

Here is the Sample File for CMR

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Abstract. This is a Sample File showing the right templates for Communications in Mathematical Research Prepared in \LaTeX . Please read the instructions in the tex file very carefully including those preceded by % sign.

AMS subject classifications: xxxxx, xxxxx

Key words: xxxxxx, xxxxxx, xxxxxx, xxxxxx.

1 Introduction

Here are some important instructions on how to prepare your \LaTeX files for Communications in Mathematical Research.

1.1 Equations

Equations should be typewritten by using `equation`, `align`, `multline` environments.

This is a sample equation: $ax = c.$ (1.1)

Please **avoid the obsolete** `\eqnarray` environment, which has several bugs.

1.2 Numbered multi-line equations

Numbered multi-line equations can be written in the following form:

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Example 1.1.

$$v_h(x_A, y_A) = V_1(x_B, y_B), \quad (1.2)$$

$$v_h^+(x_D, y_D) = v_h^-(x_D, y_D). \quad (1.3)$$

Example 1.2.

$$u(t_{n+1}) = e^{\mathbf{L}h}u(t_n) + e^{t_n\mathbf{L}} \int_{t_n}^{t_n+h} e^{-\tau\mathbf{L}}\mathbf{N}(\tau, u(\tau))d\tau, \quad (1.4)$$

$$v(t_{n+1}) = e^{\mathbf{L}h}u(t_n) + \int_0^h e^{(h-\tau)\mathbf{L}}\mathbf{R}(t_n+\tau, u(t_n+\tau))d\tau.$$

Example 1.3.

$$u(t_{n+1}) = e^{\mathbf{L}h}u(t_n) + e^{t_n\mathbf{L}} \int_{t_n}^{t_n+h} e^{-\tau\mathbf{L}}\mathbf{N}(\tau, u(\tau))d\tau - e^{\mathbf{L}h}u(t_n) + \int_0^h e^{(h-\tau)\mathbf{L}}\mathbf{R}(t_n+\tau, u(t_n+\tau))d\tau. \quad (1.5)$$

Equations should be cited by using the `\eqref` command and the form `Eq. \eqref{testequation1}` or simply `\eqref{testequation1}`. In the text they appear as Eq. (1.1) or (1.1).

1.3 Non-numbered equations

For non-numbered equations, please use the commands `equation*`, `align*`, `multline*` rather than `$$` `$$` and `\[` `\]`.

1.4 Theorems, corollaries, lemmas, definitions

For theorem, lemma, proposition, corollary, definition, remark, example use predefined environment.

Definition 1.1. *A matrix A is called invertible if there exists a matrix B such that $AB = BA = E$, where E is the identity matrix.*

Lemma 1.1. *If $A \geq 2 - \epsilon$, then the Galerkin method is stable.*

Results from other sources can be written in the form

Theorem 1.1 (cf. Author & Co-Author [1]). *If $a \neq 0$, then the Eq. (1.1) has a unique solution.*

Proof. A special environment is predefined: the *proof* environment. Please use

```
\begin{proof}
```

```
proof of the statement
```

```
\end{proof}
```

for typesetting your proofs. □

1.5 Figures

Figures should be in a finished form suitable for publication in eps format. Lettering on drawings should be of professional quality or generated by high-resolution computer graphics and must be large enough to withstand appropriate reduction for publication. For example, if you use MATLAB to do figure plots, axis labels should be at least point 18. Title should be 24 points or above. Tick marks labels better have 14 points or above. Line width should be 2 (or above). Illustrations in colors will appear in black and white in printed version.

Insert a figure in the text closest to its to where it is first cited. Number figures consecutively with Arabic numerals according to its sequence in the text, e.g., Fig. 1, Fig. 2. The caption should be placed at the bottom of the figure.

Acknowledgments

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