

AUTHOR INSTRUCTIONS

CRITICAL REVIEWS™ IN BIOMEDICAL ENGINEERING

DESCRIPTION OF PAPERS CONSIDERED FOR PUBLICATION: Biomedical engineering has been characterized as the application of concepts drawn from engineering, computing, communications, mathematics, material science, chemistry, and the physical sciences to scientific and applied problems in the field of medicine and biology. Concepts and methodologies in biomedical engineering extend throughout the medical and biological sciences. *Critical Reviews™ in Biomedical Engineering* attempts to critically review a wide range of research and applied activities in the field. More often than not, topics chosen for inclusion are concerned with research and practice issues of current interest. Experts writing each review bring together current knowledge and historical information that has led to the current state-of-the-art.

Each issue contains one or more critical reviews of specified topics representing applied, clinical and basic science areas. Most articles contain in-depth appraisals of the current state-of-the-art in a specific area of research or practice and provide complete and up-to-date bibliographies. Each review attempts to be nearly exhaustive in a constrained area rather than broad and overarching. The critical evaluations of current research and development issues include interpretive discussions of major problems. From time to time, a series of articles in a related topic area are published in order to give comprehensive coverage. Collaborative works generated by multiple authors are frequently used to provide in-depth coverage from multiple viewpoints. Each article is reviewed by one or more independent experts in the field.

The editor invites comments and suggestions about the contents of the reviews.

GENERAL INSTRUCTIONS:

Articles for the *Critical Reviews™ in Biomedical Engineering* must be submitted through the Begell House Submission Site. If you are already a registered user begin at http://submission.begellhouse.com/usr/login.html?prod_code=journals, enter your username and password, and click on the **Login** button. If you are not a registered user follow the instructions below.

SUBMISSION INSTRUCTIONS:

All users of the Begell House submission site must be registered. If you are a first-time users you can begin at http://submission.begellhouse.com/usr/login.html?prod_code=journals, click the **New User** icon located at the top of the page, on the next screen complete the registration form and then click the **Submit** button located at the bottom left side of the form. Your form will be reviewed and an email confirmation will be sent to you within 24 hours (not including weekends and holidays). Please note that due to the high security that some affiliations have on their email programs, this email may go into your junk/spam folder; please check. Keep your username and password available for further use on the submission site. Logon information is case sensitive; always be sure to enter the appropriate upper and lower-case characters. **Never** register a second time on the submission site. Having more than one account on the submission site will create difficulties in working efficiently and being able to access all articles assigned to you. If you forget your password go to http://submission.begellhouse.com/usr/login.html?prod_code=journals, click **Forgot Password**, and enter the email address that you used when you registered. Within seconds you will receive an email providing you with your username and temporary password (again remember this email may go into your junk/spam folder). Once you receive the email containing your logon information, return to http://submission.begellhouse.com/usr/login.html?prod_code=journals, enter your username and temporary password, and then click Login. On the next screen you will be asked to provide a password of your choice. Enter the password and click Login. You will now be logged onto the submission site. If the email that you used when you originally registered is no longer available to you please contact journals@begellhouse.com for assistance.

PROCEDURES FOR PROCESSING ARTICLES FOR POSSIBLE PUBLICATION:

- 1. PREPARATION OF ELECTRONIC ARTICLE FILES:** Write in clear, concise English. The author is responsible for all aspects of article preparation. Extensive changes to the article will not be undertaken by the Editor or during the production process. Each manuscript must be accompanied by a statement that it has not been published elsewhere and that it has not been simultaneously submitted for publication elsewhere.
- 2. ORIGINAL ARTICLES SUBMITTED** for possible publication in *Critical Reviews™ in Biomedical Engineering* should be submitted in a single PDF file that includes all text, figures, and tables in single-column. Please use 12-point type and Times New Roman typeface for all text and figure captions. Please ensure that high

quality figures and tables are provided and that any text that is an actual part of the figure be no less than 9-point type. Please remember that although your original submitted manuscript is required to be in PDF format for reviewing purposes, your accepted article must be provided to the publisher using your program files (see #4 below).

