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Participating in the Peer Review and Publication Process

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Introduction

Significant advancements in technology and civilization are supported by the publication process. New ideas are recorded, tested, reviewed, discussed and published in various forms. Formal publication is a process whereby large amounts of material are "mined" to separate the significant from the trivial and refined ideas are recorded for the benefit of others, both present and future. This article presents an overview description of the peer review and publication process from the perspective of the American Society of Civil Engineers (ASCE) by the Editor of the Journal of Surveying Engineering, one of 20 separate ASCE division journals.

Modes of Publication

Publication, in a general sense, is any means by which others are informed of events, ideas, and/or issues. In order to identify the specific focus of this discussion, the following generic categories are listed (there are others).

<u>Media:</u> As a broad category, this includes newspaper, radio and TV. This is a very efficient way to present "consumable" news and information to the public at large.

<u>Popular press:</u> This category is also quite broad and includes many magazines found in news stands. Material found here is often more focused than news reporting and is presented in a defined context. Certainly some newspaper articles and TV programs could be counted in this category. <u>Newsletters and technical magazines:</u> General interest material for specific professional audiences is very important and exists in abundance. The quality of information printed here may be very good, but generally the material is evaluated only by the author and/or editor. It is generally not, but could be, "peer" reviewed.

<u>Proceedings:</u> Whenever groups of people with a common interest get together to discuss issues, a common practice is to collect prepared material into a "proceedings" of the conference. Typically, the program speakers have been invited or were given an opportunity to propose a particular presentation. This meeting is an example.

Rarely is a "flake" on the program but, once on the program, an author/speaker can present or say what they like. Other than the reputation of the speaker, there is no guarantee of quality or accuracy in the material presented. On the other hand, many excellent, new, and exciting ideas are first reported at such a conference and proceedings can be a valuable source of information.

<u>Journals:</u> Material published in a technical journal is written for posterity and is subjected to extensive peer review prior to publication. The review is performed by knowledgeable volunteer professionals who read and study each paper carefully. Suggestions coming out of the review process often help improve the quality of a paper.

Material in a journal often has an immediate impact but, because journals are archived in libraries around the world, benefit also accrues to future generations who have access to the accumulated body of knowledge. Therefore, quality and integrity are paramount in the review process.

<u>Publishers:</u> Numerous books and reference materials are published by commercial enterprise and also add to the collective body of knowledge. Typically, the content is established and controlled by the publisher and/or author and, in many cases, quality is excellent. Review is the prerogative of the publisher/editor/author. Writing for a publisher can be both satisfying and rewarding.

Why Write for a Peer Reviewed Journal?

Writing is a difficult task for many but, like many activities, becomes easier with practice. There are specific criteria and guidelines for acceptable writing in each of the categories listed and many people are successful in one or more areas. For some, writing is the focus of their job description and they make a career of it. For those of us in academia, writing and publishing is often expected as a by-product of our teaching or research responsibilities. It is not my goal here to say that a person should write for one category or the other. Rather, my goal is to share my experience with the peer review process and to encourage others to use it as appropriate.

Typical reasons for writing for a technical journal might include:

- 1. Being published in a technical journal is recognition of personal accomplishment by ones peers.
- 2. Writing for a technical journal is one way of gaining practice and establishing a writing reputation. For many it is a prerequisite to writing for a publisher.
- 3. Being published in a technical journal preserves ones contribution or legacy for future generations. For some this could be as important as having children?
- 4. Being published in a technical journal is evidence of ones scholarly ability. Rightly or not, this becomes a significant motivation for those in the "publish or perish" environment in which advancement and promotion are based, at least in part, on the number of refereed articles one has published.

Many researchers prefer to publish papers in the proceedings of a conference (and I don't mean to discount that) because that is an excellent forum in which to get immediate feedback. However, the material found in proceedings has a much greater chance of being "preliminary" or technically flawed if it is printed before scrutiny by others. Long term value is assured by getting a paper reviewed, corrected and revised prior to publication.

5. A danger perceived by some authors is that the very process designed to assure minimum quality of a technical journal somehow establishes a particular journal as being beneath their dignity and/or unworthy of their brilliant efforts. In some cases, researchers or authors have gone directly to the public via the media or popular press because they don't trust the peer review process. Some get away with it (cold fusion?), but others have not. Authors are encouraged to write for technical journals because the review process adds credibility to the published paper and, in a sense, protects us from ourselves.

