1147-37-819   **Mikhail Hlushchanka*** (`m.hlushchanka@math.ucla.edu`) and **Daniel Meyer**
(`daniel.meyer@liverpool.ac.uk`). *Tiling approach to the study of iterated monodromy groups.*

I will talk about connections between dynamical systems, geometry, and algebra which are induced by an algebraic object, called iterated monodromy group (IMG). IMG is a self-similar group associated to every branched covering map of the 2-sphere (in particularly to every rational map). It was first introduced by Nekrashevych and it encodes combinatorial information about the map and its dynamics in a computationally efficient way.

It was observed that even very simple maps generate IMGs with complicated structure and exotic properties (such as intermediate growth). However, we still face a lack of general theory that would unify and explain these nice examples. I will discuss the tiling approach to the study of the properties of IMGs and illustrate it for a specific rational map whose Julia set is the entire Riemann sphere. (Received January 29, 2019)