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Toka Diagana* (tdiagana@howard.edu), Department of Mathematics, Howard University, 2441 6th Street NW, Washington, DC 20059. *Linear Operators on Some Fractional p-adic Hilbert Spaces*. Preliminary report.

One of the most substantial questions arising in p-adic functional analysis consists of providing with a unified theory of the so-called p-adic Hilbert spaces as well as their classifications, as it had been done in the classical setting. This talk introduces a new p-adic Hilbert space called fractional p-adic Hilbert space, which generalizes in a natural fashion the p-adic Hilbert space due to Khrennikov. Next, linear operators on those new p-adic Hilbert spaces are discussed. (Received September 16, 2007)