







## RESEARCH PAPER

# Template for MMNSA journal manuscript submissions

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## Abstract

The Abstract (250 words maximum) should be structured to include the following details: **Background**, the context and purpose of the study; **Results**, the main findings; **Conclusions**, brief summary and potential implications. Please minimize the use of abbreviations and do not cite references in the abstract.

**Keywords:** Keyword 1; keyword 2; keyword 3 (Three to ten keywords representing the main content of the article)

**AMS 2020 Classification:** AMS Code1; AMS Code2 (Three to five):  
<https://mathscinet.ams.org/msnhtml/msc2020.pdf>

## 1 Introduction to this MMNSA template

This is the L<sup>A</sup>T<sub>E</sub>X template for MMNSA journal manuscript submissions. **Please note that whilst this template provides a preview of the typeset manuscript for submission, it will not necessarily be the final publication layout.**

There are important commands in the preamble that you will need to modify for your own manuscript. If you are using this template on Overleaf, please switch the editor to Source code mode to view them; or if you prefer to stay in the Rich Text view, click on the title in the Rich Text view to display the preamble code.

Specify your manuscript's category with the `\papercat{...}` command in the preamble.

See the sample code in the preamble for a sample of how author and affiliation information can be specified.

Use later sections starting with ‘Background’ on page 4 to write your manuscript. The remainder of this current section will provide some sample L<sup>A</sup>T<sub>E</sub>X code for various elements you may want to include in your manuscript.

### Sectional headings

You can use `\section{...}`, `\subsection{...}` commands to add more sections and subsections to your manuscript. Further sectional levels are provided by `\subsubsection`, `\paragraph` and `\subparagraph`.

### Citations and references

Use the `num-refs` document class option for numerical citations, and `alph-refs` option for author-year citations. Use the `\citep` command for parenthetical citations, and `\citet` command for text citations (when using `alpha-refs`). These are citations for journals and books, respectively: [1, 2] and here are two more references showing a book chapter and a conference proceeding style, respectively: [3, 4].

- This is a bullet list.
- Another point.
- A third point.

This<sup>1</sup> is a footnote.

- This is a numbered list.
- Another point.
- A third point.

### This is a 3rd level heading

Use `\subsubsection` to get a 3rd level heading. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

*This is a 4th level heading.* Use `\paragraph` to get a 4th level heading. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Lorem ipsum dolor sit amet, consectetur adipiscing elit.

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### Figures and tables

Figures and tables can be added with the usual `figure` and `table` environments, e.g. Figure 1 and Table 1. Use `figure*` and `table*` if you need a two-column wide figure or table, as in Figure 2 and Table 2.

If you have a very wide table or figure, you can use `sidewaystable` or `sidewaysfigure`, as in Table 3: this will be rotated sideways and occupy a *single column* on its own.

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1 This is the footnote text. This is the footnote text. This is the footnote text. This is the footnote text. This is the footnote text.

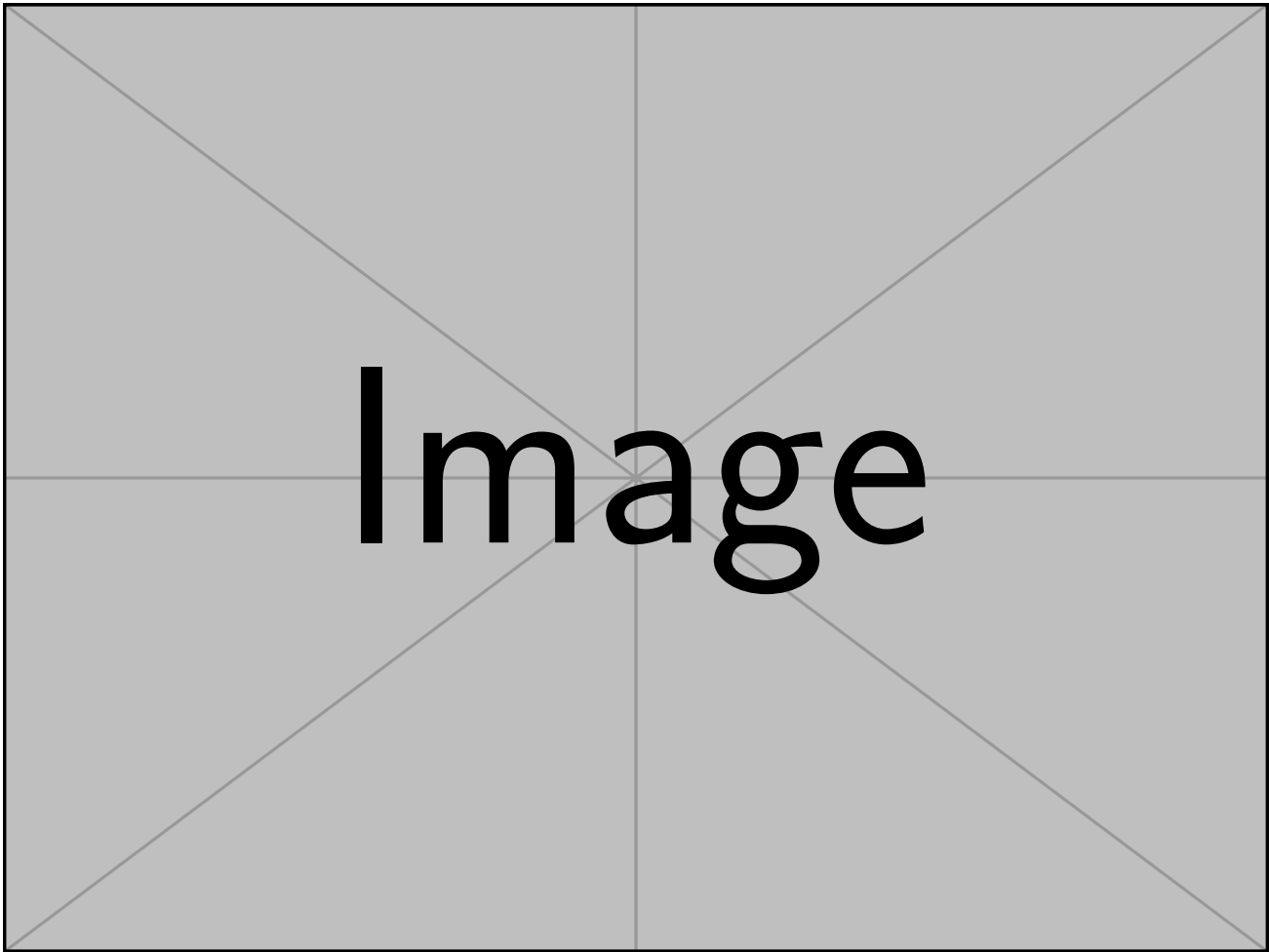
**Table 1.** An example table.

