings, the more aligned commercial and non-commercial conference proceedings publishers are with asserting quality through the adoption of these principles, the higher the quality that can be achieved.

## 5. Rights and Obligations

The quality of the conference proceedings content is ensured typically through the rights and obligations of the authors, meeting organizers, sponsors, commercial and non-commercial conference proceedings publishers, or all of them together in various measures. For the purpose of this recommended practices document, conference proceedings quality will be considered with regard to the following principles:

1. Conference proceedings content with respect to conference scope
2. Written quality requirements of conference proceedings content
3. Selection of content and peer review
4. Commercial or non-commercial publisher acceptance criteria for conference proceedings

*1. Conference Proceedings Content with Respect to Conference Scope*

It is suggested that the conference organizers, their sponsors, and/or the commercial and non-commercial conference proceedings publishers are obliged to define the scope of coverage for a conference. Submitted articles or papers are expected to fit within the subject matter scope of the conference as stated publicly in the conference's Call for Papers.

It is recommended that the content published and disseminated via the conference proceedings record should reflect accurately the scope of coverage and topics of the meeting as well as the commercial and non-commercial conference proceedings publisher's scope of coverage or closely related areas.

Articles or papers on topics that do not fit within the scope of the conference Call for Papers or do not otherwise further the mission of the commercial and non-commercial conference proceedings publishers are considered out-of-scope. It is the obligation of the conference organizers, their sponsors and the commercial or non-commercial Publisher to ensure that these articles or papers are precluded from acceptance.

*2. Written Quality Requirements of Conference Proceedings Content*

Conference content may be presented in full (i.e., a complete research paper), or in some abbreviated, representative form (e.g., as a group of slides without comments, as an abstract or digest of the original research paper, or as a record of a panel discussion or other event from the conference).

The content of the article or paper should be of sufficient written English quality to enable readers to follow the narrative easily. Authors not fluent in English may be expected to consult an individual who is fluent in English to check and correct their work.

Articles or papers should contain most (if not all) of the standard elements found in research papers.

A conference article or paper should have the following elements:

- **Metadata** – title, keywords, abstract, professional affiliation(s), and cited references in the bibliography must be included, and written in the English Language.

- **Abstract** – a brief and objective summary that previews the rest of the paper it describes. It should be succinct yet provide enough information about the paper to facilitate a decision on whether the entire paper could be read with profit.

- **Introduction** – an introductory statement of the purpose of the paper, usually describing the hypothesis that will be tested and a summary of related previous work by others.

- **Methods** – the methods that are used to test the hypothesis should be given in sufficient detail that another researcher in the field could duplicate the testing.

- **Results** – the hypothesis should be tested and data representing the results of the testing presented.

- **Conclusion** – the data should be discussed and the results interpreted, and conclusions given.

2.1 *Conference Content Intended to Deceive: Plagiarism and Machine-generated Documents*

All conference content is presumed to be submitted to the conference organizers in good faith. The author(s) is/are responsible for providing appropriate content to the conference that is new, original, and in no way intended to deceive.

Materials deemed to be plagiarized will be dealt with according to the standards outlined by the meeting organizers, their sponsors, commercial and non-commercial conference proceedings publishers or all of them, as appropriate.

Machine-generated papers (i.e., documents considered to be parodies of research papers, and intended to deceive the conference), are always considered fraudulent submissions. Conference content deemed to be machine-generated will be dealt with according to the standards outlined by the meeting organizers, their sponsors, commercial and non-commercial conference proceedings publishers, or all of them, as appropriate.

Instructions on the required format and layout of the article or paper are usually contained within the publishing agreement signed between the publisher and the conference organizers and should be referred to as needed or required.

Conference organizers should make prospective authors aware of the publication ethics and malpractice statement (PEMS) of the organization publishing their proceedings. More information on publication ethics and the expectation of authors and editors can be found at the Committee on Publication Ethics website at http://publicationethics.org/.

