

# Journal of Advanced Concrete Technology

## The Authors' Guide ver. 4.1.5

### 1. INTRODUCTION

The Journal of Advanced Concrete Technology, JACT, is committed to serving the diverse needs of authors. Modern equipment supporting the electronic media will allow a substantial reduction in processing and publication time. Nevertheless, the Editorial Board can only deliver such smooth and fast processing services to those authors who follow the instructions rigorously in this guide. The recommendations in this guide follow international standards, manuals, and advice from the literature on technical writing. By following the recommendations of this guide, the author(s) will reduce the likelihood of a premature rejection of the article and speed up the publishing process. The JACT offers authors a modern design, electronic reprints, online information on the processing status of the articles, electronic archiving, and the feedback of a highly-reputed professional organization, the Japan Concrete Institute (JCI). The JACT will be pleased to receive contributions from authors worldwide.

#### 1.1 TYPES OF CONTRIBUTION

The JACT will primarily publish regular articles, i.e., original scientific papers or technical reports on innovative or advanced techniques of the concrete industry. Articles should be original and of clear significance in data or treatment and be supported by a consistent factual record.

Contributions submitted as a set of companion papers must be submitted together. However, they only will be reviewed as separate articles if the JACT concludes to be the most appropriate and logical presentation of the work. Otherwise, if the JACT determines that the work should be presented as a single article, the manuscripts will be returned to the author(s), who may then revise the work and resubmit it as a single article. Authors are encouraged to provide a written justification for submitting their work as companion papers.

Invited reviews and discussions may be eventually considered for publication. Discussions must comply with the ethical standards for publication of the JCI.

Note that all contributions must be free of evident commercialism or private interest but must neither neglect references to trademarks<sup>[1]</sup> nor obscure proper descriptions of products when required for the endorsement of the subject matter.

#### 1.2 SUBMISSION OF ARTICLES

Submission of an article implies that the work described has neither been previously published nor is under consideration for publication elsewhere. Manuscripts based on materials available elsewhere may be considered for publication in JACT, provided the manuscript has been extensively revised and given new significance. The published materials, however, must be supplied with such

submission. If a previously published manuscript is considered of high significance and its distribution has been very limited, the editor may consider the publication as a secondary publication.

Authors are recommended to submit the manuscript using our [interactive forms and uploading](#) system (this is the fastest and safest way for submission).

If the author cannot access the Web site, please inquire to the following, or use the contact page.

**Dr. S. Ohno, Editorial Secretary of JACT (e-mail to: [secretary@j-act.org](mailto:secretary@j-act.org))**  
**Japan Concrete Institute, Sogo-Hanzomon bldg. 12F,**  
**1-7 Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan**

## **2. PREPARATION OF PDF FILE FOR SUBMISSION**

### **2.1 File Format of Electronic Manuscripts**

**For the initial submission**, an MS-Word document with a single column is a preferred format. We proceed with the review of submitted papers with a PDF file, therefore, we need a PDF file in the initial submission, but the Editorial Manager ( [interactive forms and uploading](#) ) system can directly convert from MS-Word documents or PostScript files to PDF files. For ease of handling the manuscript after review, we recommend using MS-word format.

**For the revised or final submission**, the authors need to submit the manuscript in MS-Word format for the manuscript text, equations, tables, and artwork.

### **2.2 Manuscript Layout and Typescript**

#### **•For Microsoft Word Files**

The manuscript text should be in single-spaced, single-column format with generous margins. Use standard font families (Times, Helvetica, Arial, or Symbol) with a 12-point size for the entire text. Use italics for mathematical symbols (not for abbreviated names of functions such as sin, log) as well as the title of journals and books. Use boldface for title and headings as well as to denote vectors and matrices in mathematics. Use subscripts and superscripts for indices in mathematical and chemical symbols ( $d_{ij}$ ,  $A_s$ ,  $t^2$ ,  $f'$ ) or others when required ( $m^2$ ,  $^{\circ}C$ ). Most other formatting options such as hyphenation and justification will have to be removed and replaced during the processing of the article, hence keeping the layout as simple as possible.

