

# JANNAF

# JOURNAL OF PROPULSION AND ENERGETICS

## Author's Guide

The JANNAF *Journal of Propulsion and Energetics* is an unclassified, limited-distribution technical journal dedicated to the publication of scholarly work in the fields of aerospace propulsion and energetic materials research and development. It is the only journal devoted exclusively to the publication of critical technical data that is export controlled and limited in distribution. The objective of the JANNAF *Journal* is to provide a forum for the propulsion community to recognize scientists and engineers conducting significant work; to provide refereed review of limited-distribution and export-controlled work; and to archive the achievements of individuals in the industry. Currently an annual publication, the journal is distributed only to qualified subscribers in accordance with DoD Directive 5230.25, "Withholding of Unclassified Technical Data from Public Disclosure." This guide is provided to assist you in preparing your manuscript for publication in the JANNAF *Journal*.

### Getting Started

The editor-in-chief will define requirements for journal issues in consultation with members of the editorial advisory board. Generally, issues will cover broad topics in propulsion and energetics. Periodically, guest editors will be invited to focus a specific journal issue on a technical topic of timely interest. The JANNAF *Journal* will accept for review manuscripts pertaining to the following:

- Propulsion and Energetic Materials Technology
  - Aerospace Materials
  - Combustion Science
  - Exhaust Plume Technology
  - Modeling and Simulation
  - High-Speed Fluid Dynamics
  - Nondestructive Evaluation
  - Propellants, Explosives, and Aerospace Fuels
  - Propulsion Systems Safety and Hazards
  - Rocket Nozzle Technology
  - Safety and Environmental Protection
  - Structures and Mechanical Behavior
  - Vehicle Aerodynamics
- Systems and Components
  - Airbreathing
  - Gun and Gun-Launched
  - Hybrid
  - Liquid
  - Solid
  - Spacecraft
- Systems Applications
  - Gun and Gun-Launched
  - Tactical
  - Space Access
  - Strategic/Missile Defense

The editor-in-chief will coordinate the technical review of manuscripts with the managing editor. The managing editor will oversee the day-to-day requirements of manuscripts as they go through the various stages of review and the publication process. Authors are responsible for submitting their work in accordance with JANNAF *Journal* guidelines provided in this Author's Guide. Manuscripts that do not conform to the guidelines will not be accepted.

Please note that the average journal article is approximately 15 pages in length and includes six to eight figures. The following is an estimate that may be useful in planning your manuscript: two double-spaced manuscript pages (approx. 1000 words) = one printed journal page; two to three figures = one printed journal page. *Manuscripts that exceed 18 pages in final form may be assessed a page fee of \$1000 per page.*

The JANNAF *Journal* is dedicated to the publication of technical work containing information that is export-controlled and limited in distribution. Articles will have a distribution level that is no more restrictive than Statement C, as defined in DoD Directive 5230.24, "Distribution Statements on Technical Documents": "DISTRIBUTION STATEMENT C. Distribution authorized to U.S. Government agencies and their contractors; {fill in reason}; {date of determination}. Other requests for this document shall be referred to {insert controlling DoD office}." *Manuscripts that are approved for public release and have an unlimited distribution will not be accepted (the only exception to this is for manuscripts related to the subject of toxicology).* Manuscripts must be approved by the controlling office prior to submission and publication, and authors should submit a completed JANNAF paper clearance form with their manuscript, available at <https://www.jannaf.org/journal/authorinfo>.