Overview of the Peer Review Process

These steps are specifically applicable to ASCE, but are similar for many publications.

- 1. An author consults the list of specifications for a given publication and writes a paper consistent with the stated guidelines.
- 2. The paper is submitted to the ASCE Journals Department in New York. Papers may also be submitted directly to a particular editor, but sending it to New York will ensure the widest possible consideration (by ASCE).

- 3. ASCE Journals staff logs in each paper, acknowledges receipt of same to the author and sends the manuscript to the appropriate editor.
- 4. The Editor previews the manuscript and sends it out for review to at least two competent reviewers. Three reviewers for each paper are commonly used.
- 5. A reviewer has 4-6 weeks to read, study, and make comments about the manuscript. The depth and quality of review varies with individual reviewers, but the end result is a single recommendation from each reviewer. For ASCE, the reviewer recommendation options are:
 - A. Accept in present form.
 - B. Accept, author should consider suggested revisions.
 - C. Tentatively accept, revision required. (rereview may be required)
 - D. Decline, encourage revision and resubmittal.
 - E. Decline as a paper, consider resubmittal as a technical note.
 - F. Decline.
- 6. Any paper must have at least two independent reviews supporting a publication decision by an editor. A journal editor may serve as a reviewer.
- 7. The Editor returns paper, reviews (sans reviewers identity), and marked up manuscript to ASCE Headquarters with recommendation. ASCE transmits recommendation and marked manuscripts to author.
- 8. Author makes changes as required and resubmits paper to ASCE Headquarters. If rereview is required, the paper goes to the Editor a second time. Otherwise ASCE production staff will work directly with the author in the copyediting process. Details include copyright assignments, graphics in final form, length check on both title and overall manuscript and other details. The checklist for copyediting is very detailed.
- 9. Page proofs are sent to the author by the typesetter for final proofreading. Penalties may be assessed for any changes requested (typesetter errors excepted) at this point.
- 10. The article appears in the journal. The author receives several complimentary copies of the journal issue and has the option of buying reprints in lots of 100.

Opportunities for Participation

Surveying teachers (and students) make excellent reviewers and are a mother lode of ideas for technical articles for any of several peer reviewed surveying and related publications. The list includes, but is not limited to:

ASCE Journal of Surveying Engineering ACSM Surveying and Land Information Systems ACSM Cartography and Geographic Information Systems ASPRS Photogrammetric Engineering & Remote Sensing Empire Survey Review Canadian Institute of Surveying & Mapping

Surveying has come into its own as a distinct profession in recent years. Even so, there are many qualified civil engineers, with and without surveying registration, who maintain an interest in surveying and who support activities of the Surveying Engineering Division and the division journal. ASCE has over 110,000 members and approximately 13,000 of them check off "surveying engineering" as either a primary or secondary area of interest among the 20 + /- divisions. Prospective authors are encouraged to write for that audience by submitting papers for review and possible publication in the Journal of Surveying Engineering. Authors Guides, flyers, and recent journal issues are available for interested persons. Inquiries to this editor are also welcome.

Publication Policies

Standards for peer reviewed publications have evolved over time and have been developed to address issues such as:

- Format specifications, content and length restrictions.
- Dual submission to several journals simultaneously.
- Copyrights, references and plagiarized material.
- Listing of multiple authors.
- Confidentially of material read by editors/reviewers.
- Conflict of interest on part of editor and/or reviewers.
- Companion papers which address the same project or research.
- Standards of quality.

These issues and others are addressed in documents released recently by ASCE which are included herein as Appendix A and Appendix B. They are:

Appendix A: Ethical Standards for Publication of ASCE Journals

Appendix B: Companion Papers

Appendix A

Ethical Standards for Publication of ASCE Journals

PREFACE

The American Society of Civil Engineers (ASCE) serves the civil engineering community and society at large in several ways, including the publication of technical journals that present the results of current engineering and scientific research and practice. Fundamental to that service is the responsibility of editors, authors and reviewers to maintain high ethical standards relating to the submittal, review, and publication of manuscripts. These ethical standards derive from the ASCE's definition of the scope of the journal and from the community's perception of standards of quality for engineering and scientific work, and its presentation. The ethical standards that follow reflect a conviction that the observance of high ethical standards is so vital to the entire engineering and scientific enterprise that a definition of those standards should be brought to the attention of all concerned.

