What should continuous algebraic K-theory be?

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Abstract: There are several considerations that can lead one to be interested in the algebraic K-theory of topological rings such as the real numbers and the p-adic numbers. However, the algebraic K-groups of these rings exhibit some "pathologies" due to the fact that algebraic K-theory ignores the natural topology on the ring. I will propose a theory which retains only the "continuous" information. This theory is expected to be calculable and reasonably finite (at least in simple cases such as the reals and p-adics), as well as to exhibit strong ties to other mathematical objects, e.g. mixed hodge structures.