### Authorship

All manuscripts must be the original work of the author. All those who assisted in the writing of the manuscript or made significant contributions to the manuscript should be included as "authors," although authorship should be limited to seven. All authors and coauthors must be made aware of the manuscript and approve of its publication. Others who participated in the work described in the manuscript should be mentioned in the

### JANNAF Journal Points of Contact

Manuscript preparation, graphics, submission procedures, and deadlines:

Nicole Miklus, Managing Editor, [nmiklus@erg.jhu.edu](mailto:nmiklus@erg.jhu.edu), 410-992-7303

Technical topics, special focus areas, research, or data:

Steve Son, Editor-in-Chief, [sson@purdue.edu](mailto:sson@purdue.edu)

Miki Fedun, Technical Advisor, [mfedun@erg.jhu.edu](mailto:mfedun@erg.jhu.edu)

acknowledgments. To avoid conflicts of accessibility, it is strongly suggested that all authors be U.S. citizens.

## Writing Your Article

Consider the information you wish to present and the manner in which you will organize this material. Prepare a detailed outline. Plan how you will incorporate figures and/or tables in your article. Make sure that each sentence is written in clear, concise English that conforms to the basic rules of grammar, syntax, punctuation, and clarity. Avoid slang and jargon. Review your own writing and critique it as objectively as possible. Think about how your article will be viewed by others. Make revisions that will improve your writing and enhance the overall appearance of your article.

## Obtaining Sponsor Approval for Publication

If your article is related to sponsored work, indicate sponsor information in the acknowledgments. Include the sponsoring organization's name and address, as well as the prime contract number.

## Obtaining Permission to Use Copyrighted Material

Material that is borrowed from other sources, including text, figures, tables, data, illustrations, and photographs, must be fully credited. Credit lines should cite the name of the publication from which the material was taken, author, publisher, and date of publication. If the material is copyrighted, you must obtain written permission from the copyright holder to use the material. Material that is published by the federal government does not require permission to be used, although the source of the material should be fully cited.

## Presentation of Work Encouraged

To provide an additional factor of merit in the peer review and feedback process, authors are encouraged to present their work at a JANNAF Meeting prior to the publication of their article in the *JANNAF Journal*. While manuscripts may be submitted for review and possible publication at any time, publication preference will be given to manuscripts that have been presented and critiqued at a JANNAF Meeting. Consult the schedule of JANNAF meetings at <https://www.jannaf.org/meetings> to determine possible presentation dates. Authors of JANNAF "Best Papers" may be invited by a member of the editorial staff or advisory board to submit a manuscript.

## Preparing/Submitting Your Manuscript for Review

Manuscripts should be double spaced and formatted in a single column, with margins of at least one inch on all sides to allow room for technical and editorial queries and comments. Number each page. The title of the article and the full names of the authors should appear at the top of the first page. *The distribution statement must be placed at the bottom of the first page.* Headings and subheadings should not be preceded by numbers. Major headings should be reflected in all capital letters, with bold type. Subheadings should be in title case, with bold type. Sub-subheadings may be identified with italics. All headings and subheadings should be placed at the left margin, not centered.

Use Microsoft Word format for text. Do not apply "styles" or embedded code to your text. Proprietary fonts are not acceptable. All portions of the manuscript including abstract, nomenclature, references and captions should be typeset in 10 pt. Times or Times New Roman font style.

Submit high-resolution figures and photographs in separate files. Preferred formats are JPEG, TIFF, or EPS at 100% reproduction size at 300 pixels per inch (ppi) or greater. Also embed figures in a Word file for review purposes. Microsoft Word Math-Type is the preferred program of use for equations and formulas.

The lead or corresponding author is required to have an active JANNAF portal account. Contact the managing editor and/or ERG facility security officer if your account is expired or you need instructions to set up a new one. Notify the managing editor when your manuscript is ready to submit. Instructions on how to submit your manuscript may be found at <https://www.jannaf.org/journal/authorinfo>. Please refer to the checklist on page 4 of this guide before submitting your manuscript for review.

