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>

Publication éditée par les laboratoires de mathématiques
de l'université Blaise-Pascal, UMR 6620 du CNRS
Clermont-Ferrand — France

cedram

Article mis en ligne dans le cadre du
Centre de diffusion des revues académiques de mathématiques
http://www.cedram.org/

Annales mathématiques Blaise Pascal **13**, 207-208 (2006)

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:

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

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 $\|I - A\| < 1$ ... 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 $\|x\| = \|Ax\| = \|y\|$."

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.

Toka Diagana
Department of Mathematics
Howard University
2441 6th Street N.W.
Washington, D.C. 20059
USA
tdiagana@howard.edu