

Mathematics Department Colloquium

Organizer: John Strain

Thursday, 4:10–5:00pm, 60 Evans

Sep 7 **Ted Slaman**, UC Berkeley

Effective Randomness and Continuous Measures

We consider the following question. For a given infinite binary sequence X , under what conditions does there exist a continuous measure μ such that X is effectively random for μ ? When there is no such μ , we say that X is never continuously random.

We will review the treatment of effective randomness and give several conditions on X which are equivalent to there existing such a μ . We will then discuss two recent developments. Informally, the first states that there are only countably many X 's which are never continuously random. The second states that the proof that there are only countably many X 's which are never continuously random makes necessary use of infinitely many iterates of the power set of the reals.

This is joint work with Jan Reimann, who is visiting Berkeley this year from Heidelberg.