*3. Selection of Content: Conference Presentations and Peer Review*

As a general principle, participants at the conference should be aware that they, or a delegate notified and approved by the conference organizers, are expected to present and defend the article, paper, or other content in person at the conference, in order for their article, paper, or other content to be considered for inclusion in the conference proceedings publication. In cases where this is not the normal practice of the conference organization or the publisher, this fact should be noted as part of the final published conference record (e.g., a table of contents with non-presented papers noted), or on the final published documents themselves (e.g., as a footnote on the first page of the paper). Each conference has the option to exclude accepted papers from the final proceedings if the author does not attend the conference (commonly referred to as a "no-show author").

A proper editorial screening process is considered the key to developing a strong conference program and a high quality conference proceedings publication. Peer reviews are encouraged for material to be included in any scholarly research conference (with the rare exception of, for example, a conference whose proceedings contained only invited papers). These reviews represent objective evaluations of the research and enforce high standards of submissions.

*3.1 Suggested Workflow for Conference Organizers:*

- Establish which types of presentations from the conference will be considered for inclusion in the conference proceedings publication (e.g., keynote speech, articles or papers, or other content presented to a topical session, poster session, etc.).

- Decide what form of the research content the reviewers will assess (e.g., abstract only, conference presentation submitted in advance, or final research paper prepared for conference proceedings publication).

- Develop a schedule for the review tasks, deadlines, and dependencies.

- Decide if the review is a blind or double-blind review. (A blind review is one where only the referees are anonymous. In a double-blind review, the author and referees are anonymous to one another).

- Select independent referees who are reliable subject matter experts.

- In your Call for Papers, communicate a firm deadline for submitting papers.

- Assign an appropriate number of referees to each paper.

- Decide upon a process for adjudication in the event of conflicting opinions from referees.

- Establish the expected percentage acceptance rate of papers.

- The structure and complexity of the peer review process, and the subject matter expertise available within the pool of reviewers, should be in line with the number and type of articles included in the conference.

Conference organizers should endeavor to develop a sufficient pool of referees to review all submitted papers. The assignment of at least two referees to each paper submitted, and no more than 12 to 15 papers to each referee should allow for reasonable peer review, but may be adjusted as appropriate to the conference's or publisher's circumstances. When instructing referees, it is best to first establish the criteria the referees will apply. For example, it is suggested referees focus on these essential criteria for a recommendation of acceptance for publication:

- TECHNICAL OR SCIENTIFIC SOUNDNESS AND NOVELTY: technically or scientifically sound and new or innovative methods or approaches to a problem (or its examination) in a given subject area that is within the conference's scope.

- WRITTEN QUALITY: a presentation that delivers its information in sufficient written English quality to enable readers to follow the narrative easily, and which can be used by the appropriate audiences to further their knowledge or research.

*3.2 Tools to Manage the Peer Review Process:*

Whenever possible we recommend that conference organizers use a peer review application or tool to manage submitted works. Peer review tools make it easier for authors to submit abstracts or papers, for referees to provide comments and rate submitted papers, and for organizers tor technical program chairs to assign referees, track reviews, and manage the technical program. A peer review tool helps one to follow a consistent process, and can improve the quality of reviews over time.

Conference organizers or their designees can use a peer review tool to:

- keep track of submitted abstracts and papers
- manage the selection of referees and their assignments
- monitor the status of reviews and ratings
- create a schedule or final program
- provide reports

Some peer review tools provide additional functionality that can help to create the Call for Papers, produce the proceedings, archive papers, check for plagiarism, and manage paper and event registration.

4. *Commercial or Non-commercial Publisher Acceptance Criteria for Conference Proceedings*

The Commercial or Non-commercial Conference Proceedings Publisher reserves the right to

check the quality of the content submitted for publication by the Conference Organizers. If the above guidelines are followed, the content should meet essential quality criteria.

If the Publisher judges that some percentage or more of the submitted content has not met these criteria, it maintains the right to decline to publish the whole or any part of the Conference Proceedings and further maintains the sole right to not consider future publication of subsequent conferences organized by the same conference organizers in order to maintain the high quality Conference Proceedings standards outlined in this recommended practices document.

