1041-19-125 **Hyun Jeong Kim*** (hjkim@math.uvic.ca), Mathematics and Statistics, University of Victoria, PO BOX 3060 STN CSC, Victoria, BC. *KK-theoretic Poincaré duality and fixed point theorem.*

In this talk, I will speak about KK-theoretic Poincaré duality and prove a duality of a continuous trace algebra with a discrete group action where the action is proper and cocompact on the spectrum of the algebra. In addition, I will apply a fixed point theorem to the special case of the duality above, that is, the case of the crossed product C^*-algebra $C_0(X) \rtimes G$, and express the Lefschetz number in terms of fixed orbits and representation theoretic data using index theory. (Received August 08, 2008)