## The Review Process

The editor-in-chief in coordination with the managing editor will conduct the first examination of your manuscript and make a determination based on the following: appropriateness for the *JANNAF Journal*, technical validity, and archival merit. After initial examination, your manuscript will be forwarded to an associate editor (AE), who has direct knowledge of the subject matter, and to several expert reviewers in the field, who will be identified and recruited by the AE or managing editor. During this process, the managing editor will also review the manuscript to perform a preliminary editorial check and identify areas that must be addressed before more thorough editing and production can begin, e.g., distracting structure, missing figures, incomplete references. The associate editor, with explicit justification, may accept, reject, or request changes to the manuscript. While the technical and editorial review reports are given considerable significance, the decision to publish your manuscript lies first with the associate editors and ultimately with the editor-in-chief.

As the author, you will be kept informed of the manuscript's status and any requests for changes that may be required throughout this process. Formal acceptance and publication will not occur until you have addressed all revision requests and complied with the checklist of requirements provided on page 4 of this guide. The editorial staff will make the final decision on manuscript publication.

## Submitting the Final Manuscript

The final manuscript must be submitted electronically, in Microsoft Word format, to the managing editor. Figures and/or photographs that have been revised as a result of the review process should be submitted electronically as separate files. Please include caption information for figures and photographs.

## The Editorial and Production Process

The managing editor will edit, typeset, and format the final manuscript submitted for publication. Illustrations and photographs, referred to as "figures" in the *JANNAF Journal*, will not be redrawn or manipulated in any way; therefore, they must be camera-ready and in complete conformance to the journal specifications as described on page 3 (see **Figures**) of this guide.

To assist you in presenting the material in your manuscript in the most effective and concise way possible, the managing editor will perform the following:

- check grammar, spelling, and syntax;
- ensure that acronyms, nonstandard abbreviations, and unusual terms are defined;

- eliminate jargon, ambiguity, unnecessary repetition, and awkward constructions;
- ensure that a consistent system of units is used throughout;
- check for adherence to *JANNAF Journal* style and format requirements;
- verify that all references, figures, and tables are cited in the text, are in the proper format, and are consistent with the information presented in the text;
- ensure logical presentation and organization; and
- query the author about inconsistencies, missing information, and confusing statements.

After your manuscript has been edited, typeset, and formatted, the managing editor will send you a review copy (galley). Please respond to all queries on the galley and return it to the managing editor by the date requested. Failure to respond in a timely manner could result in delayed publication of your article.

## Major Elements of a JANNAF Journal Article

### Title

The title should clearly and concisely indicate the subject of the article.

### Abstract

A brief (100-150 words) abstract that summarizes your article must be included. The abstract should discuss the nature of your work as well as your purpose, results, and conclusions. It is not an introduction. The abstract must be able to stand alone and be read without reference to your article. Do not include numbered reference citations. The abstract will appear apart from your article in abstracting journals and databases; please give it careful attention.

### Introduction

The introduction should orient the reader with respect to your subject matter. Include background information and discuss your purpose. Indicate the scope of coverage of the topic.

### Body

The body should contain your primary message. If you investigated a problem, this section should discuss your method and results. The goal is to effectively communicate your work to the greater propulsion and energetics community, which includes various scientific and engineering communities, the defense establishment, industry, and academia. The reader should come away with an understanding of the general nature and significance of your work. Avoid the use of jargon; not all readers will be specialists in your field. If you must use a technical term that is specific to your field, define it parenthetically when it is first introduced.

### Figures

Illustrations and photographs are referred to as “figures” in the *JANNAF Journal*. Each figure should enhance the article and include only essential elements.

All figures must adhere to *JANNAF Journal* standards and be submitted as high-resolution images. Figures should be created in one of three widths: single-column width (19 picas), column-and-a-half width (26 picas), or two-column width (39.5 picas). Height is determined by the content of the figure but may not exceed 55 picas, the total height of the page. Type should be set in Arial 8 pt medium; bold is used only when necessary to make the text stand out. Please ensure that all text is legible. Lines are

.5 pt in thickness. The axes of all graphs should be labeled appropriately and include units of measure that are consistent with the rest of your article. Submit each figure electronically in a separate file. Embed figures in a Word file for review purposes. Figures should be cited numerically in the text. Photographs must be submitted in digital form (JPEG or TIFF) with a resolution of 300 ppi. Viewgraphs and PowerPoint slides will not be accepted.

