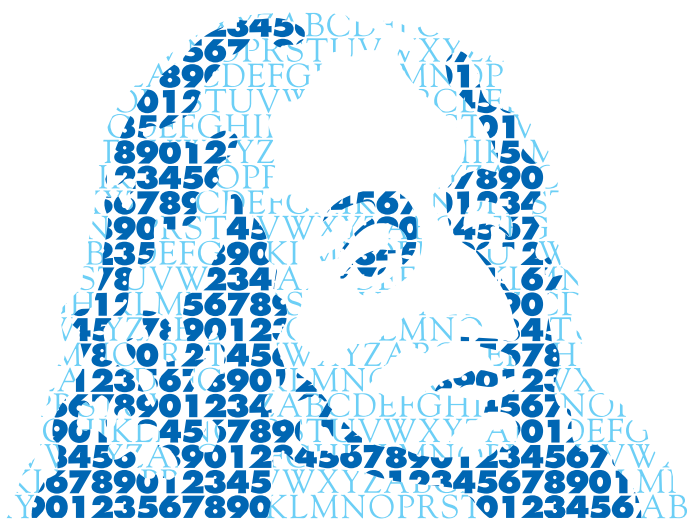


# ANNALES MATHÉMATIQUES



## BLAISE PASCAL

TOKA DIAGANA

**Erratum to: “Towards a theory of some unbounded linear operators on  $p$ -adic Hilbert spaces and applications”**

Volume 13, n° 1 (2006), p. 207-208.

[http://ambp.cedram.org/item?id=AMBP\\_2006\\_\\_13\\_1\\_207\\_0](http://ambp.cedram.org/item?id=AMBP_2006__13_1_207_0)

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## Erratum to: “Towards a theory of some unbounded linear operators on $p$ -adic Hilbert spaces and applications”

TOKA DIAGANA

In the paper “Towards a theory of some unbounded linear operators on  $p$ -adic Hilbert spaces and applications” [*Ann. Math. Blaise Pascal* **12** (2005), no. 1, 205-222; MR2126449] by T. Diagana, one needs to remove the four lines prior to **Definition 2.1**, p. 209, that is:

“Let  $D \subset \mathbb{E}_\omega$  be a subspace and let  $A : D \subset \mathbb{E}_\omega \mapsto \mathbb{E}_\varpi$  be a linear transformation. As for bounded operator one can decompose  $A$  as a pointwise convergent series defined by:

$$A = \sum_{i,j} a_{i,j} e'_j \otimes h_i \quad \text{and, } \forall j \in \mathbb{N}, \lim_{i \rightarrow \infty} |a_{i,j}| \|h_i\| = 0.”$$

Moreover, the following should be added in line 3 from the bottom of page 209:

“domain  $D(A)$  contains the basis  $(e_i)_{i \in \mathbb{N}}$  and consists of all  $u = (u_i)_{i \in \mathbb{N}} \in \mathbb{E}_\omega$  such that  $Au = \sum_{i \in \mathbb{N}} u_i A e_i$  converges in  $\mathbb{E}_\varpi$ , that is,”

In addition to the above, in the Proof of **Theorem 5.1**, the lines 9 and 10 from the bottom of page 217, that is:

“Now from the assumption  $\|I - A\| < 1 \dots$  hence  $\|x\| = \|Ax\| = \|y\|$ ,”

should be replaced by the following:

“Now, from the assumption  $\|I - A\| < 1$ , one deduces that the operator  $A$  and its inverse  $A^{-1} = \sum_{n \geq 0} (I - A)^n$  are such that  $\|A\| = 1 = \|A^{-1}\|$ . It follows that  $A$  and  $A^{-1}$  are isometric maps, and hence  $\|x\| = \|Ax\| = \|y\|$ .”

T. DIAGANA

**Acknowledgement.** The author wants to express his thanks to Professors Bertin Diarra and Eberhard Mayerhofer for pointing out these corrections.

## References

- [1] T. DIAGANA – Towards a theory of some unbounded linear operators on  $p$ -adic Hilbert spaces and applications, *Ann. Math. Blaise Pascal* **12** (2005), no. 1, p. 205–222.

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