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La Jolla, CA 92093. *II<sub>1</sub> factors with non-isomorphic ultrapowers.*

In this talk we will show that there exist uncountably many separable II<sub>1</sub> factors whose ultrapowers (with respect to arbitrary ultrafilters) are non-isomorphic. In fact, it will be proved that the families of non-isomorphic II<sub>1</sub> factors originally introduced by Dusa McDuff in the late sixties are such examples. This entails the existence of a continuum of non-elementarily equivalent II<sub>1</sub> factors, thus settling a well-known open problem in the continuous model theory of operator algebras. This is based on joint work with Remi Boutonnet and Adrian Ioana. (Received September 10, 2015)