# The SVJour document class users guide supplement for
# *Theoretical and Computational Fluid Dynamics*

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## 1   Introduction

This document describes the *tcfd* option for the SVJour LaTeX $2_\varepsilon$ document class. For details on manuscript handling and the review process we refer to the *Instructions for authors* in the printed journal. For style matters please consult previous issues of the journal.

## 2   Initializing the class

As explained in the main *Users guide* you can begin a document for *Theoretical and Computational Fluid Dynamics* by including

```
\documentclass[tcfd]{svjour}
```

as the first line in your input file. The package provides for one additional option `[amsmath]` to call for the AMS-LaTeX package that provides miscellaneous enhancements for improving the information structure and printed output of documents that contain mathematical formulas (the sample file – however – can be compiled using the former version (v1.2) of the amsmath package only). All other options are also described in the main *User guide*.

## 3  Changes to the SVJour class standard

### Abstract

As the abstract of your article is to appear in the header section, it must be coded before the `\maketitle` command. Do not use the `\begin{abstract}` ... `\end{abstract}` environment of standard LaTeX. Instead proceed as you do for the other front matter declarations:

```
\abstract {⟨Text of your abstract⟩}
```

The standard key words are also part of the frontmatter please code them at the end but still inside the `\abstract{...}` area.

### Author and Institute

Author and address information is provided with:

```
\Author{⟨first author⟩}{⟨address of first author⟩}
```

```
\Author{⟨second author⟩}{⟨address of second author⟩}
```

For the running head of authors, it is necessary to enter the Author names with the following command:

```
\authorrunning{⟨first author and second author⟩}
```

or

```
\authorrunning{⟨first author, second author, and third author⟩}
```

In case of more than three authors:

```
\authorrunning{⟨first author et al.⟩}
```

The running head of `\title` is produced automatically by the `\maketitle` command using the contents of `\title`. If the result is too long for the page header the class will produce an error message and you will be asked to supply a shorter version. This is done using the syntax

```
\titlerunning{⟨shorter version⟩}
```

These commands must be entered before `\maketitle`.

### Figures

To center the caption of figures, insert the following command before the caption command:

```
\centercap
\caption{⟨text of caption⟩}
```

It will automatically center the caption.

# 4 Changed bibliographic environment for `natbib` usage

## Overview

The `natbib`[1] package is a reimplementation of the LaTeX `\cite` command, to work with author-year citations. It is compatible with the standard bibliographic style files, such as `plain.bst`, as well as ith those of `harvard, apalike, chicago, astron, authordate`, and of course `natbib`.

## Loading

A loading with `\usepackage[`*options*`]{natbib}` is not needed. All `natbib` options and citations styles are implemented for usage with the `tcfd`-option. The option `numbers` selects the numerical citations. You have to use this option in the following way:

```
\documentclass[tcfd,numbers]{svjour}
⋮
\begin{thebibliography}{99}
\bibitem{author} ...
\end{thebibliography}
```

## Basic commands

The `natbib` package has two basic citation commands, `\citet` and `\citep` for *textual* and *parenthetical* citations, respectively. All of these may take one or two optional arguments to add some text before and after the citation.

| | | |
|---|---|---|
| `\citet{jon90}` | ⇒ | Jones et al. (1990) |
| `\citet[chap.~2]{jon90}` | ⇒ | Jones et al. (1990, chap. 2) |
| `\citep{jon90}` | ⇒ | (Jones et al., 1990) |
| `\citep[chap.~2]{jon90}` | ⇒ | (Jones et al., 1990, chap. 2) |
| `\citep[see][]{jon90}` | ⇒ | (see Jones et al., 1990) |
| `\citep[see][chap.~2]{jon90}` | ⇒ | (see Jones et al., 1990, chap. 2) |

[1]Natbib coding copyright (C) 1993–1999 Patrick W. Daly. This file may be used for non-profit purposes. It may not be distributed in exchange for money, other than distribution costs.

### Multiple citations

Multiple citations may be made as usual, by including more than one citation
key in the `\cite` command argument.

```
\citet{jon90,jon91}    ⇒  Jones et al. (1990); James et al. (1991)
\citep{jon90,jam91}    ⇒  (Jones et al., 1990; James et al. 1991)
\citep{jon90,jon91}    ⇒  (Jones et al., 1990, 1991)
\citep{jon90a,jon90b}  ⇒  (Jones et al., 1990a,b)
```

### Bibliography

Use the `\bibitem` macro in the following way:

```
\bibitem[\protect\authyear{Jones \etal}{1990}]{jon90} {\bf Jones ...
\bibitem[\protect\authyear{Jones \etal}{1991}]{jon91} {\bf Jones ...
\bibitem[\protect\authyear{James \etal}{1991}]{jam91} {\bf James ...
```

## 5    Changes using Postscript fonts

The journal 'Theoretical and Computational Fluid Dynamics' is typeset using
the Postscript[2] Times fonts for the main text and math. As the use of PostScript
fonts results in different line and page breaks than when using Computer Modern
fonts, we encourage you to use our document class together with the psnfss
package times and if available the mathtime package. This packages does all
necessary font replacements to show you the page make-up as it will be printed.
Ask your local TeXpert for details. PostScript previewing is possible on most
systems. On some installations, however, on-screen previewing may be possible
only with CM fonts.

If, for technical reasons, you are not able to use the PS fonts, it is also possible
to use our document class together with the ordinary Computer Modern fonts.
Note, however, that in this case line and page breaks will change when we reTeX
your file with PS fonts, making it necessary for you to check them again once
you receive the proofs from the printer.

## 6    Notes

Again we strongly suggest to use the `\bibitem` - `\cite` as well as the `\label` -
`\ref` mechanism of LaTeX for your cross references throughout your document.

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[2]PostScript is a trademark of Adobe.

# 7 Installation

Following packages should be installed: `times`, `natbib`.