



Authors' Guide

KEY DEADLINE DATES

Forum 78 final paper deadline extended to **April 18, 2022**

Early bird registration – register by April 11, 2022 for discounted rates

Hotel Reservations by April 14, 2022 for confence rates

Checklist

Final Written Paper

Now Due **April 18, 2022**

Clearance for Publication
Copyright Ownership
Submitted electronically
Speaker Bio information

Forum Attendance

Early bird registration April 11, 2022
Hotel reservation April 14, 2022

Registration
Hotel Reservation

Presentation

Late April: Presenting Authors Notified of Where/How to Upload Files
Presentation Files uploaded by May 9, 2022

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Visit the Vertical Flight Society web site for the most current information regarding all aspects of the Society including the Forum at www.vtol.org.

General Overview

The information in this package will help you prepare for:

- Final written paper
- Forum presentation
- Forum attendance

Forum Papers

- Should be concise and ideally 10 to 15 pages in length and **should NOT exceed 30-pages in length.**
- The optimal file size is between 2 and 5 MB and **should NOT exceed 10 MB in size.**
- **Please use either the Microsoft Word or the LaTeX templates.** These templates are available on the Mira submission (www.vtol.org/mira) site and the VFS Forum event page (www.vtol.org/forum - under Author Information).
- **Your final paper submission format needs to be a PDF** — the Mira site can perform conversions from Word to PDF.
- More detailed guidance materials for your paper are under Part C, Section C1.

Forum Presentation

- Presenting authors will be notified in late April with where and how to upload presentations which are due **May 9, 2022** and NLT day before when your presentation is scheduled – contact your Session Chair for your session schedule.
- Your electronic presentation at the VFS Forum is required to be either **Adobe Acrobat PDF (preferred) or Microsoft PowerPoint (pptx) and maximum file size is 75 MB.**
- The format and/or template of the presentation is at the discretion of the presenting author.
- **VFS does not publish or share Forum presentations hence copyright permission is not required.** *Presentation content needs to be non-classified and unrestricted as the Forum is open to all persons, nationalities and organizations.*
- **You will have 30-minutes to present and must adhere to that strict timing.**
- Screens and projectors optimized for 16:9 widescreen.
- Detailed presentation guidance materials detailed under Part C, Section C2.

Visa Letters of Invitation: if you require a Visa Letter of Invitation to travel to the VFS Forum, please email **Betty Chen, Forum Registrar** at bchen@vtol.org and provide the following information:

- | | |
|---------------------------------------|---|
| • Name as it Appears on your Passport | • Email Address |
| • Organization Name | • Title of VFS Forum paper and session name |
| • Organization Mailing Address | |

A. Important Dates and Links

A1. Final Paper Deadlines

The following documents are ALL due by April 18, 2022.

- Final paper submitted via the Mira Forum 78 web site at www.vtol.org/mira.
- Author information including main, presenting and co-authors.
- "Assignment of Copyright" form signed via Mira or upload your organization's copyright

- form.
- Speaker bio.
 - In order to be eligible for the Alfred Gessow Best Forum Paper Award, you must submit your paper by the deadline date — late papers are not eligible for best paper review.

A2. Hotel Reservation Deadlines

Book one of the three Forum hotels by April 14, 2022.

- Government rate rooms are available but very limited, **so government personnel should book ASAP.**
- The three Forum hotels are:
 - Omni Fort Worth
 - Sheraton Fort Worth (Marriott Bonvoy)
 - Hampton Inn & Suites Fort Worth.
- Book rooms directly from Forum website at www.vtol.org/forum-hotels to receive discounted rates.
- All deposits for individual room reservations are fully refundable if a reservation is cancelled within the **cancellation period.**

Please support our Forum 78 hotels. Staying at one of the official Forum hotels guarantees you a great rate and helps VFS defray Forum costs. Please only make your reservations through the official hotel site at www.vtol.org/forum-hotels.

A3. Forum Registration Deadlines

April 11, 2022 is the deadline for Early Bird Forum 78 registration.

- Please register as soon as possible at www.vtol.org/forum.
- **ALL speakers are expected to register and pay** and are eligible for the *discounted* speaker registration rate.

B. General Paper Guidelines

Use only the Word or LaTeX templates provided on the VFS or Mira websites.

