

"I was trying to daydream, but my mind kept wandering." – Steven Wright

The Trivial Notions Seminar
Proudly Announces

No Wandering Domains

A talk by
Omar Antolin Camarena

Abstract

If you're looking to iterate a rational map on the Riemann sphere and figure out what happens to each point, the first distinction you make is between the Fatou set, consisting of points that have the same fate as nearby points, and the Julia set where what happens is wild (and of which you've most likely seen pretty pictures). Each connected component of the Fatou set is mapped onto another one and you can ask about the trajectories of the components. Dennis Sullivan proved a remarkable conjecture of Fatou's that says that every component of the Fatou set eventually falls into a cycle of components, or in slogan form: the Fatou set has no wandering domains. I will sketch Sullivan's proof (with some later simplifications by Baker and McMullen), which uses a wandering domain to construct an infinite dimensional space of deformations of the rational map.

Thursday September 20th, at 1:30 pm
Science Center 507