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Latex Template for Advances in Systems Science and Applications

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Abstract: This instruction give you guidelines for preparing papers for ASSA publication. Please use this document as a template to prepare your manuscript for submission. Abstract size should be 150-200 words.

Keywords: assa template, latex, keywords

1. INTRODUCTION

The following template is used for preparing manuscripts for International Journal of Advances in Systems Science and Applications. Please, follow the instructions below.

2. FIGURES, EQUATIONS, AND TABLES

This section provides sample equations, figures, and tables.

2.1. Figures

ijassa.cls includes the graphicx package for handling figures. ijassa.cls supports graphic formats

`.jpg, .png, .gif`

This was produced by simply typing:

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

2.2. Tables

All tables must be centered and have a caption above them, numbered with Arabic numerals. See table 2.1 as an example.

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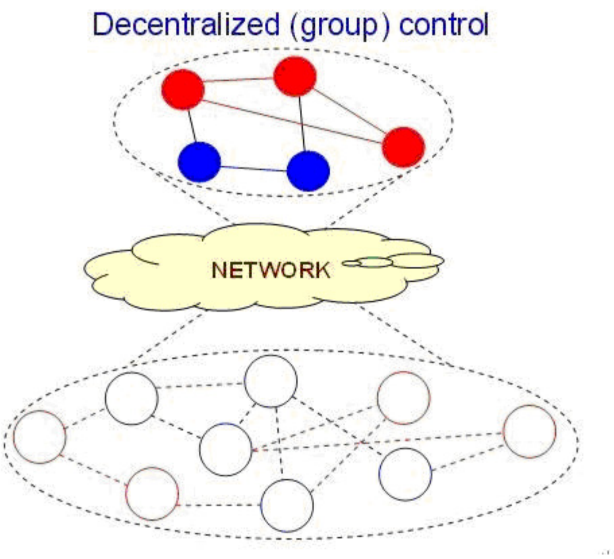

Fig. 2.1. Sample figure.

```
\begin{table}
\caption{The number of parameters}
\label{sampletable}
\centering
\tabsize
\begin{tabular}{|c|c|c|c|c|}
\hline
coefficient & b & h & m & total\\
\hline
numbers & 20 & 30 & 30 & 80 \\
\hline
\end{tabular}
\end{table}
```

Table 2.1. The number of parameters

coefficient	b	h	m	total
numbers	20	30	30	80

2.3. Equations

We consider a state-space differential equation of the form

$$\dot{x}(t) = A(t)x(t) + B(t)u(t), \quad (2.1)$$

$$y(t) = Cx(t), \quad (2.2)$$

where

$$A = \begin{bmatrix} 0 & 1 & 0 & \cdots & 0 \\ 0 & 0 & 1 & \cdots & 0 \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ -a_n & -a_{n-1} & -a_{n-2} & \cdots & -a_1 \end{bmatrix},$$

$$B = \begin{bmatrix} b_1 \\ b_2 \\ \vdots \\ b_n \end{bmatrix}, \quad C = [\, 1 \quad 0 \quad \cdots \quad 0 \,].$$

3. THEOREM-LIKE ENVIRONMENT

ijassa.cls provides predefined *proof* environment. For example,

Proof
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem. □

This was produced by simply typing:

```
\begin{proof}
More recent algorithms for solving the semidefinite programming
relaxation are particularly efficient, because they explore the
structure of the MAX-CUT problem.
\end{proof}
```

Other theorem-like environments (theorem, lemma, corollary, etc.) are defined in sample document. Also you can redefine your environment using command

```
\newtheorem{theorem}{Theorem}[section]
```

your .tex file before

```
\begin{document}
```

Theorem 3.1:
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.

Lemma 3.1:
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.

Corollary 3.1:
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAXCUT problem.

Proposition 3.1:
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAXCUT problem.

Definition 3.1:
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAXCUT problem.

Remark 3.1:
More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.

These were defined as shown in detail in the preamble of the gGENguide.tex file, and produced by typing, for example:

```
\begin{theorem}
More recent algorithms for solving the semidefinite programming
relaxation are particularly efficient, because they explore the
structure of the MAX-CUT problem.
\end{theorem}
```

4. CONCLUSION

Good luck!

ACKNOWLEDGEMENTS

Put here your acknowledgements and grant funding.