3. **DECLARATION OF ORIGINALITY:** Each article submitted must be accompanied by a statement that the article has not been published elsewhere and that it has not been simultaneously submitted for publication elsewhere. The original electronic files of drawings, photos and the article should be retained by the author until the conclusion of the publication process. This statement should also confirm that all tables and figures are your original work and no permissions are required.
4. **PERMISSIONS:** Authors are responsible for obtaining permission to reproduce copyrighted material from other sources and are required to sign an agreement for the transfer of copyright to the publisher. Please note that if a figure or table was previously published the copyright for that figure is usually owned by the publisher not the author. **ALL PERMISSIONS MUST BE UPLOADED WITH THE FINAL DRAFT OF YOUR ARTICLE BEFORE YOUR ARTICLE CAN BE PROCESSED.**
5. **REVIEW PROCESS:** The editor will seek reviews of submitted articles from appropriate experts and will do their best to have the articles reviewed as quickly as possible. It would be helpful if you recommend 5 potential Reviewers when submitting your original manuscript. Each article will be reviewed by at least two reviewers. Submission implies that the author is willing to consider making any necessary revisions requested by the Reviewer/Editor. Retain all original figures until the conclusion of the publication process. Please upload your corrections onto the submission site.
6. **REVISIONS:** After your article has been reviewed, the Editor will inform you if any revisions must be made before your article can be accepted for publication. If revisions are required you must upload your revised files onto the submission site. After uploading your files onto the submission site, please remember to click the Submit icon.
7. **ACCEPTED ARTICLE:** After your article has been accepted for publication, please provide your electronic files in the following format: 12-point type, on US Letter (preferred) or A4-sized pages, double spaced with 1-inch margins all around. Times New Roman is the preferred typeface for text. Acceptable formats for text files are Microsoft Word (using .doc or .docx extension) or LaTeX. All pages should be numbered consecutively, centered at the bottom of each page. Your article should begin with the title information and end with pages containing references, tables, and figure legends. Figures must be submitted in either a separate file containing all figures or individual figure files. All figures must be labeled (example: 1, 2, 3, etc.) clearly for proper placement within the text. Figures can be submitted in the following formats: tiff, jpeg, eps or similar program files. All files should be uploaded onto the submission site using your original username and password. If you have several files to upload you can combine all files into one ZIP file; when you upload the ZIP file the system will automatically extract the files. This process can only be done with ZIP files. Although you can use other compressed software programs (such as RAR) to upload your files they will not automatically extract files. After uploading your files onto the submission site please remember to click the Submit icon.

LaTeX File: If you are providing your final approved article in LaTeX please follow all the above instructions, but also include a PDF file that is double spaced, only figure captions (no figures) and tables. Figure captions and tables should be placed at the end of the article after the references.

Accepted manuscripts are eligible for rapid online posting if a valid copyright form is received and nothing is missing, such as Word or LaTeX files, applicable figure files, permissions, key words, etc. Along with your program files we ask that you provide a PDF file of the complete article that includes text, figures, and tables. This PDF, which is the accepted uncorrected version of your article will be available on the Begell House Journal Home page, listed under "Forthcoming Articles." Posted articles will include DOI numbers so that papers can be cited and referenced immediately. Authors will receive notification from Begell House when the typeset proofs are available and when the final version is posted. Papers listed under Forthcoming Articles will be removed once the edited and final typeset version is completed and posted online under the appropriate journal volume and issue.

8. **TRANSMITTAL AND COPYRIGHT FORM:** The copyright form can be found when you upload your original manuscript files or on the Authors Hub website at <http://submission.begellhouse.com/help/hub.html>. Each article submitted for publication must include a signed copyright form. All accepted articles, artwork, and photographs become the property of the publisher. We also require that you fill out a transmittal form. The transmittal form can be found when your article has been accepted for publication and you upload your final files. The transmittal form

includes the following information: article title, short title for running heads, key words (3 to 10), and all author names (include affiliation and e-mail addresses). Corresponding authors must include their complete mailing address, e-mail address, telephone number, and fax number.

9. ALL ARTICLES MUST INCLUDE THE FOLLOWING:

Author Information: Senior author's full name, affiliation, and e-mail address. Corresponding author's complete mailing address and e-mail address. Co-authors' affiliations and e-mail addresses.

Abstract: All articles must have an abstract not to exceed 250 words. Avoid using abbreviations, diagrams, and references in the abstract.

Key Words: All articles should have a list of key (indexing) terms. Three to ten key words or terms not in the title will assist indexers in cross-indexing your article.

Body: Group all tables, figures, figure captions, and footnotes at the end of the article, following the references. The body should be divided into several sections identified by headings and subheadings according to the following scheme:

- I. PRINCIPAL
- HEADING A. First
- Subheading
- 1. Second Subheading
- a. Third Subheading

Italic or boldface type should be clearly indicated and Greek or unusual characters should be written plainly or explained by annotations. Simple fractional expressions should be written with a slant line rather than stacked, so that only a single line of type is required in the text.

