1151-60-124 **Michael Damron**, **Jack Hanson** and **Wai-Kit Lam*** (wlam@umn.edu). *Universality for the time constant in 2D critical first-passage percolation.*

We consider first-passage percolation (FPP) on the triangular lattice with vertex weights whose common distribution function F satisfies $F(0) = 1/2$. This is known as the critical case of FPP because large (critical) zero-weight clusters allow travel between distant points in time which is sublinear in the distance. Denoting by $T(0, \partial B(n))$ the first-passage time from 0 to the boundary of the box of side length $2n$. We show existence of the "time constant" and find its exact value to be $\lim T(0, \partial B(n))/\log n = I/(2\sqrt{3}\pi)$ almost surely, where $I = \inf\{x > 0 : F(x) > 1/2\}$. This result shows that the time constant is universal and depends only on the value of I. Furthermore, we find the exact value of the limiting normalized variance, which is also only a function of I, under the optimal moment condition on F. Joint work with Michael Damron and Jack Hanson. (Received August 13, 2019)