5. REFERENCE STYLE

References should be cited in the text in square brackets like [1], [2,4] and [2,4–6]. References should be listed at the end of the main text in the alphabetical order, with full page ranges (where appropriate) and issue numbers (for journals paginated by issue). We recommend using APA citation style in the references (http://blog.apastyle.org/). The following list shows some references prepared in the style of the journal. You are welcome to use BibTex or BibLaTex as well.

5.1. Books, book chapters and manual

5.1.1. Citing a book

Boyd, S., Ghaoui, L. E., Feron, E. & Balakrishnan, V. (1994) *Linear Matrix Inequalities in Systems and Control Theory*. Philadelphia, PA: SIAM Studies in Applied Mathematics.

5.1.2. Citing a non-English book
Non-Latin scripts should be transliterated into English alphabet.

Piaget, J. (1966). La psychologie de l'enfant [The psychology of the child]. Paris, France: Presses Universitaires de France, [in French].

Rozanov, Yu. A. (1985) *Teoria veroyatnostey, sluchainyie processy i matematicheskaya statistika* [Probability theory, random processes and mathematical statistics]. Moscow, USSR: Nauka, [in Russian].

5.1.3. Citing a chapter

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (1997). Motivated attention: Affect, activation, and action. In P. J. Lang, R. F. Simons, & M. Balaban (Eds.), *Attention and orienting: Sensory and motivational processes* (pp. 97–135). Mahwah, NJ: Erlbaum

5.2. Journal articles

Rusten, T. & Winther, R. (1992). A preconditioned iterative method for saddlepoint problems, *SIAM J. Matrix Anal. Appl.*, 13(3), 887–904.

Petersen, I. R. (1987). A stabilization algorithm for a class of uncertain linear systems, *Systems and Control Letters*, 8, 351–357.

Janzen, G., & Hawlik, M. (2005). Orientierung im Raum: Befunde zu Entscheidungspunkten [Orientation in space: Findings about decision points]. *Zeitschrift für Psychologie*, 213(4), 179–186, [in German], https://doi.org/10.1026/0044-3409.213.4.179

If a publication contains more than 5 authors, use et. al. after them:

Wunder, G., Jung, P., Kasparick, M., Wild, T., Schaich, F., et. al. (2014). 5GNOW: non-orthogonal, asynchronous waveforms for future mobile applications. *IEEE Communications Magazine*, 52(2), 97–105.

5.3. Conference proceedings

Bahl-Nielsen, B. (2006). Mirrors, body image, and self. *Proc. of the 6th Delphi Int. Symp.* San Diego, CA, 87–94.

Or as a periodical (if published regularly):

Yung C.F., Wang C.C., Wu P.F. & Wang Y.S. (2008). Bounded real lemma for linear discrete-time descriptor systems. *IFAC Proceedings Volumes*, 41(2), 9982–9986 https://doi.org/10.3182/20080706-5-KR-1001.00004.

5.4. Online sources

5.4.1. A document

United States Environmental Protection Agency. (2004, July). *Drinking water standards*. [Online]. Available http://water.epa.gov/drink

5.4.2. Blog entry or website page

Mayer, C. (2007, January 10). *Stamps to become marketing vehicle*. [Online]. Available http://www.washingtonpost.com/wp-dyn/content/article/2006/05/23/AR2006052301593.html

5.4.3. Preprint

Charina, M. & Protasov, V. Yu. (2016) Smoothness of anisotropic wavelets, frames and subdivision schemes. *arXiv:* 1702.00269, [Online]. Available: https://arxiv.org/abs/1702.00269

5.5. A thesis

Tellado, J., & Cioffi, J. M. (1999). PAPR Reduction in multicarrier transmission system.*Ph.D. Thesis*, Stanford University.

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4. Boyd, S., Ghaoui, L.E., Feron, E. & Balakrishnan, V. (1994) *Linear Matrix Inequalities in Systems and Control Theory.* Philadelphia, PA: SIAM Studies in Applied Mathematics.
5. Lofberg, J. (2004) YALMIP : A toolbox for modeling and optimization in MATLAB. *Proc. IEEE Int. Symp. Comput. Aided Control Syst. Des.*, Munich, Germany, 284–289.
6. Pytlalk, R., Mohideen, M.J., & Pistikopoulos, E.N. (1996) Numerical procedure for optimal control of differential-algebraic equations. *Proc. Computational Engineering in Systems Applications*, Lille, France, 398–402.