The artwork (figures, charts, and drawings) can be placed with a few line spaces at the preferred position in the text part but should not be embedded in the sentences. Do not embed "graphically designed" equations and tables. Equations should be prepared using MS Equation Editor

or **MathType**. Tables should be prepared using MS Word and use grids or tabs to separate columns instead of spaces.

### **3. PREPARATION OF MANUSCRIPTS**

#### **3.1 Manuscript Requirements**

##### **3.1.1 Length**

Manuscripts should not exceed 10000 words or word equivalents in length. Lengthy contributions may be reviewed after preliminary evaluation based on budget, journal style, relevance, and composition of the article. The editor will reserve the right to remove tables, charts, or any artwork considered by the referees as unnecessary for a clear understanding of the subject. The article may be accepted after reviewing if the length is judged adequate to succinctly treatment of the subject. In this case, the time of publication may be longer than the usual cases.

Preferably, estimate the length of the page using automatic word counters from MS word. As a rough estimate, a page of artwork corresponds to 900 words, hence determining the length of artwork and tabular material in word-equivalents proportionally to the occupancy on a page; e.g., a figure measuring half-page in height would be equivalent to 500 words.

Discussions and conclusions should neither include artwork nor exceed 1800 words.

##### **3.1.2 Style**

The text must be in concise English, and authors may adopt UK or US spelling but not combinations of both. As the JACT has an international reader, which includes non-native speakers of English, avoid colloquialisms and idioms (e.g., "connect" rather than "hook up," "system or apparatus" rather than "set up" as well as technical terms that are used only locally (e.g., "micron" obsolete technical slang used by some scientists and engineer to designate one-millionth of a meter by the symbol  $\mu$ , replaced in the SI by micrometer, symbol  $\mu\text{m}$ ).

Authors may write in active or passive voice but should avoid gender-specific words (midshipman, craftsman, spokesman, she, he, his) and pronouns (I, you, we, our). Gender-specific words may be understood as discriminatory or sexist language. The use of pronouns often results in poor or imprecise constructions or even mildly offensive.

**e.g.**, When you fail to make accurate measurements...

(inaccurate or mildly offensive)

When the measurements are not accurate...;

(introducing the potential consequences of inaccurate measurements)

When the engineer fails to attain accurate measurements...

(draw attention to the dependency on the qualifications of the professional)

The past tense is preferred to describe the actions in the development of the project or study, whereas

the present tense is used to state the facts. For politeness, when referring to or discussing published works, particularly from primary Journals, regard them as facts, i.e., in the present tense.

### **(1) Units:**

Authors must use consistent units throughout the article and according to the International System of Units (SI). Only units named for a person and when abbreviated should be capitalized (e.g., Hz, Pa, g **but** hertz, pascal, gram). Do not use metric prefixes such as M (Mega), m (milli), etc. when using exponential notation ("0.556 m/s" **not** "5.56x10<sup>-4</sup> km/s". Use proper abbreviations, e.g., the correct abbreviated form of "seconds" is "s" whereas "sec." means secundum in accordance with, second, section, secant). Use space between numbers and units and a dot, space, or solidus (/) between compound units (" 2 N m", "3 kg/m<sup>3</sup> or 3 kg m<sup>-3</sup>).

### **(2) Numbers:**

One-digit numbers should be spelled out, except where attached to a unit of quantity (e.g., 1 mm or 3 kg) or where expressions contrast or enumerate one-digit numbers with numbers of two or more digits ("3 out of 20 specimens", "5 mortar specimens and 15 concrete specimens". Numbers of two or more digits should be rendered in digits except where the context makes this awkward (e.g., use spelled-out forms at the beginning of a sentence).

In numbers above 10 000, spaces may be used between sets of three digits but not commas (as it is a violation of international scientific and engineering practice and standards). The comma is the decimal mark in many countries and also in the SI. The SI allows the decimal point to be used in publications in English with spaces for the "Thousands" (e.g., 11 012.35).

For numbers between -1 and 1, insert a zero to the left of the decimal point to make it more difficult for the reader to overlook the decimal point ("0.47 **not** .47").

