1137-35-64 **Koushik Ramachandran*** (koushik.math@gmail.com). *Convexity of level lines of Martin functions and some applications.*

Let Ω be an unbounded domain in $\mathbb{R} \times \mathbb{R}^d$. A positive harmonic function u on Ω that vanishes on the boundary of Ω is called a Martin function. In this talk, we will show that, when Ω is convex, the superlevel sets of a Martin function are also convex. As a consequence we obtain that if in addition Ω has certain symmetry with respect to the t-axis, and $\partial\Omega$ is sufficiently flat, then the maximum of any Martin function along a slice $\Omega \cap (\{t\} \times \mathbb{R}^d)$ is attained at $(t, 0)$. Based on joint work with J. Lebl and A.-K. Gallagher. (Received January 23, 2018)