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TITLE OF PAPER

FIRST AUTHOR[1] and SECOND AUTHOR[2*]

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1. Introduction and preliminaries

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bibliography. References should be listed in the alphabetical order according to the surnames of the first author at the end of the paper using the APA style. Each reference must have the DOI. References should be cited in the text as, e.g., [2] or [3, Theorem 4.2], etc.

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2. Main results

Here is an example of a definition.

Definition 2.1. Let A be a C^*-algebra. A mapping $\phi : A \to \mathbb{C}$ is called a positive linear functional on A if it satisfies the following conditions:

(1) $\phi(\alpha x + \beta y) = \alpha\phi(x) + \beta\phi(y)$ for all $\lambda, \beta \in \mathbb{C}$ and $x, y \in A$.
(2) $\phi(x) \geq 0$ for all $a \geq 0$ in A.

Here is an example of a table.

Table 1.

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

Here is an example of a matrix.

$$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$$

Here is an example.

Example 2.2. Let A be the C^*-algebra of $n \times n$ complex matrices. Define $Tr : A \to \mathbb{C}$ to be the canonical trace of a matrix. Then we have

$$Tr(\alpha x + \beta y) = \alpha Tr(x) + \beta Tr(y). \tag{2.1}$$

for all $\lambda, \beta \in \mathbb{C}$ and $x, y \in A$. It follows that Tr is linear functional on A.

The following is an example of a theorem and a proof. Please note how to refer to a formula.

Theorem 2.3. *Let G be a finite group acting on a second countable compact Hausdorff space X. Suppose that μ is a finite Borel measure on X. Then the induced bimodule $\mathcal{H}_\mu \times \mathcal{H}_\mu$ has almost central unit vectors.*

Proof. Since f is uniformly continuous on X there exists $\delta > 0$ such that $|f(x) - f(y)| < \epsilon$ for all $x, y \in X$ with $d(x, y) < \delta$. It follows that

$$\begin{aligned}|f(xr) - f(yr)| &= |f(xr) - f(yr)| \\ &= |f(xr) - f(yr)| \\ &< \epsilon \end{aligned} \tag{2.2}$$

for all $x, y \in E_n$, $r \in G$, $n > \frac{2}{\delta}$. Let $\triangle = \{(s,s) : s \in G\}$ be the diagonal of $G \times G$. It follows from Equation (2.2) that $||\pi(f)U(r)\zeta_n - \zeta_n\pi(f)U(r)|| \to 0$ for all $f \in C(X)$, $r \in G$. □

The following is an example of a remark.

Remark 2.4. The purpose of this remark is to refer to the Theorem 2.3. We also want to [3, 4].

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. Bekka, B. (2006). Property (T) for C*-algebras. Bulletin of the London Mathematical Society, 38(5), 857-867. https://doi.org/10.1112/S0024609306018765
2. Bekka, B., de La Harpe, P., & Valette, A. (2008). Kazhdan's property (T). Cambridge university press. https://doi.org/10.1017/CBO9780511542749
3. Brown, N. P. (2006). Kazhdan's property T and C*-algebras. Journal of Functional Analysis, 240(1), 290-296. https://doi.org/10.1016/j.jfa.2006.05.003
4. Connes, A., & Jones, V. (1985). Property T for von Neumann algebras. Bulletin of the London Mathematical Society, 17(1), 57-62. https://doi.org/10.1112/blms/17.1.57
5. Green, P. (1978). The local structure of twisted covariance algebras. Acta Mathematica, 140, 191-250. https://doi.org/10.1007/BF02392308
6. Kazhdan, D. A. (1967). Connection of the dual space of a group with the structure of its close subgroups. Funktsional'nyi Analiz i ego Prilozheniya, 1(1), 71-74. https://doi.org/10.1007/BF01075866
7. Leung, C. W., & Ng, C. K. (2009). Property (T) and strong property (T) for unital C*-algebras. Journal of Functional Analysis, 256(9), 3055-3070. https://doi.org/10.1016/j.jfa.2009.01.004

[1] Department of Mathematics, University of Gulf, Dubai, UAE.
Email address: first@gjom.org

[2] Department of Statistics, University of Abu Dhabi, PO Box 881155, Abu Dhabi, UAE
Email address: second@gjom.org