### **(3) Quantities:**

Use numbers instead of relative figures (small deformation, high stress) to present and discuss results. Relative figures are permissible only for assessing results and summarizing conclusions. When intended to give a reference or assessment, provide a reference value in parenthesis, e.g., "...high temperatures (about 60 **degrees C**)"

### **(4) Abbreviations:**

Abbreviations may be used only when the term appears a few times in the text and should be spelled out in full next to its first appearance, e.g., high-performance concrete (HPC) or HPC (high-performance concrete). The rule aims to prevent possible misunderstandings and redundancies, e.g.,

HPC is also found in the literature as "high-performance cement," "Helwan Portland cement," "hybridized Portland cement." HSC is usually used for "high-strength concrete" but in laboratories also for "high-speed centrifuge." In references to the finite element method (FEM), authors often repeat the word "method" as sentences appear not read well, e.g., "The FEM method was employed for the analysis."

Abbreviations by initials should be typed with no full point (e.g., JSCE, JCI, HPC, FEM).

Abbreviations in which the last letter of the abbreviation is the same as the last letter of the word should also have no full point (e.g., Mr, St, BUT no., str., etc.).

### **(5) Headings:**

In separating articles under sections, make the headings indicative rather than explicative and preferably to fit in one line. Use numbering for the headings but only up to three levels (ex. 1, 2-1, (2)). Do not use the **bullet**.

### **(6) Equations:**

Mathematical equations should only be used where absolutely necessary and should be clear and easily understood by engineers. Each equation must appear in a separate line and be numbered consecutively, whether the number is necessary for cross-reference in the article or not. The number may be useful for reference in future works and discussion of the article. If the authors conclude eventually that the equation would have no significance for future reference, they should consider removing the equation. Only the relevant equations should be shown in the body of the text. Any development of an equation should appear, if essential, in an appendix.

### **(7) Symbols:**

Symbols occurring firstly in equations should be defined preferably in the margin below the equation, e.g., "...the stress field is proportional to the forcing function  $F(t)$  defined as:

$$F(t) = \sum_{i=1}^n a_i q_i(t), \quad (1)$$

where

$a_i$ : response acceleration for  $i$ th mode,

$q_i(t)$ : general coordinate for  $i$ th mode."

However, if the article contains long lists of symbols accompanying mathematical developments, they should not be presented in the body of the paper but at the end, in a Notation section containing all symbols. In both cases, authors must provide a notation list containing all symbols on a separate

page, where is necessary to define all symbols and clarify potential ambiguities in typescripts (such as the number one and the letter "ell," zero and "oh," "double you" and lowercase Greek omega, levels of subscripts, superscripts, and exponents, etc.).

The symbols in the *Notation* section and additional list are arranged with the capital letters preceding the lower case. The Roman alphabet is followed by the Greek one.

### **(8) Figures:**

All artwork such as graphs, diagrams, and photographs should be categorized as Figure. They must have consecutive numbers as Figures, e.g., Fig. 1, Fig. 2, but not Photo 1, Photo 2.

### **(9) Tables:**

Tables should read top to bottom and not left to right, and each column in a table must have a heading. Avoid abbreviations and equations, but when essential, use single-level equations (e.g.,  $1/(a + b)$ ) and define abbreviations in the legend. Footnotes are acceptable in tables but not elsewhere.

### **(10) Captions:**

All artwork and tabular material must be identified by title with a number, followed by the explanatory information. This material must not be lettered on the artwork

### **(11) Acknowledgments:**

For expressing thanks to individuals and organizations for any help, advice, or financial assistance, include an Acknowledgments section after the Conclusion section. Do not make any acknowledgments on the title page or elsewhere.

### **(12) Appendixes and Supplementary materials:**

**Appendixes:** Use appendixes to record details and data of secondary importance or needed to support assertions in the text. Make sure the text contains references to all appendixes. Define special symbols and other nomenclature in an Appendix. Appendixes are limited to those essential to understanding the content of the paper.

**Supplementary materials:** Authors can attach various materials not included in the articles to help the reader's understanding as Supplementary materials, and the reader can reach those materials from the article's bibliographic link. The supplementary materials can include experimental data, data sources used for analysis, visualized media, etc. Please note the Supplementary materials are different from the articles' content and not subject to peer review, but the Editorial office checks whether they are acceptable for publication.

