

A demonstration of the $\text{\LaTeX} 2_{\epsilon}$ class file for the *International Journal for Numerical Methods in Engineering*[†]

A. N. Other*

John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

SUMMARY

This paper describes the use of the $\text{\LaTeX} 2_{\epsilon}$ `nmeauth.cls` class file for setting papers for the *International Journal for Numerical Methods in Engineering*. Copyright © 2010 John Wiley & Sons, Ltd.

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KEY WORDS: class file; $\text{\LaTeX} 2_{\epsilon}$; *Int. J. Numer. Meth. Engng*

1. INTRODUCTION

Many authors submitting to research journals use $\text{\LaTeX} 2_{\epsilon}$ to prepare their papers. This paper describes the `nmeauth.cls` class file which can be used to convert articles produced with other $\text{\LaTeX} 2_{\epsilon}$ class files into the correct form for publication in the *International Journal for Numerical Methods in Engineering*.

The `nmeauth.cls` class file preserves much of the standard $\text{\LaTeX} 2_{\epsilon}$ interface so that any document which was produced using the standard $\text{\LaTeX} 2_{\epsilon}$ `article` style can easily be converted to work with the `nmeauth` style. However, the width of text and typesize will vary from that of `article.cls`; therefore, *line breaks will change* and it is likely that displayed mathematics and tabular material will need re-setting.

In the following sections we describe how to lay out your code to use `nmeauth.cls` to reproduce the typographical look of the *International Journal for Numerical Methods in Engineering*. However, this paper is not a guide to using $\text{\LaTeX} 2_{\epsilon}$ and we would refer you to any of the many books available (see, for example, [1, 2, 3]).

2. THE THREE GOLDEN RULES

Before we proceed, we would like to stress *three golden rules* that need to be followed to enable the most efficient use of your code at the typesetting stage:

- (i) keep your own macros to an absolute minimum;
- (ii) as \TeX is designed to make sensible spacing decisions by itself, do *not* use explicit horizontal or vertical spacing commands, except in a few accepted (mostly mathematical) situations, such as `\,` before a differential `d`, or `\quad` to separate an equation from its qualifier;
- (iii) follow the *International Journal for Numerical Methods in Engineering* reference style.

*Correspondence to: Journals Production Department, John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK.

[†]Please ensure that you use the most up to date class file, available from the NME Home Page at <http://www3.interscience.wiley.com/journal/1430/home>

```

\documentclass[times]{nmeauth}
%\documentclass[times,doublespace]{nmeauth}%For paper submission

\begin{document}

\runningheads{<Initials and Surnames>}{<Short title>}

\title{<Initial cap, lower case>}

\author{<An Author\affil{1},
Someone Else\affil{2}\corrauth\ and Perhaps Another\affil{1}>}

\address{<\affilnum{1}First author's address
(in this example it is the same as the third author)\break
\affilnum{2}Second author's address>}

\corraddr{<Corresponding author's address (the second author in
this example)>. E-mail: <corresponding author's email address>}

%\cgs{<Contract/grant sponsor name (no number)>}
%\cgsn{<Contract/grant sponsor name>}{<number>}

\begin{abstract}
<Text>
\end{abstract}

\keywords{<List keywords>}

\maketitle

\section{Introduction}
.
.
.

```

Figure 1. Example header text.

3. GETTING STARTED

The `nmeauth` class file should run on any standard $\text{\LaTeX} 2_{\epsilon}$ installation. If any of the fonts, style files or packages it requires are missing from your installation, they can be found on the *TeX Collection* DVDs or from CTAN.

International Journal for Numerical Methods in Engineering is published using Times fonts and this is achieved by using the `times` option as

```
\documentclass[times]{nmeauth}.
```

If for any reason you have a problem using Times you can easily resort to Computer Modern fonts by removing the `times` option.

4. THE ARTICLE HEADER INFORMATION

The heading for any file using `nmeauth.cls` is shown in Figure 1.

```

\begin{table}
\caption{<Table caption>}
\centering
\tabsize
\begin{tabular}{<table alignment>}
\toprule
<column headings>\\
\midrule
<table entries
(separated by & as usual)>\\
<table entries>\\
.
.
.\\
\bottomrule
\end{tabular}
\end{table}

```

Figure 2. Example table layout.

4.1. Remarks

- (i) In `\runningheads` use ‘*et al.*’ if there are three or more authors.
- (ii) Note the use of `\affil` and `\affilnum` to link names and addresses. The author for correspondence is marked by `\corrauth` and `\corraddr` is used to give that author’s address, which will be printed as a footnote, prefaced by ‘Correspondence to:’.
- (iii) For submitting a double-spaced manuscript, add `doublespace` as an option to the `documentclass` line.
- (iv) Use `\cgs` for giving details of financial sponsors; alternatively use `\cgsn` if the grant number is also to be included. These details will be printed as a footnote, with ‘Contract/grant sponsor:’ and ‘contract/grant number:’ inserted in the appropriate places.
- (v) The abstract should be capable of standing by itself, in the absence of the body of the article and of the bibliography. Therefore, it must not contain any reference citations.
- (vi) Keywords are separated by semicolons.

5. THE BODY OF THE ARTICLE

5.1. Mathematics

`nmeauth.cls` makes the full functionality of $\mathcal{A}_M\text{STEX}$ available. We encourage the use of the `align`, `gather` and `multline` environments for displayed mathematics. `amsthm` is used for setting theorem-like and proof environments. The usual `\newtheorem` command needs to be used to set up the environments for your particular document.

5.2. Figures and Tables

`nmeauth.cls` includes the `graphicx` package for handling figures.

Figures are called in as follows:

```

\begin{figure}
\centering
\includegraphics{<figure name>}
\caption{<Figure caption>}
\end{figure}

```

For further details on how to size figures, etc., with the `graphicx` package see, for example, [1] or [3]. If figures are available in an acceptable format (for example, .eps, .ps) they will be used but a printed version should always be provided.

The standard coding for a table is shown in Figure 2.

5.3. Cross-referencing

The use of the \LaTeX cross-reference system for figures, tables, equations, etc., is encouraged (using `\ref{<name>}` and `\label{<name>}`).

5.4. Acknowledgements

An Acknowledgements section is started with `\ack` or `\acks` for *Acknowledgement* or *Acknowledgements*, respectively. It must be placed just before the References.

5.5. Bibliography

The normal commands for producing the reference list are:

```
\begin{thebibliography}{99}
\bibitem{<x-ref label>}
    <Reference details>
.
.
.
\end{thebibliography}
```

where `\bibitem{x-ref label}` corresponds to `\cite{x-ref label}` in the body of the article and `{99}` is the widest such number expected and determines the width of the number column in the reference list.

Please note that the file `wileyj.bst` is available from the same download page for those authors using $\text{BIB}\TeX$.

5.6. Double Spacing

If you need to double space your document for submission please use the `doublespace` option as shown in the sample layout in Figure 1.

6. SUPPORT FOR NMEAUTH.CLS

We offer on-line support to participating authors. Please contact us via e-mail at nmeauth-cla@wiley.co.uk.

We would welcome any feedback, positive or otherwise, on your experiences of using `nmeauth.cls`.

7. COPYRIGHT STATEMENT

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www.sunrise-setting.co.uk

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