

## TITLE OF PAPER

FIRST AUTHOR<sup>1</sup> AND SECOND AUTHOR<sup>2\*</sup>

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*Keywords.* Analysis, PDEs, machine learning, cybernetics

*2020 Mathematics Subject Classification.* Primary 46L55; Secondary 44B20

### 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.

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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  $\phi : A \rightarrow \mathbb{C}$  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  $Tr : A \rightarrow \mathbb{C}$  to be the canonical trace of a matrix. Then we have

$$Tr(\alpha x + \beta y) = \alpha Tr(x) + \beta Tr(y). \quad (2.1)$$

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  $\mu$  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  $\Delta = \{(s, s) : s \in G\}$  be the diagonal of  $G \times G$ . It follows from Equation (2.2) that  $\|\pi(f)U(r)\zeta_n - \zeta_n\pi(f)U(r)\| \rightarrow 0$  for all  $f \in C(X)$ ,  $r \in G$ .  $\square$

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.

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