Formulas and Equations: Displayed equations should be incorporated in the text and should be numbered using Arabic numerals (in parentheses) in sequence. In the text, they should be referred to as "Eq. (1)," etc. At the beginning of a sentence, the word Equation(s) should be written out. Equations should not be provided as pictures; use programs such as MathType, Microsoft Equation, etc. All symbols should be identified in the text at first mention. Symbols that denote mathematical variables should be in italics. A clear distinction should be made between the characters "l," "1" (el) and "1" (one); "o," "O," and "0" (zero); "w" and "ω" (omega); "v" and "ν" (nu), etc. Please observe correct spacing: 25°C (not 25° C or 25 °C). For numerical values of measurable quantities, show no more digits than are significant. The use of powers of ten is recommended, e.g., 1.23 x 10⁵ instead of 123,000. Use decimal points, not commas. Empirical and structural formulas and mathematical and chemical equations should be arranged to fill the width of a single or double column. Subscripts and superscripts (i.e., exponents), such as +, -, =, <, or >, (ex: 10² + 11⁴ or 125 - 47) should be spaced, but the components of mathematical products should not be spaced.

Organic Structural Formulas: Organic structural formulas should be submitted as copy suitable for direct photographic reproduction. Do not use structures when a simple formula will suffice. Do not use multiple lines unnecessarily. In order to avoid errors, carefully arrange and execute all formula matter, paying special attention to correctness of symbols; location of subscripts, superscripts and electric charges; and the placing and close join-up of single and multiple bond lines. Originals should be grouped at the end of the manuscript with other figures.

Units and Quantities: Units follow the Systeme International d'Unites (SI <http://www.physics.nist.gov/cuu/Units/units.html>). Symbols for physical quantities should be those recommended by IUPAC, IUPAP or ASTM.

Figures: Figures should not exceed the size of the journal pages (size requirements can be obtained by emailing journals@begellhouse.com). Use only Arial and Symbol fonts for text within figures. Acceptable formats for figures are TIFF, JPEG, EPS, or similar program files saved from the original application at 300-700 dpi. Because of the loss of resolution, we do not accept figures embedded in word or PDF. The preferred format is TIFF; however, maintaining a clear quality of the figures is most important. Do not use gray rules, only black. If the text is printed over gray backgrounds for any reason, the gray must be at least 50% lighter than the text. If possible, avoid grayscales entirely. For best results, figures must be submitted at the highest possible quality. Figure captions should be typed at the end of the article, after the references. The author can submit color figures that will appear in color online, but will print in black and white. Color reproduction of figures is possible at the author's expense; rates will be provided upon request. If you are providing color figures and do not want to pay to print the figures in

color, please do not refer to the colors when describing the figure in the text or figure caption. Please be sure to call out all figures in the text in numerical order.

Tables: Tables cannot be embedded in the text or provided as a picture. Provide tables at the end of the article and be sure to call out the tables in numerical order in the text. A short descriptive title should appear above each table with a clear legend and any footnotes suitably identified below the table. All units must be included.

Footnotes: Footnotes should be identified in the text with symbols such as * † ‡ § || ¶, and cited consecutively within the paper. If you have many footnotes you can double the suggested symbols.

Please Carefully Follow the Reference Formatting: Incorrectly formatted reference lists or reference callouts in the text will be returned to the author to correct before processing for publication.

Reference Format: References follow *Vancouver Style*, which is available in all reference management software. Detailed instructions to set up *Vancouver Style* references can be found on the *NLM* site at http://www.nlm.nih.gov/bsd/uniform_requirements.html. Cite references in the text in numerical order using superscript numerals, placed close-up (no space) after punctuation. References to classified documents and reports or to unpublished material not generally available to the scientific public should not be used. Journal abbreviations should be consistent with *Index Medicus* (check journal abbreviations at <http://www2.bg.am.poznan.pl/czasopisma/medicus.php?lang=eng>).

NOTE: Previously the first six authors were followed by et al. However, NLM now lists all authors.

Format references exactly as follows:

Journal Articles

Agarwal S, Rao A. Modulation of chromatin structure regulates cytokine gene expression during T-cell differentiation. *Immunity*. 1998 Dec 25;9(6):765-75.

As an option, if a journal carries continuous pagination throughout a volume (as many medical journals do) the month and issue number may be omitted.

Agarwal S, Rao A. Modulation of chromatin structure regulates cytokine gene expression during T-cell differentiation. *Immunity*. 1998;9:765-775.

