# OF PAPER 

FIRST AUTHOR ${ }^{1}$, SECOND AUTHOR ${ }^{1}$ AND THIRD AUTHOR ${ }^{2 *}$

Abstract. The journal is an author-prepared journal which means that authors are responsible for the proper formatting of accepted manuscripts by using the style file of the journal. The journal does not consider any more submission of (co)authors while one of their papers is still under review by the journal.

## 1. Introduction and preliminaries

Here you should state the introduction, preliminaries and your notation. Authors are required to state clearly the contribution of the paper and its significance in the introduction. There should be some survey of relevant literature.
1.1. Instructions for author(s). Manuscripts should be typeset in English with double spacing by using AMS-LaTex. The authors are encouraged to use the journal style file that has been developed for LaTeX2e standard and can be found at the website of the journa.

While you are preparing your paper, please take care of the following:
(1) Abstract: 200 words or less with no reference number therein.
(2) MSC2010: Primary only one item; and Secondary at least one item (We need at least one in MSC43, MSC46 or MSC47).
(3) Key words: At least 3 items and at most 5 items.
(4) Authors: Full names, mailing addresses and emails of all authors.
(5) Each Theorem, Proposition, Corollary, Lemma, Definition, Example, etc should be typeset in its respective environment such as $\backslash$ begin $\{$ theorem $\} \ldots \backslash$ end $\{$ theorem $\}$ and so on.
(6) Margins: A long formula should be broken into two or more lines. Empty spaces in the text should be removed.
(7) Tags (Formula Numbers): Equations and numbered items referred to in the text must be labeled by $\backslash \operatorname{label}\{A\}$. References to them must be typeset by using $\backslash e q r e f\{A\}$. Remove unused tags. Manual numbering of

Date: Received: xxxxxx; Revised: yyyyyy; Accepted: zzzzzz.

* Corresponding author.

2010 Mathematics Subject Classification. Primary 39B82; Secondary 44B20, 46C05.
Key words and phrases. Convexity, stability, functional equation, Hahn-Banach theorem.
equations or sections must be avoided.
(8) Acknowledgement: At the end of paper but preceding to References.
(9) References: Use $\backslash \operatorname{cite}\{M M\}$ to refer to the specific book/paper [3] (with $\backslash$ bibitem $\{M M\}$ ) in the text. Remove unused references. References should be listed in the alphabetical order according to the surnames of the first author at the end of the paper and should be cited in the text as, e.g., [2] or [2, Theorem 4.2], etc.
(10) Abbreviations: Abbreviations of titles of periodicals/books should be given by using Math. Reviews, see Abbreviations of names of serials or MRLookup.

## 2. Main Results

The following is an example of a definition.
Definition 2.1. Let $\mathcal{X}$ be a real or complex linear space. A mapping $\|\cdot\|: \mathcal{X} \rightarrow$ $[0, \infty)$ is called a 2 -norm on $\mathcal{X}$ if it satisfies the following conditions:
(1) $\|x\|=0 \Leftrightarrow x=0$,
(2) $\|\lambda x\|=\|\lambda\|\|x\|$ for all $x \in \mathcal{X}$ and all scalar $\lambda$,
(3) $\|x+y\|^{2} \leq 2\left(\|x\|^{2}+\|y\|^{2}\right)$ for all $x, y \in \mathcal{X}$.

Here is an example of a table.
Table 1.

| 1 | 2 | 3 |
| :---: | :---: | :---: |
| $f(x)$ | $g(x)$ | $h(x)$ |
| $a$ | $b$ | $c$ |

This is an example of a matrix

$$
\left[\begin{array}{cc}
1 & -2 \\
3 & 5
\end{array}\right]
$$

The following is an example of an example.
Example 2.2. Let $\theta: \mathcal{A} \rightarrow \mathcal{A}$ be a homomorphism. Define $\varphi: \mathcal{A} \rightarrow \mathcal{A}$ by $\varphi(a)=a_{0} \theta(a)$. Then we have

$$
\begin{align*}
\varphi\left(a_{1} \ldots a_{n}\right) & =a_{0} \theta\left(a_{1} \ldots a_{n}\right) \\
& =\varphi\left(a_{1}\right) \ldots \varphi\left(a_{n}\right) \tag{2.1}
\end{align*}
$$

Hence $\varphi$ is an $n$-homomorphism.
The following is an example of a theorem and a proof. Please note how to refer to a formula.

Theorem 2.3. If $\mathbf{B}$ is an open ball of a real inner product space $\mathcal{X}$ of dimension greater than $1, \mathcal{Y}$ is a real sequentially complete linear topological space, and $f: \mathbf{B} \backslash\{0\} \rightarrow \mathcal{Y}$ is orthogonally generalized Jensen mapping with parameters $s=t>\frac{1}{\sqrt{2}} r$, then there exist additive mappings $T: \mathcal{X} \rightarrow \mathcal{Y}$ and $b: \mathbb{R}_{+} \rightarrow \mathcal{Y}$ such that $f(x)=T(x)+b\left(\|x\|^{2}\right)$ for all $x \in \mathbf{B} \backslash\{0\}$.
Proof. First note that if $f$ is a generalized Jensen mapping with parameters $t=$ $s \geq r$, then

$$
\begin{align*}
f(\lambda(x+y)) & =\lambda f(x)+\lambda f(y) \\
& \leq \lambda(f(x)+f(y)) \\
& =f(x)+f(y) \tag{2.2}
\end{align*}
$$

for some $\lambda \geq 1$ and all $x, y \in \mathbf{B} \backslash\{0\}$ such that $x \perp y$. Now the result can be deduced from (2.2).

The following is an example of a remark.
Remark 2.4. One can easily conclude that $g$ is continuous by using Theorem 2.3.
Again, note how we refer to Theorem 2.3 and formula (2.1).
Acknowledgement. Acknowledgements could be placed at the end of the text but precede the references.

## References

1. U. Haagerup, Solution of the similarity problem for cylic representations of $C^{*}$-algebras, Ann. of Math. (2) 118 (1983), no. 2, 215-240.
2. G.J. Murphy, $C^{*}$-Algebras and Operator Theory, Academic Press, Boston, 1990.
3. M. Mirzavaziri and M.S. Moslehian, Automatic continuity of $\sigma$-derivations in $C^{*}$-algebras, Proc. Amer. Math. Soc. 134 (2006), no. 11, 3319-3327.
4. M.S. Moslehian, Ky Fan inequalities, Linear Multilinear Algebra, arXiv:1108.1467v2 (to appear).
5. Th.M. Rassias, Stability of the generalized orthogonality functional equation, Inner product spaces and applications, 219-240, Pitman Res. Notes Math. Ser., 376, Longman, Harlow, 1997.
6. J.P. Vial, Strong convexity of set and functions, J. Math. Econom 9 (1982), no. 1-2, 187-205.

1 Department of Mathematics, University of AAAA, BBBB 654321, CCCC, India.

E-mail address: first1@afa.ac.ir; first2@afa.ac.ir
2 Department of Pure Mathematics, Ferdowsi University of Mashhad, P. O. Box 1159, Mashhad 91775, Iran;
Tusi Mathematical Research Group (TMRG), Mashhad, Iran.
E-mail address: second@afa.ac.ir

