TEMPLATE FOR THE PROCEEDINGS OF ICTAA 2018

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ABSTRACT. Here we give the example of the paper style file for the Proceedings.

1. INTRODUCTION

Please follow the example given here for Your file for Proceedings. I will put as an example some results from the paper from the Proceedings of ICTAA 2013.

Definition 1. *This is the* **template file**.

2. RESULTS ABOUT COMPACT AND PRECOMPACT ELEMENTS

We start with a generalization of Lemma 4.2 from [2], p. 724.

Lemma 1. *Let A be a topological group (in particular, a topological ring or a topological algebra). Then the set $P(A)$ is closed in $L(A)$.*

Proof. Let $T \in L(A)$ be an arbitrary map from the closure of $P(A)$ in the *topology of bounded convergence* in $L(A)$. Then there exist a directed set Λ and a net $(T_\lambda)_{\lambda \in \Lambda}$ of maps from $P(A)$ converging to a map T. We have to show that $T \in P(A)$. Take any neighbourhood O of zero in A and a bounded subset B of A. Since the addition is continuous in A, then there exists a symmmetric neighbourhood U of zero (i.e., for every $u \in U$ also $-u \in U$) in A such that $U + U \subset O$. As $(T_\lambda)_{\lambda \in \Lambda}$ converges to T, there exists $\lambda_U \in \Lambda$ such that $T_\lambda(B) - T(B) \subset U$ for every $\lambda > \lambda_U$. Fix $\lambda_0 \in \Lambda$ such that $\lambda_0 > \lambda_U$. Since U is symmetric, then also $T(B) - T_{\lambda_0}(B) \subset U$. As T_{λ_0} is precompact, there exists a finite set M such that $T_{\lambda_0}(B) \subset M + U$. Hence,

$$T(B) \subset T_{\lambda_0}(B) + U \subset M + U + U \subset M + O.$$

Therefore, T is also a precompact map and the set $P(A)$ is closed in $L(A)$. $\qquad\square$

Although we did not cited all of the references in this template file, I will include the references so that You can see how the references should be presented.

References

[1] A. Ansari-Piri, A. Zohri, *Banach precompact elements of a complete metrizable topological algebra.* Far East J. Math. Sci. (FJMS) 32 (2009), no. 3, 329-333.

[2] U. N. Bassey, V. A. Babalola, *Factoring compact elements of Banach algebras.* Far East J. Math. Sci. (FJMS) **27** (2007), no. 3, 717-728.

[3] J. L. Kelley, I. Namioka, *Linear topological spaces.* D. Van Nostrand Co., Inc., Princeton, N. J., 1963.

[4] B. M. Ramadisha, V. A. Babalola, *Some results about Banach compact algebras.* Kragujevac J. Math. **26** (2004), 123-128.

[5] B. M. Ramadisha, V. A. Babalola, *Banach precompact elements of a locally M-convex B_0-algebra.* Kragujevac J. Math. **26** (2004), 129-132.

[6] B. M. Ramadisha, V. A. Babalola, *Some results about Banach precompact elements of locally convex algebras.* Far East J. Math. Sci. (FJMS) **13** (2004), no. 3, 383-386.

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