ETHICAL STANDARDS

A. Obligations of Editors

1. The primary responsibility of an ASCE journal editor is to ensure an efficient and fair review process of manuscripts submitted for publication, and to establish and maintain high standard of technical and professional quality. Criteria of quality are: originality of approach, concept and/or application; profundity; and relevance to the civil engineering profession.

2. An editor shall give unbiased consideration to all manuscripts offered for publication, and shall judge each on its merits without regard to any personal relationship or familiarity with the author(s), or to the race, gender, sexual orientation, religious belief, ethnic origin, citizenship, professional association, or political philosophy of the author(s).

3. The editor and editorial staff shall disclose no information about a manuscript under consideration to anyone other than those from whom professional advice regarding the publication of the manuscript is sought. The names of reviewers shall not be released by the editors or editorial staff.

4. An editor who authors or co-authors a manuscript submitted for consideration to the journals with which that editor is affiliated, shall not review that work. If after publication, the editor-author's work merits on-going scientific debate within the journal, the editor-author shall accept no editorial responsibility in connection therewith.

5. An editor shall avoid conflicts of interest and/or the appearance thereof. An editor shall not send a manuscript to reviewers who are known to have personal bias in favor of or against the author or the subject matter of that manuscript.

6. Unpublished information, arguments, or interpretations contained in a submitted manuscript are confidential and shall not be used in the research of an editor or associate editor, or otherwise disseminated except with the consent of the author and with appropriate attribution.

7. If an editor is presented with convincing evidence that the substance, conclusions, references or other material included in a manuscript published in an ASCE journal are erroneous, the editor, after notifying the author(s) and allowing them to respond in writing, shall facilitate immediate publication of an errata. If possible, an editor shall also facilitate publication of appropriate comments and/or papers identifying those errors.

8. If an editor is presented with convincing evidence that a manuscript or published paper contains plagiarized material or falsified research data, the editor shall forward such evidence to the Manager, Journals, for investigation by the ASCE Professional Conduct Committee.

B. Obligations of Authors

1. An author's central obligation is to present a concise account of the research, work, or project completed, together with an objective discussion of its significance.

2. A submitted manuscript shall contain detail and reference to public sources of information sufficient to permit the author's peers to repeat the work or otherwise verify its accuracy.

3. An author shall cite and give appropriate attribution to those publications influential in determining the nature of the reported work sufficient to guide the reader quickly to earlier work essential to an understanding of the present work. Information obtained by an author privately, from conversation, correspondence, or discussion with third parties, shall not be used or reported in the author's work without explicit permission from the persons from whom the information was ob-

tained. Information obtained in the course of confidential services, such as refereeing manuscripts or grant applications, shall be treated in the same confidential manner.

4. The submitted manuscript shall not contain plagiarized material or falsified research data.

5. Fragmentation of research papers shall be avoided. An engineer or scientist who has done extensive work on a system or group of related systems shall organize publication so that each paper gives a complete account of a particular aspect of the general study.

6. It is inappropriate for an author to submit for review more than one paper describing essentially the same research or project to more than one journal of primary publication.

7. Scholarly criticism of a published paper may sometimes be justified; however, personal criticism is never appropriate.

8. To protect the integrity of authorship, only persons who have significantly contributed to the research or project and paper preparation shall be listed as co-authors. The corresponding author attests to the fact that any others named as co-authors have seen the final version of the paper and have agreed to its submission for publications. Deceased persons who meet the criterion of co-authorship shall be included, with a footnote reporting date of death. No fictitious name shall be given as an author or co-author. An author who submits a manuscript for publication accepts responsibility for having properly included all, and only, qualified co-authors.

9. It is inappropriate to submit manuscripts with an obvious commercial intent.

10. It is inappropriate for an author either to write or co-author a discussion of his or her own paper; except in the case of a rebuttal or closure to criticism or discussion offered by others.

