William W Menasco* (menasco@buffalo.edu) and Dan Margalit. Distance and intersection number in the curve complex. Preliminary report.

Let $S_g$ be a closed oriented surface of genus $g \geq 2$ and $\mathcal{C}^1(S_g)$ be its curve complex—vertices are homotopy classes of essential simple closed curves with two vertices sharing an edge if they have disjoint representatives. It is known that $\mathcal{C}^1(S_g)$ is path connected, and the distance, $d(\alpha, \beta)$, between two vertices $\alpha, \beta \in \mathcal{C}^1(S)$ is just the minimal count of the number of edges in an edge-path between $\alpha$ and $\beta$. One can also consider, $i(\alpha, \beta)$, the minimal intersection between curve representatives of $\alpha$ and $\beta$. This talk will discuss the interplay between the growth of $i(\alpha, \beta)$ and $d(\alpha, \beta)$ grows. This is joint work with Dan Margalit and, additionally, features joint work with Joan Birman and Dan Margalit. (Received January 10, 2019)