All authors are required to read and comply with these guidelines for their paper submission.

Any specific detail in formatting not addressed in these guidelines, especially those applicable to specific fields, will be evaluated by the LRSJ Executive Board and/or the reviewers.

Format of Articles

Articles submitted to LRSJ should be in Word's .docx format. You can use your own format, but we recommend downloading the submission Template (We can insert a link here). If you are using LaTeX, please download your manuscript as .docx. If this is not possible, please reach out to get further instructions.

Electronic files should be formatted for US letter paper (8.5 by 11 inches). Use 1.5 spacing for the main text, and 1.15 for figure and table captions. Submissions should be made in English using black font; we encourage the use of Georgia or similar fonts. Use 10.5 pt font and 1.5 spacing for the main text and indent the first sentence of each paragraph. Include the page number on the bottom right of each page.

Cover

Your manuscript should include a cover page with your title, author name(s), affiliation(s), abstract, and keywords. Each element on the mentioned list should be marked with the name (e.g., "Title", "Authors", etc.) in brown (Hex #80340D, or another distinguishable color) bold font.

Title. The title should describe your work and be inviting to the readers. Creative titles are welcome within measure. The title should be concise (under 120 characters), clear, and specific. Avoid using abbreviations, where possible, unless they are broadly recognized (e.g., DNA). Titles should not be a question or state relations that are not investigated in the manuscript (e.g., "Effect of..." but not specifying the effect in the proposed work).

Authors and their institution affiliation(s). Authors should be listed by given name(s) followed by family name(s). Carefully check that all names are accurately spelled and separated by commas in a single paragraph. Affiliations should indicate at which institution(s) the work was performed and linked using superscript numbers. Affiliations should be numbered as they appear and listed with the complete name of each affiliated institution; separate the city and country from the name using a semicolon. An undergraduate author can be the corresponding author, denoted with an asterisk (*) next to their affiliation superscript. If there is a faculty corresponding author, you may denote them with an asterisk (*) next to their affiliation superscript. Having a faculty corresponding author is not mandatory, and the corresponding author, regardless of their rank and position, would serve as the point of contact for the manuscript.

Abstract. The abstract should be a single paragraph with no more than 250 words. This paragraph should explain to the reader the purpose of your research, how the subject was approached, principal results, and conclusions. References should be avoided within the abstract. It is suggested to include brief background information, followed by objectives, methods, and to finalize with the main conclusion of the study. Minimize the use of abbreviations and avoid citing references, figures, or tables.

Keywords. As LRSJ is a multidisciplinary research journal, you should provide 1 to 6 keywords to identify the field(s) of your work. You may choose to avoid using words that are already in your title; that way, you can get a broader description of your work.

Main Text

Any abbreviation should be introduced at the first mention in the text. Organize the main text using subheadings, using descriptive terms, not full sentences. You may use up to 3 nested levels, using a line break for each and distinguishing them as:

Bold for level one

Bold and italic for level two

Italic for level three

The specific sections should be appropriate for your research field. For original research articles, it is recommended to organize your manuscript into the following sections:

Introduction

Start your manuscript with a brief introduction that provides background information and context on the significance of the presented research. Clearly state the research question or objective and explain how your work fits within the broader field. Summarize key literature or prior findings that inform your study, highlighting any gaps your research addresses. Conclude the introduction by outlining the purpose, hypothesis, or specific aims of your work and briefly mentioning the approach used to achieve them.

Materials and Methods

The information provided in this section should contain sufficient detail to allow replication of the study in conjunction with cited references. Ethics approval information should be included in this section when necessary, such as when animal or human research is performed. Statistical methods should be described, and the original data should be available upon request to verify the results. Statistical significance symbols must be consistent throughout the manuscript, indicating the specific statistical test(s) performed in the appropriate figure caption or results text.

Results and Discussion

Use subheadings to describe each part of the research performed clearly. You should cover the key findings of the study, discuss the novelty and the limitations of the work, and compare them to the current state of the field. All figures and tables should be numbered in the order they appear in the manuscript and should be referred to within the main text.

Conclusions

Cover key findings of the study in one paragraph. Mention the limitations of the work and the future directions. Remember, this is your take-home message.