Item	Quantity	Mean
Widgets	42	Over-supplied*
Gadgets	13	Under-supplied

This is a table note.

\* Another note.

If your table or figure is both wide and tall (so it wouldn't fit well in a single column with `sidewaystable` or figure), you can use `table` or `figure` inside a landscape environment for a full-page landscaped alternative. A page break will be inserted *immediately before and after* the landscape environment, so you'll need to carefully position it in a suitable location in your manuscript.

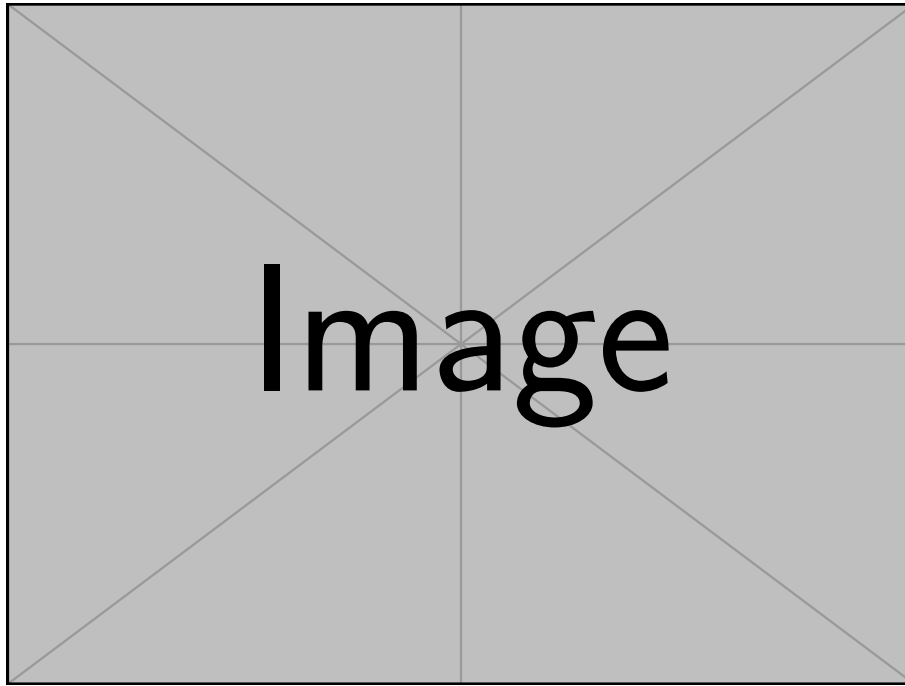


**Figure 1.** An example figure

**Some mathematics sample**

Let  $X_1, X_2, \dots, X_n$  be a sequence of independent and identically distributed random variables with  $E[X_i] = \mu$  and  $\text{Var}[X_i] = \sigma^2 < \infty$ , and let

$$S_n = \frac{X_1 + X_2 + \dots + X_n}{n} = \frac{1}{n} \sum_i^n X_i \tag{1}$$



**Figure 2.** An example wide figure. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

denote their mean. Then as  $n$  approaches to infinity, the random variables  $\sqrt{n}(S_n - \mu)$  converge in distribution to a normal  $\mathcal{N}(0, \sigma^2)$ . This is a citation for Eq. (1) in the text.