Conference organizers should not guarantee post-publication indexing by abstracting & indexing (A&I) services, to their authors. These services may have their own specific criteria for selecting conferences for indexing, which may differ from the issues presented in this document. A&I services always have the right to reject conference proceedings. However, following the guidelines in this recommended practices document will support the focus on quality, and therefore increase the conference's likelihood of getting indexed.

## Appendices

*Note: This section is subject to ongoing additions, deletions, and other changes as other publishing organizations and professional associations contribute, and as organization-specific scope definitions may be adjusted in the future based on evolving research.*

The guiding principles noted here are intended to provide a flexible framework that commercial and non-commercial conference proceedings publishers can adopt to ensure that the conference proceedings content they publish is of the highest quality and will remain useful. Publishers who see fit to adopt these principles may also choose to add their own additional explanatory information as appendices to the recommended practices main document, to clarify issues that are particular to themselves.

Publishers listed here have both adopted this set of recommended practices as a framework to ensure that the conference proceedings content they publish is of the highest quality and will remain useful. Also as noted in Section 4 of this recommended practices document, commercial and non-commercial conference proceedings publishers listed below, have chosen to add their own additional explanatory information that seeks to clarify issues, policies, or practices particular to their organization.

**Appendix 1: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)**

The IEEE endorses and agrees to operate within the framework of this set of recommended practices and wishes to add the following:

IEEE's mission is to foster technological innovation and excellence for the benefit of humanity. IEEE will accomplish this by becoming essential to the global technical community and to technical professionals everywhere, and will be recognized universally for the contributions of technology and of technical professionals in improving global conditions. To further IEEE's mission, content variously called 'articles,' 'papers', or generally, conference proceedings 'content' in any format at both the article/paper and publication levels, shall fit within the subject matter scope of the conference as the scope was stated publicly in the Call for Papers.

For instance, if the scope of the conference is wireless technology, a paper on magnetic disk drives would be outside the technical scope of the conference (unless wireless technology was an important aspect of the disk drive).

Each article or paper in a conference's proceedings is required to be within IEEE's core technical scope of electrical engineering, electronics, computer science, and closely related areas. IEEE has identified its current scope of coverage to include the following 16 broad topical areas that reflect how content is categorized in IEEE *Xplore®\*:*

- o Aerospace
- o Bioengineering
- o Communication, Networking & Broadcasting
- o Components, Circuits, Devices & Systems
- o Computing & Processing (Hardware/Software)
- o Engineered Materials, Dielectrics & Plasmas
- o Engineering Profession
- o Fields, Waves & Electromagnetics
- o General Topics for Engineers (Math, Science & Engineering)
- o Geoscience
- o Nuclear Engineering
- o Photonics & Electro-Optics
- o Power, Energy, & Industry Applications
- o Robotics & Control Systems
- o Signal Processing & Analysis
- o Transportation

*\*IEEE Xplore® is a scholarly research database that provides full text for articles and papers on electrical engineering, electronics, computer science, and closely-related areas and whose metadata includes various indexes and article abstracts.*

Further detailed information about IEEE's technical scope, as defined in the descriptions of its technical societies' areas of interest, is available at
http://www.ieee.org/membership_services/membership/societies/index.html

Some articles or papers in fields that converge with IEEE's core technical areas, such as other branches of engineering, physical science, life science, applied mathematics, or others still to be designated in the future based on evolving research, are considered to be within IEEE's scope, as long as the paper includes substantial portions that are clearly relevant to IEEE's core areas of interest.

Articles or papers on non-technical topics such as tourism, philosophy, art, politics, architecture, agriculture, economics, pure mathematics, pure finance, etc., that do not make use of or interact with IEEE's primary subject areas *in a non-trivial manner*, are considered to be outside of IEEE's scope.

Plagiarized content is of no value to the research community and does not represent material that should be presented at an IEEE conference. IEEE defines plagiarism as the reuse of someone else's prior ideas, processes, results, or words without explicitly acknowledging the original author and source.

IEEE considers plagiarism in any form to be a serious breach of professional conduct, with potentially severe ethical and legal consequences. Further detailed information about IEEE's policies regarding plagiarism is available at
http://www.ieee.org/publications_standards/publications/rights/plagiarism_FAQ.html.

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