Optional addition of a database's unique identifier for the citation:

Agarwal S, Rao A. Modulation of chromatin structure regulates cytokine gene expression during T-cell differentiation. *Immunity*. 1998 Dec 25;9(6):765-775. Cited in PubMed; PMID 12000309.

Organization as author

Diabetes Prevention Program Research Group. Hypertension, insulin, and proinsulin in participants with impaired glucose tolerance. *Hypertension*. 2002;40(5):679-86.

Both personal authors and an organization as author

Vallancien G, Emberton M, Harving N, van Moorselaar RJ; Alf-One Study Group. European men suffering from lower urinary tract symptoms. *J Urol*. 2003;169(6):2257-61.

No author given

21st century heart solution may have a sting in the tail. *BMJ*. 2002;325(7357):184.

Article not in English

Ellingsen AE, Wilhelmsen I. Sykdomsangst blant medisinerstudenter. *Tidsskr Nor Laegeforen*. 2002;122(8):785-7.

Volume with supplement

Geraud G, Spierings EL, Keywood C. Tolerability and safety of frovatriptan with short- and long-term use for treatment of migraine and in comparison with sumatriptan. *Headache*. 2002;42 Suppl 2:S93-9.

Issue with supplement

Glauser TA. Integrating clinical trial data into clinical practice. *Neurology*. 2002;58(12 Suppl 7):S6-12.

Volume with part

Abend SM, Kulish N. The psychoanalytic method from an epistemological viewpoint. *Int J Psychoanal*. 2002;83(Pt 2):491-5.

Issue with part

Ahrar K, Madoff DC, Gupta S, Wallace MJ, Price RE, Wright KC. Development of a large animal model for

lung tumors. *J Vasc Interv Radiol*. 2002;13(9 Pt 1):923-8.

Issue with no volume

Banit DM, Kaufer H, Hartford JM. Intraoperative frozen section analysis in revision total joint arthroplasty. *Clin Orthop*. 2002;(401):230-8.

No volume or issue

Outreach: bringing HIV-positive individuals into care. *HRSA Careaction*. 2002 Jun:1-6.

Books and Other Monographs

Personal author(s)

Murray PR, Rosenthal KS, Kobayashi GS, Pfaller MA. *Medical microbiology*. 4th ed. St. Louis: Mosby; 2002.

Editor(s), compiler(s) as author

Gilstrap LC 3rd, Cunningham FG, VanDorsten JP, editors. *Operative obstetrics*. 2nd ed. New York: McGraw-Hill; 2002.

Author(s) and editor(s)

Breedlove GK, Schorfheide AM. *Adolescent pregnancy*. 2nd ed. Wiczorek RR, editor. White Plains (NY): March of Dimes Education Services; 2001.

Organization(s) as author

Royal Adelaide Hospital; University of Adelaide, Department of Clinical Nursing. *Compendium of nursing research and practice development, 1999-2000*. Adelaide (Australia): Adelaide University; 2001.

Chapter in a book

Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. *The genetic basis of human cancer*. New York: McGraw-Hill; 2002. p. 93-113.

Conference Proceedings

Harnden P, Joffe JK, Jones WG, editors. *Germ cell tumours V*. Proceedings of the 5th Germ Cell Tumour Conference; 2001 Sep 13-15; Leeds, UK. New York: Springer; 2002.

Conference paper

Christensen S, Oppacher F. An analysis of Koza's computational effort statistic for genetic programming. In: Foster JA, Lutton E, Miller J, Ryan C, Tettamanzi AG, editors. *Genetic programming. EuroGP 2002: Proceedings of the 5th European Conference on Genetic Programming*; 2002 Apr 3-5; Kinsdale, Ireland. Berlin: Springer; 2002. p. 182-91.

Report

Issued by funding/sponsoring agency

Yen GG (Oklahoma State University, School of Electrical and Computer Engineering, Stillwater, OK). *Health monitoring on vibration signatures*. Final report. Arlington (VA): Air Force Office of Scientific Research (US), Air Force Research Laboratory; 2002 Feb. Report No.: AFRLSRBLTR020123. Contract No.: F496209810049.

Issued by performing agency

Russell ML, Goth-Goldstein R, Apte MG, Fisk WJ. *Method for measuring the size distribution of airborne Rhinovirus*. Berkeley (CA): Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division; 2002 Jan. Report No.: LBNL49574. Contract No.: DEAC0376SF00098. Sponsored by the Department of Energy.

Dissertation

Borkowski MM. *Infant sleep and feeding: a telephone survey of Hispanic Americans [dissertation]*. Mount Pleasant (MI): Central Michigan University; 2002.