### **(13) Dates:**

Use the day-month-year system ("16 January 1990" **not** "January 16, 1990").

#### ***3.1.3 Title of the Article***

Some information-retrieval services rely exclusively on the title of the articles. Hence, the title should be as short, concise, and informative as possible. It should not contain non-standard acronyms or abbreviations and should not exceed 80 characters, including spaces. Avoid titles beginning with "Analysis of...", "A Note on...", "Theory of...", "On the...", "Some...", "Toward a...", "Investigation on...", "A study on...", etc. Such openings are not helpful for the reader and are useless for information-retrieval purposes. Limit the title to words that highlight the significant content of the article both for understanding and retrieving purposes.

#### ***3.1.4 Authors' Name and Affiliation***

Under the title of submission, type job title, full name and the affiliation of each author. Under the name of the corresponding author, type the e-mail address, the author's current affiliation, and complete address. Former affiliation is permissible only if the author has changed affiliation after the submission of the work. Changes in the number, names, and order of the authors are not possible after submission.

#### ***3.1.5 Abstract***

The abstract used in primary Journals is often referred to as informative type (rather than the indicative type) and is designed to condense the article. It should not be viewed as a part of the text and should be complete in itself. It may be better understood as a brief description of all sections of the article. Hence, the abstract should (1) state the principal objectives and scope of the investigation or project, (2) describe the general methodology employed, (3) summarize the results, (4) and state the principal conclusions.

Abstracts are often used for information retrieval and therefore have a major role in promoting articles. They should be succinctly and clearly written within a maximum of 200 words. As it should stand alone, it must not contain abbreviations and mathematical expressions nor any specialized terms that may not be understandable in themselves. References to other literature should be avoided, but if essential, then they should be cited in full and not included in the reference list at the end.

#### ***3.1.6 References***

Responsibility for the accuracy of bibliographic citations lies entirely with the authors.

Please ensure that every reference cited in the text is also present in the reference list (and vice

versa). Any references cited in the Abstract must be given in full. Unpublished results and personal communications should not be in the reference list, but may be mentioned in the text. Citation of a reference as "in press" implies that the item has been accepted for publication.

### **(1) Citations in the text:**

All statements, opinions, conclusions, etc., taken from another writer's work should be cited, whether the work is directly quoted, paraphrased or summarized. Do not abbreviate titles of publications and for Journals cite the full name or the library abbreviation of the name. Cited publications are referred to in the text by giving the author's surname and the year of publication in one of the forms shown below. If details of particular parts of a document are required, e.g. page numbers, they should be given after the year within the parentheses.

+If the **author's name occurs naturally in the sentence** the year is given in parentheses:

**e.g.** In a popular study Hillerborg (1988, p.172) argued that ...

+If, however, **the name does not occur naturally in the sentence**, both name and year are given in parentheses:

**e.g.** More recent studies (Schorn 1991, 1993; Schlangen 1993) show that ...

+When an **author has published more than one cited document in the same year**, these are distinguished by adding lower case letters (a, b, c, etc.) after the year and within the parentheses:

**e.g.** Slowik (1990b) discussed the subject ...

+If there are **two authors**, the surnames of both should be given:

**e.g.** Tazawa and Miyazawa (1993) have proposed that...

+If there are **more than two authors** the surname of the first author only should be given, followed by et al.:

**e.g.** Bazant et al. (2000) conclude that...

+If the **author is anonymous** then "Anon" should be used:

**e.g.** A recent article (Anon 1993) stated that...

However, if it is a **reference to newspapers or magazines** where **no author is given**, the name of the paper can be used in place of author or Anon whichever seems most helpful. You will need to use the same style in the reference list so the name of the newspaper may be more helpful.

**e.g.** The Japan Concrete Institute (1996) stated that....

+If you refer to a **source quoted in another work** you cite both in the text:

**e.g.** A study by Neville (1960 cited Nakamura et al. 2000, p.233) showed...

(You need to place the work you have used, i.e. Jones, in the reference list.)

+Short **quotations** of less than a line may be included in the body of the text in quotation marks. If the quotation is longer, start a new line and indent it. Include the page number if desired.