### Figure Captions

Each figure caption should include enough information to make the figure useful by itself (~2 or 3 sentences). All symbols and abbreviations used in the figure should be identified in the caption if they are not identified elsewhere in the article. Figure captions should be compiled into one list at the end of your manuscript and be after each figure in the embedded figure file.

### Tables

Tables should consist of at least two columns and three rows. Lists are not tables. Each table should include an explanatory title (caption) at the top; column headings should include units of measure, if appropriate. If a table contains a blank entry or requires further explanation, add a footnote beneath the table. Tables that simply repeat what is already stated in the text should be omitted. Tables should be cited numerically in the text.

Create tables with sufficient space between columns to achieve a total table width of either 19, 26, or 39.5 picas (the same width options as indicated for figures). Tables should be typeset in 9 pt Goudy Old Style. Table captions, which are included as part of the table, should be typeset in 9 pt bold Goudy Old Style for the entire caption, with an initial capital for the first word only. Refer to the example below.

Table 1. The table caption should be size 9 font, bold, and centered across the top of the table.

Temperature (K)	CDT ( $\mu$ s)	Standard Deviation ( $\mu$ s)
299	1073	128
311	1688	271
333	2863	152

### Equations

Mathematical equations should be used judiciously. They should be carefully chosen and adequately explained in the text. All mathematical terms (e.g., variables, vectors, matrices, etc.) must be defined when first introduced. Indicate variables with italic type, and vectors and matrices with boldface type. MathType is the preferred program. Each equation should be submitted as a graphic image, identified by a sequential number placed in parentheses to the right of the equation.

### Conclusion

State the conclusion clearly and discuss the significance of your results. Include any applications of your findings and recommendations for future work. Do not repeat the abstract in your conclusion.

### References

Cite references numerically in the text in sequential order, and compile a reference list at the end of your manuscript. Include complete information (e.g., author/editor, title of journal/book, volume number, page span, year). Cite only retrievable unclassified work, i.e., work that is published, available on CD,

or available on the Web. Presentations or manuscripts in preparation should be treated as unpublished material. Unpublished materials should be cited parenthetically in the text as follows: (personal communication, J. Smith, MIT, 31 Jan 2009). Refer to the examples below for proper reference citation style.

### **AIAA Papers**

Lou, G., Bao, A., Nishihara, M., Keshev, S., Utkin, Y.G., and Adamovich, I.V., "Ignition of Premixed Hydrocarbon-Air Flows by Repetively Pulsed, Nanosecond Pulse Duration Plasma," AIAA-2006-1215, 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV (9-12 Jan 2006).

### **Books with Authors**

Avery, W.H., and Wu, C., *Renewable Energy from the Ocean: A Guide to OTEC*, Oxford University Press, New York, pp. 152-169 (1994).

### **Books with Editors**

Pisacane, V.L., and Moore, R.C. (eds.), *Fundamentals of Space Systems*, Oxford University Press, New York, pp. 174-176 (1994).

### **CD-ROMs**

Chew, W.M., "Health, Safety, and Environmental Advantages of Gelled Propellants," in *Proc. 1st JANNAF Liquid Propulsion Subcommittee Meeting*, Las Vegas, NV, JSC CD-33 (CD ROM) (May 2004).

### **Chapters of Books with Editors**

Mitchell, D.G., "The Space Environment," Chap. 2, in *Fundamentals of Space Systems*, V. L. Pisacane and R. C. Moore (eds.), Oxford University Press, New York, pp. 45-98 (1994).

### **Journals**

Billig, F.S., "Combustion Process in Supersonic Flow," *Journal of Propulsion and Power* 4(3), 209-216 (1988).