References

References should be numbered in the order they are cited in the main text. To streamline the citation process and organization, we recommend using reference manager tools such as Zotero or Mendeley. These tools help maintain consistency across both in-text citations and the final reference list. The formatting of citations in the main text may follow the style recommended by the chosen reference manager, usually as a superscript format in the main text. If references are managed manually, we suggest italicizing citation numbers and enclosing them in brackets within the manuscript (e.g., [1]).

In the reference section, citations should be listed in order. Each reference should be on a separate line ending in a period.

[1] First name initial. Surname, Article title. *Journal name*. Volume no. (issue) page(s) (Year), DOI

Acknowledgements

Non-author contributions can be mentioned in this section, including any disclosures of editing services and AI-assisted technologies. **Funding information**, including grant numbers, agency, and the recipient's initials. **Competing interests** of any of the authors must be listed or a statement of no competing interests (e.g., "The authors declare that they have no financial or personal relations that may derive into a conflict of interest with the presented work."). Being clear about any potential relationships that might influence the work is crucial for maintaining trust in both the work performed and the results obtained. **Data and materials availability** of manuscript and supplementary materials should be stated (e.g., "The data that support the findings of this study are available from the authors upon reasonable request."). Transparency in reporting data results enhances researchers' credibility and enables others to propose new experimental or analytical approaches.

Figures

During the submission process, figures can be introduced in the manuscript with a *top and bottom* text wrapping but will require the submission of individual full-resolution versions before the editing process. <u>Any previously published material must include appropriate credit</u>, and authors are required to obtain permission from the copyright holders. This is a simple process: you can contact the copyright owner—typically the original publisher rather than the authors—and request permission to reproduce the material. Publishers often have designated channels for such requests on their websites. Once permission is granted, you must indicate that the image is republished, whether it is used as it was originally published ("Reproduced with permission from [Publisher], [Author], [Title], [Journal], [Year].") or has been modified ("Adapted from…" instead of "Reproduced").

Final figures can be submitted as tag image file format (TIFF), joint photographic experts group (JPG), portable network graphics (PNG), or encapsulated postscript file (EPS). Vector-based files are preferred to maintain resolution upon resizing in editing, with a minimum resolution of 300 dots per inch (dpi) expected for the final submission.

Labels

All images must have a description of the image. Caption should be positioned immediately under the figure labeled as "**Fig. #.**", including a short figure title in **bold** font. When a figure includes distinct panels, they should be labeled using bold letters in parentheses **(a**, **I**, **A**, etc.**)** and should be addressed in the caption separately. The figure title should describe the figure as a whole, not individual panels. Avoid using text in figures such as titles as much as possible; this makes the editing more efficient. Use the legend text to describe the figures, including statistical tests used, *N,* and significance, when applicable.

Color and contrast considerations

All color figures must be supplied in RGB or CMYK format. To make the journal more accessible, LRSJ will request that the formatting of figures considers the use of color palettes and the use of shapes and/or textures that help identify different parts of a figure.

A combination of green and red should be avoided as much as possible, but if they can't be avoided, you may use strongly contrasting shades and add shapes or textures to differentiate the various parts. It is recommended to design colorblind-friendly palettes, using available resources such as Coloring for Colorblindness.

The incorporation of different visual aspects, such as different symbols or patterns, is a better resource to communicate results compared to a color-based differentiation. Color can be modified by screens or during the printing process (e.g., printing on black & white).