**e.g.**.....so "good practices must be taught" (Kim 1996, p.15) and we should...

or: Theory rises out of practice, and once validated, returns to direct or explain the practice (Stevens 1997, pp.92-93).

+Citing a **Web site** within the text of an assignment, give the address of the site (e.g. <http://www.j-act.org>). To cite a document from a Web site you must follow the author-date format. In both cases an entry will still be required in the reference list.

## (2) Reference list:

A list of references contains details only of those works cited in the text. The reference list is arranged **in alphabetical order** of the first author on a separate page. Where an item has no author it is cited by its title, and ordered in the reference list in sequence by the first significant word of the title. The use of the expression *et al.* (= et alia) to indicate multiple authorship is permissible in the text, but not in the list of references, where all names should be given.

Each entry in the reference list should use the elements and punctuation given in the following examples for the different types of published work you may have cited:

### +Reference to a **book**

Author's Surname, INITIALS., (Year of publication). "Title." Edition. (if not the first). Place of publication: Publisher.

e.g. Metha, P. K. and Monteiro, P. G. M., (1993). "*Concrete: Structure, properties, and methods.*" 2nd ed. New Jersey: Prentice Hall.

### +Reference to a **contribution in a book**

Contributing author's Surname, INITIALS., (Year of publication). "Title of contribution." Followed by In: INITIALS. Surname, of author or editor of publication followed by Ed. or Eds (if applicable). *Title of book*. Place of publication: Publisher, Page number(s) of contribution.

e.g. Topping, B. H. V., (1999). "Neural networks in advanced computational problems." In: Z. Waszczyszyn Ed. *Neural Networks in the Analysis and Design of Structures*. Wien: Springer-Verlag, 197-248.

### +Reference to an **article in a journal**

Author's Surname, INITIALS., (Year of publication). "Title of article." *Title of journal*, Volume number and (part number), Page numbers of contribution.

e.g., Zaitsev, Y. B. and Wittmann, F. H., (1984). "Simulation of crack propagation and failure of concrete." *Materials and Structures*, 14 (83), 357-365.

### +Reference to a **conference paper**

Contributing author's Surname, INITIALS., (Year of publication). "Title of contribution." Followed by In: INITIALS. Surname, of editor of conference proceedings (if applicable) followed by Ed. or

Eds. *Title of conference proceedings* including date and place of conference. Place of publication: Publisher, Page numbers of contribution.

**e.g.**, Springenschmid, R., (2002). "Experimental research on surface cracking of concrete." In: H. Mihashi and F.H. Wittmann, Eds. *International conference on control cracking of early age concrete*, Sendai 23-24 August 2000. Lisse: A.A. Balkema Publishers, 1-8.

+Reference to a **publication from a corporate body**

Name of Issuing Body, (Year of publication). "*Title of publication.*" Place of publication: Publisher, Report Number (where relevant).

**e.g.**, JSCE, (1985). "*Standard specification for design and construction of concrete structures.*" Tokyo: Japan Society of Civil Engineers,

**or** RILEM, (1998). "*Prevention of thermal cracking in concrete at early ages.*" R. Springenschmid, Ed. London: FN Spon. RILEM report 15.

+Reference to a **thesis and a report** (not regularly published)

Author's Surname, INITIALS., (Year of publication). "*Title of thesis.*" Designation, (and type). Name of institution to which submitted.

Author's Surname, INITIALS., (Year of publication). "Title of reports." Report name, Number, Name of institution as a publisher.

or

Author's Surname, INITIALS., (Year of publication). "Title of reports, (Report ID)." Place of publication: Name of institution as a publisher.

**e.g.**, Walraven, J.C., (1980). "*Aggregate interlock: a theoretical and experimental analysis.*" Thesis (PhD). Delft University of Technology.

or

Graybeal, B., (2006). "*Material property characterization of ultra-high performance concrete (FHWA-HRT-06-103).*" McLean, Virginia: US Federal Highway Administration.

+Reference to a **code** or a **standard**

Abbreviation of Standard Institution, (Year of publication). "*Title of code, (Standard name).*" Standard Institution, Place of publication: Publisher.

