1113-46-197 **Valentin Deaconu*** (vdeaconu@unr.edu), Department of Math & Stat, University of Nevada, Reno, NV 89557. *Groupoid actions on graphs and C^*-correspondences.* Preliminary report.

Let the groupoid G act on a C^*-correspondence $\mathcal{H}$ over the C^*-algebra A. By the universal property G acts on the Cuntz-Pimsner algebra $\mathcal{O}_{\mathcal{H}}$ which becomes a $C_0(G^0)$-algebra. We study the crossed product $\mathcal{O}_{\mathcal{H}} \rtimes G$ and the fixed point algebra $\mathcal{O}_{\mathcal{H}}^G$. Using intertwiners, we define the Doplicher-Roberts algebra $\mathcal{O}_\rho$ of a representation ρ of a groupoid G on $\mathcal{H}$ and prove that under certain conditions $\mathcal{O}_{\mathcal{H}}^G$ is isomorphic to $\mathcal{O}_\rho$.

Suppose G has finite unit space and finite isotropy. If G acts on a discrete and locally finite graph E, we prove that the crossed product $C^*(E) \rtimes G$ is isomorphic to the C^*-algebra of a graph of C^*-correspondences and stably isomorphic to a locally finite graph algebra. We illustrate with some examples. (Received August 21, 2015)