## 2 Background

The background section should be written in a way that is accessible to researchers without specialist knowledge in that area and must clearly state—and, if helpful, illustrate—the background to the research and its aims. The section should end with a brief statement of what is being reported in the article.

## 3 Data description

A statement providing background and purpose for collection of these data should be presented for readers without specialist knowledge in that area. A brief description of the protocol for data collection, data curation and quality control, as well as potential uses should be included, as well as outlining how the data can be accessed if it is not deposited in our repository.

## 4 Analyses

This section should provide details of all of the experiments and analyses that are required to support the conclusions of the paper. The authors should make clear the goal of each analysis and state the basic findings.

## 5 Results and discussion

The discussion should spell out the major conclusions and interpretations of the work, including some explanation on the importance and relevance of the dataset and analysis. It should not be restatement of the analyses done and their basic conclusions. The discussion section can end with a concluding paragraph that clearly states the main conclusions of the research along with directions for future work. Summary illustrations can be included.

**Table 2.** Automobile land speed records (GR 5-10)

Speed (mph)	Driver	Car	Engine	Date	Extra comments
407.447	Craig Breedlove	Spirit of America	GE J47	8/5/63	(Just to demo a full-width table with auto-wrapping long lines)
413.199	T. G.	Wingfoot Express	WE J46	10/2/64	
434.22	A. A.	Green Monster	GE J79	10/5/64	
468.719	C. B.	Spirit of America	GE J79	10/13/64	
526.277	C. B.	Spirit of America	GE J79	10/15/65	
536.712	A. A.	Green Monster	GE J79	10/27/65	
555.127	C. B.	Spirit of America, Sonic 1	GE J79	11/2/65	
576.553	A. A.	Green Monster	GE J79	11/7/65	
600.601	C. B.	Spirit of America, Sonic 1	GE J79	11/15/65	
622.407	G. G.	Blue Flame	Rocket	10/23/70	
633.468	R. N.	Thrust 2	RR RG 146	10/4/83	
763.035	A. G.	Thrust SSC	RR Spey	10/15/97	

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## 6 Potential implications

Authors should provide some additional comments about potential, more broad-ranging implications of their work that are not directly related to the current focus of their manuscript. This section is meant to promote discussion on possible ways the findings or data presented might be used in or have a relationship with other areas of research that may not be directly apparent in the work. It is not meant to provide ‘proof of importance’ of the work. Only to engender expansion of use to other areas.

Explicit personal opinions by the authors are permitted, but they should be made clear as such. References or related information to support the propositions should be included. These section should focus on work that can be done within the foreseeable future and specifically using the information within the manuscript, not provide speculation on how it will relate to far-reaching goals of the research area.

## 7 Methods

The methods section should include the design of the study, the type of materials involved, a clear description of all comparisons, and the type of analysis used, to enable replication of the work. Ease of reproducibility is one of the key criteria on which reviewers will be asked to comment. MMNSA encourages and assists with the submission of detailed protocols to the open access repository.

## Declarations

### List of abbreviations

If abbreviations are used in the text they should be defined in the text at first use, and a list of abbreviations should be provided in alphabetical order.

### Ethical approval (optional)

Manuscripts reporting studies involving human participants, human data or human tissue must:

- include a statement on ethics approval and consent (even where the need for approval was

Table 3. Automobile land speed records (GR 5-10). This is the same table as before, but rotated sideways.

Speed (mph)	Driver	Car	Engine	Date	Extra comments
407.447	C. B.	Spirit of America	GE J47	8/5/63	(Just to demo a full-width table with auto-wrapping long lines)
413.199	T. G.	Wingfoot Express	WE J46	10/2/64	
434.22	A. A.	Green Monster	GE J79	10/5/64	
468.719	C. B.	Spirit of America	GE J79	10/13/64	
526.277	C. B.	Spirit of America	GE J79	10/15/65	
536.712	A. A.	Green Monster	GE J79	10/27/65	
555.127	C. B.	Spirit of America, Sonic 1	GE J79	11/2/65	
576.553	A. A.	Green Monster	GE J79	11/7/65	
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633.468	R. N.	Thrust 2	RR RG 146	10/4/83	
763.035	A. G.	Thrust SSC	RR Spey	10/15/97	

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waived)

- include the name of the ethics committee that approved the study and the committee's reference number if appropriate

If your manuscript does not report on or involve the use of any animal or human data or tissue, this section is not applicable to your submission. Please state "Not applicable" in this section.

### Consent for publication

If your manuscript contains any individual person's data in any form, consent to publish must be obtained from that person, or in the case of children, their parent or legal guardian. All presentations of case reports must have consent to publish. You can use your institutional consent form. You should not send the form to us on submission, but we may request to see a copy at any stage (including after publication). If your manuscript does not contain any individual person's data, please state "Not applicable" in this section.

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All financial and non-financial competing interests must be declared in this section. Where an author gives no competing interests, the listing will read 'The author(s) declare(s) that they have no conflict of interests'. If you are unsure whether you or any of your co-authors have a competing interest please contact the editorial office.

### Funding

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### Acknowledgements

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### References

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