B1. Clearance for Publication – **DO NOT DELAY!**

- **Your final paper must be cleared by your organization prior to submission for publication and no later than the extended deadline of April 18, 2022.**
- It is the author's responsibility to determine and acquire the appropriate types and levels of clearances — internal and external such as co-author organizations — for the paper to be published.
- The VFS Forum is open to all interested parties of all nationalities and all organizations. *Therefore, absolutely no classified, sensitive or otherwise restricted material may be published or presented in conjunction with the Forum.*

B2. Assignment of Copyright Ownership

- The Assignment of Copyright Ownership is part of the online final paper submission process and must be accepted.

- In the case of multiple authors, only the main author is required to accept the release.
- The copyright laws require written transfer of copyright, which
 - *protects you as the author from unauthorized use of your paper*
 - *you as the author retains copyright of the paper*
 - *gives VFS permission to publish your paper*
- If you are a U.S. government employee, you may still accept the release form because you are only signing ***to the extent transferable and appropriate language is included in the copyright form.***
- For those organizations using their own copyright release, your organization's form can also be uploaded on the Mira copyright page.
- See the next page for sample of the Copyright Form.

ASSIGNMENT OF COPYRIGHT OWNERSHIP

VFS — *The Vertical Flight Society*

FORUM 78

**May 10-12, 2022
Ft. Worth Convention Center
Ft. Worth, Texas, USA**

(Information will be generated automatically in Mira)

I, _____, (hereinafter, "the author") as author(s) (or employer, in the case of work made for hire) of the article entitled: _____

_____ (hereinafter "the article")

hereby grant and assign to the Vertical Flight Society (hereinafter, "the publisher") all rights of copyright ownership now and hereafter protected in the article **(for U.S. Government employees, to the extent transferable)** effective if and when the article is accepted for publication in the *VFS 78th Annual Forum Proceedings*, including, but not limited to, derivation rights, the right to reproduce and distribute the article as part of the issue, and the right to grant or refuse permission to third parties to republish all or part of the article.

Provided, however, that the right to grant or refuse permission to third parties to republish all or part of this article (subject to giving proper credit including the copyright notice) shall also be held by the author.

And further provided, however, that the author reserves the right as author or editor to republish or use all or part of this article in future works, but not limited to lectures, press releases, reviews, or textbooks.

Name: (Generated by Mira).

Check the "Accepted" box on the Mira website OR upload your organization's copyright form.

B3. Author Information

- Author information to be completed during the submission process for each individual(s) who is either a main, presenting or co-author and the information will be used for the following:
 - To provide a point of contact for your paper
 - To list your presentation correctly in the official Forum program – **make sure ALL author names and organizations are ACCURATE.**

B4. No Paper – No Podium Rule

- A “*No Paper – No Podium*” policy will be in effect. This policy means that an author will not be scheduled to speak if a written paper has not been received by the deadline date.

B5. Journal Publication

- Papers presented at the Forum may be suitable for publication in the *Journal of the American Helicopter Society*.
- Guidelines for submitting a Journal paper can be found online at www.vtol.org/journal-guidelines.

B6. Alfred Gessow Forum Best Paper Award

Overview:

- The Alfred Gessow Award for Best Paper prepared was established to recognize the author(s) who prepared and presented the most significant Forum technical paper as judged and selected by his/her peers. The selected paper is presented at the European Rotorcraft Forum (ERF).
- Per an exchange program between VFS and ERF whereby the winner of the European Rotorcraft Forum (ERF) Ian Cheeseman Best Paper Award is invited to present his or her paper at the VFS Annual Forum.
- Submission of the Alfred Gessow Best Paper for publication in the *Journal of the American Helicopter Society* is expected.
- This year’s winner will attend the **48th European Rotorcraft Forum, September 5-9, 2022 at Zurich University in Winterthur, Switzerland.**
 - The winning author will receive a plaque – presented during their presentation at ERF
 - Air travel to ERF (up to \$1,500 US), provided by VFS headquarters
 - Complimentary registration and accommodations will be provided by ERF organizers.

Eligibility:

- All VFS Forum technical papers submitted by the paper submission deadline date are eligible.
- Exceptions are the Lichten Award winner and runner-up papers and the Ian Cheeseman Best Paper.

C. Detailed Paper & Presentation Guidelines

C1: Papers

These requirements ensure that your paper is properly formatted for inclusion in the Forum Proceedings and your presentation at the Forum is successful.