C. Obligations of Reviewers of Manuscripts

1. Because qualified manuscript review is essential to the publication process, all engineers and scientists have an obligation to do their fair share of reviews.

2. If a reviewer feels inadequately qualified or lacks the time to fairly judge the work reported, the reviewer shall return the manuscript promptly to the editor.

3. A reviewer shall objectively judge the quality of a manuscript on its own merit and shall respect the intellectual independence of the author(s). Personal

criticism is never appropriate.

4. A reviewer shall avoid conflicts of interest and/or the appearance thereof. If a manuscript submitted for review presents a potential conflict of interest or there viewer has a personal bias, the reviewer shall return the manuscript promptly without review, and so advise the editor.

5. Unpublished information, arguments or interpretations contained in a submitted manuscript are confidential and shall not be used in the research of a reviewer, or otherwise disseminated except with the consent of the author and with appropriate attribution.

6. If a reviewer receives for review a manuscript authored or co-authored by a person with whom the reviewer has a personal or professional relationship, the existence of this relationship shall be promptly brought to the attention of the editor.

7. A reviewer shall treat a manuscript received for review as a confidential document and shall neither disclose or discuss it with others except, as necessary, to persons from whom specific advice may be sought; in that event, the identities of those consulted shall be disclosed to the editor.

8. Reviewers shall explain and support judgments adequately so that the editor and author(s) may understand the basis for their comments. Any statement that an observation, derivation, or argument has been previously reported shall be accompanied by the relevant citation.

9. A reviewer shall call to the editor's attention any substantial similarity between the manuscript under consideration and any published paper or any manuscript submitted concurrently to another journal.

10. A reviewer shall not use or disclose unpublished information, arguments or interpretations contained in a manuscript under consideration, except with the consent of the author and with appropriate attribution.

11. If a reviewer has convincing evidence that a manuscript contains plagiarized material or falsified research data, the reviewer shall notify the editor, and send the evidence to the Manager, Journals, for investigation by the ASCE Professional Conduct Committee.

ACKNOWLEDGEMENTS

The ethical standards reported herein were initially drafted using the "AGU Policies and Procedures" of the American Geophysical Union. The ASCE acknowledges its appreciation to the AGU for granting permission to quote from that work.

Appendix B

Companion Papers

Papers submitted as sets of companion papers will be reviewed as papers if the editor or associate editor determines that this is the most appropriate and logical presentation of the work. If the editor or associate editor determines that the work would more logically be presented as a single paper, the companion papers will be returned to the author(s), who may then revise the papers and resubmit the work as a single paper. If the resulting single paper is overlength, it will be subject to the normal rules for overlength papers. The author(s) are encouraged to provide a written justification with their manuscripts for publishing their work as companion papers. Sets of companion papers should be submitted together. Authors should recognize that review of companion papers may take longer than reviewing a single paper.



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TO: Prospective Reviewers and Authors

FROM: Earl F. Burkholder, Editor

RE: Articles for ASCE Journal of Surveying Engineering

The Journal of Surveying Engineering is a peer reviewed technical journal published quarterly by the American Society of Civil Engineers (ASCE). Papers published in the journal are read world-wide and archived in numerous libraries throughout the nation and world.

Papers submitted for possible publication are sent by the Editor to anonymous reviewers who evaluate each paper for technical integrity and content. A reviewer may recommend that a paper be published "as is"; be sent back to the author for suggested revisions; or be declined for publication by ASCE. It takes at least two reviewers who agree in their recommendation to either approve or decline a paper for publication. It is a lengthy process, but serves to enhance the reputation and integrity of the Journal.

Surveying Engineering is a basic professional endeavor, but applications of modern technology to fundamental measurement processes have brought about many changes, opportunities and efficiencies only dreamed of by previous generations. The modern survey engineer interacts with information and management professionals as well as contractors, architects, developers, cartographers and other traditional disciplines. That means there are many ideas to be presented, discussed, challenged, debated, tested, improved, adopted and/or discarded. The ASCE Journal of Surveying Engineering serves to facilitate that professional discourse.

Contact me if you desire more information about the publication process. Many answers can also be found in the ASCE Author's Guide.

_____ Please send me _____ copy(ies) of ASCE Author's Guide.

I am willing to serve as a reviewer for (topic(s))_____

Comments:

Name & Address:

