THE DYNAMICS OF PARABOLIC TRANSCENDENTAL ENTIRE MAPS

MASHAEL ALHAMD, UNIVERSITY OF LIVERPOOL

In the dynamics of polynomials, it is interesting to ask whether the Julia set is locally connected or not since it implies complete description of the topological dynamics. For transcendental entire maps, local connectivity of Julia sets does not have the same implications as in the polynomials case. For example, the Julia set might be the entire complex plane, in which case it is trivially locally connected with no implications for the dynamics. However, analogous results have been shown by Rempe-Gillen and Mihaljevic-Brandt for hyperbolic and subhyperbolic transcendental entire maps.

I will talk about the behavior near a *parabolic* point of a transcendental function f. Then I will give a definition of the *parabolic transcendental* functions, and I will show our extension of the results above to the setting of parabolic transcendental entire functions.