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***Representation of bilinear forms in non-Archimedean Hilbert space by linear operators***

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**Abstract:** The paper considers representing symmetric, non-degenerate, bilinear forms on some non-Archimedean Hilbert spaces by linear operators. Namely, upon making some assumptions it will be shown that if  $\phi$  is a symmetric, non-degenerate bilinear form on a non-Archimedean Hilbert space, then  $\phi$  is representable by a unique self-adjoint (possibly unbounded) operator  $A$ .

**Keywords:** non-Archimedean Hilbert space, non-Archimedean bilinear form, unbounded operator, unbounded bilinear form, bounded bilinear form, self-adjoint operator

**AMS Subject Classification:** 47S10, 46S10