Top-Level Format Requirements

- Use the MS Word or LaTeX Forum paper templates.
- If you use LaTeX, please observe the following instructions: In order to generate screen-readable PDF you must include the following lines in the preamble:
 - `\usepackage{times}% set default font to "Times"`
 - `\usepackage{mathptm}% use Times in equations too`
 - `\usepackage{helvetica}% set \sf font to Helvetica`
- The paper should be formatted to **8.5-inch by 11-inch** paper.
- Corporate letterhead may NOT be used.
- ISO A4-sized pages may NOT be used.
- Paper title in upper/lower case – **NOT in capitals**.
- The first page **must include a Copyright Statement** and should be a footnote at the bottom left column.
- Margins should be at least 0.75 inches [19 mm] and not more than 1.0 inch [25.4 mm] on the top, bottom and sides.
- A standard proportional font such as Helvetica or Times New Roman should be used and Times New Roman is preferred.
- Title font size must be 14-point.
- Authors' names and information 10-point font.
- Title block and abstract centered across the width of the first page.
- The abstract and the rest of the paper should be 10-point font.
- Using any other fonts (e.g. special symbols) and not embedding them could cause production problems.
- If you are including graphics, equations, or photos, you must also embed them in your file. **Links to other files are NOT permitted and any embedded macros will be disabled.**
- Do NOT list author email addresses on the front page, but rather at the end of the paper.
- Except for the title block and abstract, centered across the page, fully justified text throughout the paper is preferred and left justified is acceptable.
- The body of a paper should be single-spaced and in two columns of equal width, with a 0.20 inch [5.1 mm] "gutter" between columns.
- Elements of the paper plus the sections and subsections within the body of the paper should NOT be numbered or lettered.
- The titles for the elements of the paper plus the sections and subsections should be in bold and in capital letters.
- The use of color should be limited to Figures and Tables.

Organization

The paper should consist of the following elements. Except for the "Source Footnote," the elements arranged in the following order:

- Title Block – not in capitals
- Source/Copyright Footnote (bottom of first page/left column)
- Abstract
- Notation (optional)
- Introduction
- Main Body (including text, figures, tables, and equations)
- Conclusions
- Author Contact Information
- Appendix or Appendices (optional)

- Acknowledgments (optional)
- References

Description of Elements

Title:

- Title block should consist of the title itself and information on each author.
- The title should be brief and concise.
- Avoid unnecessary acronyms, symbols, abbreviations, and punctuation (hyphens, slashes, colons and question marks).

Author Information:

- Place the author's(s) full name(s), official title, employer, and simple address (city and state [and country for non-US authors]) on separate lines below the author's(s) name.
- Do not include the email address on the 1st page but rather at the end in the Conclusion information.
- For multiple authors with the same employer, formatting approaches that minimize repeating the same information are encouraged.
- Do not include academic degrees, sub-levels within your organization, or the full mailing address.

Source/Copyright Footnote

- Footnotes placed at the bottom of the left column of the first page to show the source of the paper. It should include the specific Forum, the location, and the date. The second line should indicate copyright. Please refer to the example below:

Presented at the Vertical Flight Society (VFS) 78th Annual Forum & Technology Display, May 10-12, 2022, Fort Worth, Texas, USA. Copyright © 2022 by VFS. All rights reserved.

For US government agencies:

*Presented at the Vertical Flight Society (VFS) 78th Annual Forum & Technology Display, May 10-12, 2022, Fort Worth, Texas, USA. **This is a work of the U.S. Government and is not subject to copyright protection in the U.S.***

Abstract

- Abstract of approximately 150-words and single paragraph only. The abstract will become part of the metadata for your paper in the online proceedings and other searchable databases, so make it an accurate and complete — but concise — summary of the paper.
- Should be a summary, not an introduction, and be complete in itself.
- Should not contain any numerical references to figures or references contained in the paper.
- Should indicate the subject covered in the paper and state the objectives of the investigation.
- Newly observed facts and conclusions stated in summary form.
- Abstract centered across the width of the first page.

Notation

- This section is optional if only a few symbols or simple equations are used. In this case, the symbols should be defined in the text when introduced.

- If more than a few symbols or equations are used, a Notation section should be included. It should list and define the symbols used (including units).
- Place the symbols in alphabetical order, English first, Greek next, and then subscripts. Metric and US customary units should always both be used wherever possible.
- If used, this section is the first section in the two-column format.

Introduction

- Should introduce the subject, provide some background, including a brief assessment of prior work by others (citing relevant references), and an explanation of how the paper contributes to the field.
- It is not a summary and should explain analysis/data completed, further work to be completed, and how the present results relate to past work and present work.

Main Body

- Organize the main body under logical headings and subheadings.
- Do not number the headings.
- Main headings centered on the page.
- Subheadings begin at the left margin above the text, and sub-subheadings are set at the left margin on the first line of the paragraph.
- Use third person.
- Avoid jargon, slang and commercialism.
- Use acronyms and footnotes sparingly.
- Use simple English prose in paragraph form.
- Metric and US customary units should always both be used.