Miller, T.F., and White, E.R., "Dynamic Modeling of Water Breathing Powerplants for High Speed Supercavitating Underwater Vehicles," *JANNAF Journal of Propulsion and Energetics* 1(1), 83-100, 2008-0189H (2008).

### **Proceedings**

Kent, R., and Rat, R., "Static Electricity Phenomena in the Manufacture and Handling of Solid Propellants," in *Proc. 20th DDESB Seminar*, Norfolk, VA, Vol. 1, pp. 885-889 (Aug 1982).

### **Reports**

Guier, W.H., and Weiffenbach, G.C., *Theoretical Analysis of Doppler Radio Signals from Earth Satellites*, Bumblebee Report No. 276, JHU/APL, Laurel, MD (Apr 1958).

### **Web Sites**

The Johns Hopkins University Applied Physics Laboratory Web site, "APL to Lead Team Developing Revolutionary Prosthesis," last verified 20 Apr. 2006, accessed 26 Apr. 2006, available at <http://www.jhuapl.edu/newscenter/aplnews/2006/prostheticarm.asp>.

### **Acknowledgments**

If you wish to include an acknowledgment, please provide full first names; nicknames are discouraged.

### **Biographies**

Submit a brief (120 words or less) professional biography. Include your education, current work assignment, professional society memberships, and significant previous assignments. Also include your email address at the end of your biography. Please provide a high-resolution (300 ppi) digital portrait photograph to accompany your biography.

### **Glossaries**

If your manuscript includes a large number of mathematical terms, symbols, or complex definitions, you may include a glossary or nomenclature list to assist the reader. In most cases, however, a glossary is not necessary.

### **Footnotes**

Avoid footnotes to textual material. Such information can usually be incorporated parenthetically into the text.

### **Abbreviations**

Nonstandard abbreviations should be defined when they are first introduced. Standard abbreviations, such as units of measure and time (m, kg, s, in, lbm), need not be defined.

### **Acronyms**

Please limit the use of acronyms. When acronyms are required (in general, for terms that appear more than two times in an article), they should be defined when they are first introduced. The following commonly recognized acronyms do not need to be defined but may be: JANNAF, DoD, DoE, NASA.

### **Numeral Usage**

Always use numerals with units of measure, e.g., 5 mm, 25 g. Spell out one through nine when not used with a unit of measure, e.g., five motors, two investigations.

### **Units of Measure**

Use a self-consistent system of measurement throughout your article; you may use the system that is conventional in your field. However, if it is either unusual or little known, include the SI equivalents in parentheses.

## **CHECKLIST**

Before submitting your manuscript for review, please be sure that it meets the following requirements:

- Sponsor approval of manuscript and distribution statement as indicated on accompanying JANNAF Journal clearance form (available at [https://www.jannaf.org/sites/default/files/jannaf/journal/JournalClearanceForm\\_July2021.pdf](https://www.jannaf.org/sites/default/files/jannaf/journal/JournalClearanceForm_July2021.pdf)).
- Microsoft Word file for text, reference list, and figure captions with one-inch margins on all sides. Text of manuscript should be double-spaced. All pages numbered.
- Title and full author names included at top of first page; distribution statement indicated at bottom.
- Abstract (100-150 words).
- Separate electronic files (high resolution, 300 ppi) for all figures, including photographs.
- Figures with captions in a Word file for review purposes.
- Figure captions compiled into one list at the end of the article.
- All borrowed or copyrighted material credited with complete reference information.
- References cited numerically in sequential order.
- Complete reference list compiled at the end of your manuscript in the JANNAF Journal reference style.
- Reference prime contract number(s) under which work was performed (if applicable).
- Acknowledgment (if desired).
- Biographies and digital photos of all authors; include an email address for the lead author.

To submit your manuscript files, ensure your JANNAF portal account is active and email [nmiklus@erg.jhu.edu](mailto:nmiklus@erg.jhu.edu) for upload instructions.