**e.g.**, ASTM, (2018). "*Concrete and aggregate, (ASTM C33/C33M-18).*" American Society for Testing and Materials, West Conshohocken Pennsylvania: ASTM International.

or

BS, (1983). "*Method for determination of compressive strength of concrete cubes, (BS 1881-116).*" British Standard, London: The British Standard Limited.

or

SAC, (2008). "*Code for design of concrete structures, (GB 50010-2010).*" The Standardization Administration of the People's Republic of China, Beijing: China Architecture & Building Press.

+Reference to a **patent**

Originator, (Date of publication). "*Title of patent.*" Series designation.

**e.g.** Philip Morris Inc., (1981). "*Optical perforating apparatus and system.*" European patent application 0021165 A1.

+Reference to a **non-alphabetical article**

Translate the bibliographical data into English and attach the name of the original language in parenthesis to the end of the data.

**e.g.** Takahashi, Y. and Suzuki, I., (1984). "Simulation of crack propagation and failure of concrete." *Concrete Research and Technology*, 2 (1), 67-75. (in Japanese)

**(3) Citing electronic sources:**

Citation in the text must follow the author-date procedure as outlined above.

References End of a Work:

+Reference to **individual works**

Author/editor, (Year). "*Title [online].*" (Edition). Place of publication, Publisher if ascertainable). Available from: <URL> [Accessed Date].

**e.g.** Holland, M., (1996). "*Harvard system*[online]." Poole, Bournemouth University. Available from: <<http://www.windsor.igs.net/~nhodgins>> [Accessed 18 Feb 1999].

**or** Library Services, (1995). "*Internet user glossary* [online]." North Carolina, North Carolina State University. Available from:

<<gopher://dewey.lib.ncsu.edu:70/7waissrc%3A/>> [Accessed 18 Feb 1999].

+Reference to **article in E-Journals**

Author I s Surname, INITIALS., (Year). "Title." *Journal Title*[online], volume (issue), location within host. Available from: <URL> [Accessed Date].

**e.g.** Tazawa, E.-I., (1998). "Effect of self stress on flexural strength of gypsum-polymer composites." *Advanced Cement Based Materials* [online], 7 (1). Available from: <<http://www.sciencedirect.com/web-editions>> [Accessed 20 Feb 2002].

+Reference to **article in conference**

Author I s Surname, INITIALS., (Year of publication). "Title of contribution." Followed by In:

INITIALS. Surname, of editor of conference proceedings (if applicable) followed by Ed. or Eds.

Title of conference proceedings including date and place of conference location within host.

Available from: <URL> [Accessed Date].

**e.g.**, Slowik, V., Leite, J.P.B. and Zaitsev, Y.V., (2000). "Mesolevel modelling of concrete fracture by using particle and truss models." In *Werkstoffwoche-Partnerschaft Ed. Materials Week 2000 - Proceedings* [online], conference on advanced materials, their processing & applications, Munich, Germany, Sept. 25-28, 2000. Available from:

< <http://www.materialsweek.org/proceedings>> [Accessed 10 May 2001].

+Reference to **electronic media (BPO)**:[\[2\]](#)

Author/editor I s Surname, INITIALS., (Year). "*Title* [type of medium]. (Edition)." Place of publication, Publisher (if ascertainable). Available from: Supplier/Database identifier or number (optional).

**e.g.** Bogaerts, W.F.L., (1998). "*Active library on corrosion 2.0: an interactive adventure* [CD-ROM]." Elsevier Science.

## **3.2 Recommended Structure of the Article**

### **3.2.1 Introduction**

The purposes of this section are: (1) present sufficient background information for the understanding and evaluation of the results of the reported study, as well as their relationship to earlier work in the field; and (2) provide the purpose and validation for the present study. It should not, in general, exceed two typed pages.

Unanimous rules for a good Introduction are: (1) present the problem investigated or project reported, in terms of nature and scope; (2) review of the pertinent literature, but only at the required extent to orient the reader; and (3) state the chosen methods and perhaps the reasons for the choice, but not describing them.

As for promoting technical and scientific matter, an extra rule is also convenient to capture the attention of the reader: (4) advance in condensed and highlighted manner the principal result or conclusion suggested by the results, which will be substantiated in later sections. The reason behind the latter rule is that otherwise a reader initially planning to study the entire article might naturally neglect the abstract and lose motivation to read the article to the end.