Equations

- Unless only a few are used, all equations should be numbered in the order introduced and referred to by number in the text.
- Equations and/or symbols presented in any suitable form; however, clarity for the printer is essential.
- Special symbols should be identified.

Placement of Figures and Tables

- Figures and tables inserted in the Main Body.
- Each figure or table placed as soon after its reference in the text as is practical.
- If including them within the Main Body proves too difficult, grouping all Figures together and then all of the Tables together after the last section of the Main Body is acceptable. Note that Figures and Tables should all be within the Main Body or all after the Main Body.

Figures

- Illustrations and graphics used in Figures must be clear and sharp.
- Converting to PDF files can sometimes affect the resolution of images: If you do the conversion to PDF, carefully review the conversion of all images to ensure they are of adequate quality.
- Lettering should be large enough to be legible, at least 1/16" (4 mm) high.
- If needed for clarity, selected figures can be double column width.
- Illustrations/figures showing plotted data should have axes labeled with appropriate names and units.

- Symbol keys should be included to identify plotted lines and data when needed. Additional information or parameter values related to a figure generally placed in the figure caption rather than on the figure itself.
- Each figure numbered and have a caption.
- A reference in the text should appear before the figure.

Tables

- Keep number of tables to a minimum.
- Each table must have a number and a caption and be cited in numerical order in the text.
- A reference in the text should appear before the table.
- Tables should be simple and arranged in the following format:
 - Use a thicker line at the top and bottom of each table and a thinner line under the column headings.
- Table footnotes placed under the bottom line and should be indicated by the letters a, b, c, d, etc.
- Both metric and US customary units should be presented.

The following example for illustrative purposes only:

Table 1. AgustaWestland AW609 Aircraft Characteristics.

Characteristic	English	Metric
Engines	2 x P&WC ^a PT6C-67A turboshaft	
Passengers	6 to 9 pax + 1-2 crew	
Engine Power	2 x 1,940 shp	2 x 1,450 kW
Wingspan	33.8 ft	10.3 m
Length	46 ft	14.0 m
Height	15 ft	4.5 m
Proprotor Diameter	26 ft	7.9 m
Max Useful Load	5,500 lb	2,500 kg
Max Gross Weight	16,000 lb	6,974 kg
Range	750 nm	1,389 km
Service ceiling	25,000 ft	11,364 m
Vmax (at cruise)	275 kt	509 km/h

^a P&WC: Pratt & Whitney Canada

Conclusions

- The most important results of the paper summarized as a concise list of numbered items.
- Conclusions supported by development in the main text and no new material should be introduced in this section.
- If the paper did not result in specific conclusions, then the section may be entitled Concluding Remarks or Concluding Recommendations, with brief summary comments as appropriate.

Appendices

- Used for highly specialized data, derivations, etc.
- Be lettered (A, B, C, ...) if more than one is used.
- Each appendix must be cited in the main text.

Acknowledgments

- If used, acknowledgements should be placed at the end of the paper, before the references.

References

- All reference material grouped in the final section of the paper, numbered, and placed in the order cited in the text.
- Reference only that material which is readily available to the reader.
- Do not include classified material, internal company memoranda, or reports unavailable to the reader.

Use the following styles:

Book:

Johnson, W., *Helicopter Theory*, Princeton University Press, Princeton, NJ, 1980, pp. 808-813.

Periodical:

Yeo, H., Potsdam, M., and Ormiston, R. A., "Rotor Aeroelastic Stability Analysis Using Coupled Computational Fluid Dynamics/Computational Structural Dynamics," *Journal of the American Helicopter Society*, Vol. 56, (4), Oct. 2011, pp. 1884–2013. DOI: 10.4050/JAHS.56.042003.

Report:

Johnson, W., "A Comprehensive Analytical Model of Rotorcraft Aerodynamics and Dynamics, Part I: Analytical Development," NASA TM 81182, 1980.

Conference or Meeting Paper:

Sadler, S. G., "A Method for Predicting Helicopter Wake Geometry, Wake-Induced Inflow and Wake Effects on Blade Airloads," American Helicopter Society 27th Annual Forum Proceedings, Washington, DC, May 1971.

Website:

Hirschberg, M., "Commentary: Vertical Flight Saves Lives," VFS International, dated Oct. 29, 2017, <https://vtol.org/news/commentary-vertical-flight-saves-lives> (accessed Dec. 1, 2017).

