# SAMPLE CONTRIBUTION TO THE PROCEEDINGS OF PANM 16 

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#### Abstract

This sample file serves as an illustration how to prepare a contribution to PANM 16 proceedings in $\mathrm{EAT}_{\mathrm{E}} \mathrm{X}$. The authors are kindly asked to follow this style when preparing their manuscripts.


## 1. Introduction

This document has been prepared using the provided panm.cls class file. The simplest and recommended way to prepare a contribution is to edit this sample.tex file.

To include figures, we recommend the command \includegraphics (from packages graphics, graphicx, or epsfig). See Figure 1 for an example.

This is a figure.

Figure 1: This figure was created in Linux by xfig.

When preparing graphics, please keep in mind that the proceedings will be printed in grayscale and scaled down to the size of A5 paper. Although colours may be used in the online version, your graphics should keep legibility when printed. For good results, the text appearing at graphics (description of axes in plots, etc.) should be comparable in size to the main text. Table 1 shows recommended formatting of tables.

| \#proc | 64 | 128 | 256 | 512 | 1024 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| case 1 |  |  |  |  |  |
| set-up (sec) | 61.0 | 37.7 | 25.7 | 23.2 | 39.5 |
| iter (sec) | 22.3 | 19.9 | 27.8 | 44.9 | 97.5 |
| case 2 |  |  |  |  |  |
| set-up (sec) | 49.5 | 29.0 | 18.4 | 12.6 | 11.0 |
| iter (sec) | 28.5 | 22.6 | 16.7 | 14.7 | 13.2 |

Table 1: Strong scaling for different cases.

Equations are included using the standard equation environment, e.g.

$$
\begin{equation*}
a+b=c . \tag{1}
\end{equation*}
$$

For series of equations, we recommend using eqnarray environment:

$$
\begin{align*}
& a \times b=c,  \tag{2}\\
& d-e=f \tag{3}
\end{align*}
$$

Command ( $\backslash$ ref $\}$ ) produces references to these equations in the text, such as (1), (2)-(3).

Mathematical lemmas and theorems have special environment, lemma and theorem, respectively. Examples are Lemma 1 and Theorem 2.

Lemma 1. The following statement is valid:

$$
\begin{equation*}
1+1=2 . \tag{4}
\end{equation*}
$$

Theorem 2 (Lax-Milgram). Let a bilinear form a $(\cdot, \cdot)$ satisfy $a(u, u) \geq \gamma\|u\|_{V}^{2}$ for all $u \in V$ (ellipticity) and $a(u, v) \leq \Gamma\|u\|_{V}\|v\|_{V}$ for all $u, v \in V$ (continuity). Let a linear functional $\ell(v) \leq \Lambda\|v\|_{V}$ for all $v \in V$ (continuity). Then there exists a unique $u \in V$ for which

$$
\begin{equation*}
a(u, v)=\ell(v) \text { for all } v \in V \text {. } \tag{5}
\end{equation*}
$$

The bibliographic sources are cited by the command \cite. Notice the recommended style of the bibliography - an article in proceedings [1], a book [2], a journal article [3], a Ph.D. thesis [4], and a technical report [5]. Bibliography is sorted alphabetically by surname of the first author and then by year of publication. Users of BibTEX can achieve this behaviour by using provided bibliography style panm.bst.

With $\mathrm{BibT}_{\mathrm{E}} \mathrm{X}$, the DVI output is produced as

1. latex sample
2. bibtex sample

## 3. latex sample <br> 4. latex sample

In this case, insert the final *.bbl file into the $*$.tex file before submission.

## Acknowledgements

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## References

[1] Babuška, I.: Courant element: before and after. In: M. Křížek, P. Neittaanmäki, and R. Stenberg (Eds.), Finite element methods, Lecture Notes in Pure and Appl. Math., vol. 164, pp. 37-51. Marcel Dekker, New York, 1994.
[2] Babuška, I. and Strouboulis, T.: The finite element method and its reliability. Oxford University Press, New York, 2001.
[3] Babuška, I., Szabó, B.A., and Actis, R.L.: Hierarchic models for laminated composites. Internat. J. Numer. Methods Engrg. 33 (1992), 503-535.
[4] Brezina, M.: Robust iterative methods on unstructured meshes. Ph.D. thesis, University of Colorado at Denver, 1997.
[5] Van Veldhuizen, D.A. and Lamont, G.B.: Multiobjective evolutionary algorithm research: A history and analysis. Tech. Rep. TR-98-03, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, 2001.

