1102-46-184 **Thomas Sinclair*** (thomas.sinclair@math.ucla.edu) and **Isaac Goldbring**. *Existentially closed C*-algebras.*

A C*-algebra $A$ is said to be existentially closed if, roughly, every set of equations involving norms of noncommutative $*$-polynomials which has a solution in B(H) has a sequence of approximate solutions in $A$. A basic result in continuous logic shows that every separable C*-algebra is contained in a separable, existentially closed C*-algebra. In this talk I will survey some basic properties of existentially closed C*-algebras. In particular I will describe how existential closure is connected to several open problems in C*-algebras such as Kirchberg's problem on whether every separable C*-algebra embeds in an ultrapower of the Cuntz algebra $\mathcal{O}_2$, as well as Kirchberg's C*-algebraic reformulation of of Connes' embedding problem. No knowledge of continuous logic will be assumed. This talk is based on joint work with Isaac Goldbring. (Received July 28, 2014)