C2: Presentations

- The VFS Forum is open to all interested parties of all nationalities and all organizations. ***Therefore, absolutely no classified, sensitive or otherwise restricted material may be presented at the Forum.***
- VFS does not publish or share Forum presentations hence copyright permission is not required.
- **Presenting authors will be notified by email in April on where and how to upload their Forum presentations.**
- Presentations should be **uploaded by May 9, 2022 and NLT day before when your presentation is scheduled** – contact your Session Chair for session schedule.

File Format Overview

- Your electronic presentation at the VFS Forum is required to be either **Adobe Acrobat PDF (preferred) or Microsoft PowerPoint (pptx) 2010 or later and maximum file size of 75 MB.**
- The format and/or template choice of the presentation is at the discretion of the presenting author.
- Each session room will be equipped with an LCD projector connected to a computer running the Microsoft Windows operating system.

- Presentations must be readable by Windows 7 or later. Those who develop their presentation under an operating system other than Windows should transfer the file to a computer running Windows with Microsoft PowerPoint 2007 or later for Windows (or Adobe Acrobat-compatible reader) and test the conversion.
- **Screens and projectors will be optimized for 16:9 widescreen.**
- You should test your presentation by projecting it electronically prior to the Forum – it may look great on your computer but look different when projected.

Presentation Appearance

Every chart should:

- Carry the message in a concise, condensed, and technically correct manner.
- Be legible from the back row. Assume the distance to be 75 feet (23 m).
- Standardize the typeface throughout and use bold face characters. In general:
 - All upper case is ONLY acceptable for the title, but Title Case is preferred
 - Sentence case is recommended for the body of the presentations i.e., first letter of first word of a line is capitalized; everything else in lower case.
 - "Title Case" is also acceptable (i.e., first letter of all words [except short words like "a", "the", "and"] is capitalized; all other letters are lower case).
- In general, a figure or plot that is clearly legible in a paper is likely not very legible when projected. Some simplification and clarification of a printed figure(s) is required to ensure clear legibility when projected.

Suggestions for having readable charts:

- Your presentation charts should not be crammed or overly full. The chart should only be a prompt for the speaker and not text for the speaker or audience to read.
- Letters and numerals should be large and at least 16-point font and a minimum of 14-point.
- Avoid vertical legends (and Y-axis labeling).
- Multiple lines on a graph should be individually labeled, not cross-checked to a legend.
- Avoid charts with complex equations.
- Use a concise title at the top of each chart. The title can be a declarative statement to inform the audience of what can be learned from the image.
- A boxed statement at the bottom of a chart with a very concise statement/major point can be effective.
- A number of attendees could potentially be colorblind. Red–green color blindness affects up to 8% of males and 0.5% of females of Northern European descent. Red-green "stoplight" charts should be avoided, as well as red-green color-coding where possible. Use of different symbols is preferred to lines of different colors.

Session Rooms and Equipment

- Each session room will be pre-set with the following:
 - Computer running Microsoft Office
 - Video Projector
 - Projection Screen
 - Speaker timer
 - Laser pointer
 - Podium microphone and Lavalier (for speaker)
 - Standing microphone (audience questions)

- Student volunteer(s) will be assigned to each technical session and professional audio/visual (A/V) representatives can be summoned if there are any technical difficulties.
- A Speaker Ready Room will be available.

Delivery

- **Presentations are on a 30-minute cycle:**
 - 5-minutes for introduction
 - 20-minutes for the presentation
 - 5-minutes for questions.
 - Complete your talk at least 5 minutes before the end of your time to allow for questions.
- **The 30-minute cycle must be observed** in accordance with the published program to allow audience migration between sessions.
- A speaker who appears as if he or she may run over their time will be warned and, if necessary, stopped to preserve the schedule.

Be sure to:

- Present selected parts of your written paper so that your oral presentation is compatible within the allotted time and questions/answers.
- Conduct a dry run to rehearse timing, delivery and content.
- The presenter is also strongly encouraged to rehearse the presentation at least once using electronic projection.
- Stand at the podium and face your audience at all times – do not turn your back.
- Speak loudly and clearly enough to be heard in the back row.
- Do not read your speech or your charts verbatim and avoid a monotonous, uninteresting delivery.
- Refer only to abbreviated notes of your presentation.
- When introducing a plot or graph on an image, briefly describe the abscissa and ordinate axes, before you get into an interpretation of the results.
- **Avoid commercialism and sales nuances.**
- Include "Proprietary" or similar appropriate marking on your slides.
- Use a laser pointer when necessary to direct attention to specific points.