Figure 1 illustrates how incorporating diverse visual cues can improve the accessibility and interpretability of result plots. In the top row (*Non-friendly Palette*), group distinctions are conveyed using color alone (a). However, this differentiation becomes unclear under color vision deficiency, such as Deuteranopia (b), and may disappear entirely when printed in black and white (c). Although this example includes group labels on the x-axis, such labeling is not always feasible, making it increasingly important to use additional visual cues to distinguish experimental groups. In contrast, the bottom row (*Friendly Palette*) employs a color-blind–friendly palette along with fill patterns and shapes to differentiate groups (A). These cues remain effective under color vision deficiency (B) and in grayscale format (C). While not all visual cues need to be used simultaneously all the time, thoughtful design choices can significantly enhance the accessibility of published figures. This not only benefits readers with diverse visual abilities but also broadens the reach and impact of the manuscript.
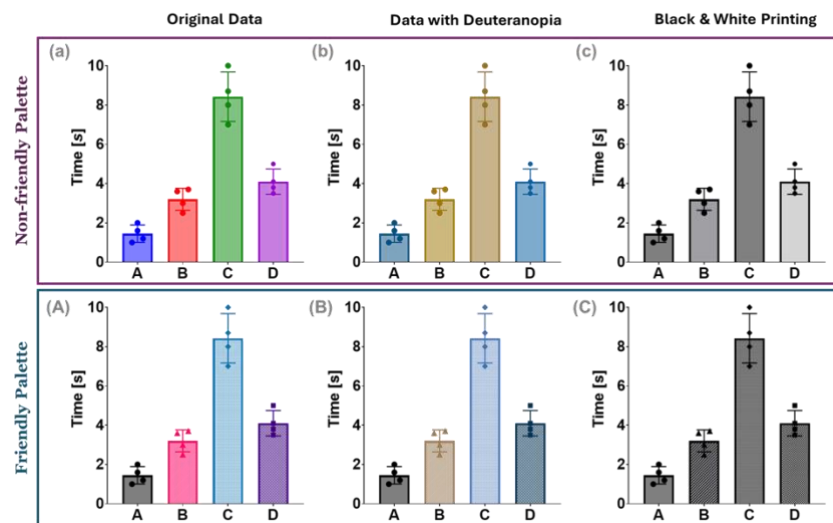

Figure 1. Using accessible color palettes can improve the overall communication of results. By combining color, shapes, and patterns, contrast between figure elements is enhanced, making the visualization more inclusive for individuals with varying visual abilities. The first column shows two approaches to presenting the same data: the top panel (a) relies solely on color to differentiate groups, while the bottom panel (A) incorporates color, fill patterns, and shapes for distinction. The middle column (b and B, respectively) displays how the same data appears under Deuteranopia—one of the most common forms of color vision deficiency. The final column (c and C, respectively) illustrates how the data would appear in grayscale, simulating the effect of printing in black and white.

Typefaces

- The use of a sans-serif font is recommended.
- Label graphs on the ordinate and abscissa with the parameter or variable being measured.
- Units should always be included using SI notation.
- Units should be put in brackets, e.g., [cm].

- Report only significant digits and use leading zeros on decimals, e.g., 0.03.
- Unusual units should be spelled out in full or defined in the legend of the same figure.

Microscopy and photographic images

Microscopy images may be included in the initial manuscript submission; however, high-resolution versions must be provided upon final revision. All photos and microscopy images must include a scale bar, with the length of the bar clearly defined on the image. Magnification factors may be noted when comparing images with different magnifications, but a defined scale bar is still required. If a subset of images shares the same magnification, the scale bar length may be defined once, but each image must still display a scale bar.

Chemical structure figures

If your paper includes chemical structures, we recommend using ChemDraw (available through Lehigh University) or a similar software. The LRJS website provides a template of chemical properties that can be imported into ChemDraw to streamline formatting. Colors may be used to highlight specific features or key elements relevant to your manuscript; however, these colors should adhere to the guidelines outlined above and must not compromise the contrast or legibility of the structural components. If a chemical analysis spectrum is presented, like ^{1}H NMR spectrum, standard peaks of interest need to be identified in the spectrum and described in the legend of the figure with the appropriate information according to the technique used.

Tables

Tables can be arranged within the main text during submission, but they should be inserted in an editable format. Tables should include a caption placed above the table, consisting of a brief title and labeled as "**Table #.**" Each column and row must have a clear heading. Units of measurement should be indicated in the column headings using brackets (e.g., [x]) and must remain consistent throughout the column.

Table content should be referred to within the main text to support the narrative but should not be duplicated content. The text should highlight key findings or trends without restating all data presented in the table. Long tables (exceeding one page in length) will not be accepted in the main manuscript unless they are deemed essential to the core content. Such tables may instead be included as part of the supplementary material.