Patent

Pagedas AC, inventor; Ancel Surgical R&D Inc., assignee. *Flexible endoscopic grasping and cutting device and positioning tool assembly*. United States patent US 20020103498. 2002 Aug 1.

Other Published Material

Audiovisual material

Chason KW, Sallustio S. *Hospital preparedness for bioterrorism [videocassette]*. Secaucus (NJ): Network for

Continuing Medical Education; 2002.

Legal Material

Public law

Veterans Hearing Loss Compensation Act of 2002, Pub. L. No. 107-9, 115 Stat. 11 (May 24, 2001).

Unenacted bill

Healthy Children Learn Act, S. 1012, 107th Cong., 1st Sess. (2001).

Code of federal regulations

Cardiopulmonary Bypass Intracardiac Suction Control, 21 C.F.R. Sect. 870.4430 (2002).

Hearing

Arsenic in Drinking Water: An Update on the Science, Benefits and Cost: Hearing Before the Subcomm. on Environment, Technology and Standards of the House Comm. on Science, 107th Cong., 1st Sess. (Oct. 4, 2001).

Map

Pratt B, Flick P, Vynne C, cartographers. Biodiversity hotspots [map]. Washington: Conservation International; 2000.

Unpublished Material

In press (Note: NLM prefers "forthcoming" because not all items will be printed.)

Tian D, Araki H, Stahl E, Bergelson J, Kreitman M. Signature of balancing selection in Arabidopsis. Proc Natl Acad Sci U S A. In press 2002.

Electronic Material

CD-ROM

Anderson SC, Poulsen KB. Anderson's electronic atlas of hematology [CD-ROM]. Philadelphia: Lippincott Williams & Wilkins; 2002.

Journal article on the internet

Aboud S. Quality improvement initiative in nursing homes: the ANA acts in an advisory role. Am J Nurs [serial on the Internet]. 2002 Jun [cited 2002 Aug 12];102(6):[about 3 p.]. Available from: <http://www.nursingworld.org/AJN/2002/june/Wawatch.htm>.

Monograph on the internet

Foley KM, Gelband H, editors. Improving palliative care for cancer [monograph on the Internet]. Washington: National Academy Press; 2001 [cited 2002 Jul 9]. Available from: <http://www.nap.edu/books/0309074029/html/>.

Homepage/website

Cancer-Pain.org [homepage on the Internet]. New York: Association of Cancer Online Resources, Inc.; c2000-01 [updated 2002 May 16; cited 2002 Jul 9]. Available from: <http://www.cancer-pain.org/>.

Database on the internet

Who's Certified [database on the Internet]. Evanston (IL): The American Board of Medical Specialists. c2000 - [cited 2001 Mar 8]. Available from: <http://www.abms.org/newsearch.asp>.

- 10. AUTHOR PROOFS:** Corresponding authors will be notified by email when the typeset proof of their article is ready for them to review. Please note that due to the high security that some affiliations have on their email programs this email may go into your spam/junk folder; please check. Upon receipt of the email please log on to the submission site to review the proofs. After reviewing your author proof you must return to the submission site to either approve your article as is or upload your corrections. If approving your article as is, log on to the submission site, click on the article, click Submit, follow the prompts to the comment field, in the comment field, indicate that you are approving the article as is, then **click Submit**. If you are providing corrections, log on to the submission site, click on the article, upload your corrections file, **click Submit**, and follow the prompts to submit the article to the typesetter. Alterations made in the proof stage should be absolutely minimal. If the author makes numerous revisions to the author proof, they will be charged a fee of \$25.00 per hour (please see the cover letter provided with author proofs). Typesetter mistakes will not be charged to the authors. We usually request that corrections be returned within 48 hours (not including weekends or holidays). If more than 48 hours is needed to return your corrected proofs, please contact journals@begellhouse.com as soon as possible.

11. OFFPRINTS: An order form for offprints, copies of issues, subscriptions, and color figures will be sent to the corresponding author with the author proofs. Authors who wish to purchase any of the above should fill out the order form and return it with author's corrections. Corresponding authors are asked to provide their co-authors with the above information. Corresponding authors will receive a complimentary PDF file of their article upon publication of the journal issue in which the article will appear. This PDF file is for your own personal use and cannot be posted on any other websites or used for distribution purposes. If the corresponding author does not receive their complimentary PDF of their article, within 3 months after receiving their page proofs, they should notify Begell House immediately. Begell House will not honor claims for missing complimentary PDFs after the year in which the article is published.