### **3.2.2 Methods and Materials**

The purpose of this section is to provide sufficient information on methodology and materials employed, so that competent professionals can reproduce the experiments, numerical simulations or projects reported. For scientific and technical merit, the possibility of reproduction of same or similar results must exist. In case of serious doubt about the viability for reproducing the work, reviewers are encouraged to reject the manuscript.

Provide the exact technical specifications and quantities of materials, as well as source or method of preparation. Statements and references should be accurate but free of speculative or advertising material. The text should not refer to the names of individuals, organizations, products or services unless it is essential to understanding and in neither complementary nor derogatory.

The Methods and Materials section usually has subheadings, which usually depend on the nature of the reported work (e.g. experimental and/or analytical). Examples of usual elements of a Methods and Materials section are: (a) the procedures for preparing materials, for setting or operating equipment, and for performing measurements, (b) the detailed description of equipment, specimens and constitutive materials, in terms of dimensions, quantities, sources and conditions, (c) the analytical modelling and assumptions; (d) the aspects of mathematical simulations and analyses; (e) evaluation approaches and criteria.

Only methods or their variations, which are truly new or have not been accurately presented in the literature, should be described. Others should be only cited with appropriate references.

### ***3.2.3 Results and Discussion***

The Results and Discussion may eventually be separated into two independent sections when the article presents a large volume of raw data in text, tabular or graphical form. Though in this case further care is required to avoid redundancies in the sections. The Results section would present the factual data to substantiate the discussion and conclusions in subsequent sections. Results are presented in figures and tables and some results not requiring documentation are given solely in the text. Do not repeat tabular and graphical data in text and if you adopt separate sections, leave the discussion for the subsequent section. Preferably, use absolute numbers and allow the reader evaluates the results. Only use statistics and relative numbers if they are meaningful and the more logical way of presenting the results.

The discussion should be concise and focused on the interpretation of the results rather than a repetition of the Results section. In the Discussion section, (1) Derive principles, relationships and generalizations based on the presented results, (2) point out exceptions, lack of correlations and any unsettled points and provide known or hypothetical reasons for them, (3) demonstrate how your results and interpretations agree or contrast with the previous work, (4) provide the evidence for each conclusion, and (5) discuss the potential applications of your work.

The subheadings of the results should preferably match those of the methods.

### **3.2.4 Conclusion**

In the Conclusion section, summarize the conclusions based on evidence provided in the article and highlight the significance of the results and/or project. Avoid cite previous work in the Conclusion section. Indicate the potential applicability of proposed methods, with assessments if possible.

In research related articles, authors may recommend further directions of the research, as suggested by the results presented in the article.

## **4. Ethical attention**

### **4.1 Authorship**

Authorship should be limited to the persons who have made a substantial contribution to the conception, design, execution, analysis, or interpretation of the study of the submitted article. After the initial submission, Changes in the number, name, and order of the authors are not allowed, as shown in section 3.1.4. The secondary contributors, such as cooperators or advisors in the revision, should be expressed gratitude in the section of acknowledgments.

### **4.2 Plagiarism**

Authors should write a completely original article and should not use the same sentences or paragraphs taken from other articles. Even if the copied parts are taken from your articles published previously, the act without proper citations may infringe the right of copyright holders. The authors should check whether the publishers allow the reuse of the contents and how much you can reuse them. Activities such as composing paragraphs with sentences taken from previously published articles or articles on the internet are considered ethical violations. If we have found these prominent acts, we will not receive the manuscript for review.

### **4.3 Duplicate publications and simultaneous submissions**

Submitting the same or a very similar manuscript to two or more journals is unethical. If we find a duplicate submission in this journal, we will withdraw the article and remove the published paper.

## **5. COPYRIGHT, REPRODUCTION, AND PERMISSIONS**

### **5.1 Transfer of Copyright**

Before JACT can publish any article the copyright must be transferred to the Japan Concrete Institute. Transfer of copyright helps JCI to make articles more widely accessible across different media, whether supplementing or replacing printed versions, and hence ensures that the research gains global promotion. This transfer agreement enables JCI to protect the copyrighted material for the authors, but

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