Mathematics, Statistics, and Computer Science **@ UIC**

Logic Seminar

Time change equivalence of multidimensional Borel flows.

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Abstract: A time change equivalence between free Borel $\mathbb{R}^n$-flows is defined to be an orbit equivalence which is also a homeomorphism when restricted onto any orbit. This notion appeared first in the set up of ergodic theory, when flows and orbit equivalence maps are required to preserve given probability measures, and all constructions are defined up to null sets. It is known that in this case there are continuumly many pairwise non equivalent ergodic $\mathbb{R}$-flows, but, surprisingly, Rudolph showed that any two free ergodic $\mathbb{R}^n$-flows, $n \geq 2$, are time change equivalent.

In the context of Borel dynamics, Miller and Rosendal proved that all $\mathbb{R}$-flows are time change equivalent. They also posed a question of whether Rudolph's theorem is true in the Borel framework. We shall discuss a partial result in this direction, which shows that all free $\mathbb{R}^n$-flows are time change equivalent up to a compressible set.

Tuesday, September 13 at 4:00 PM in SEO 427