1145-35-1179 **Anudeep Kumar Arora***, ana001@fiu.edu, and **Svetlana Roudenko**. *Singularities and global solutions in the Schrödinger Hartree equation.*

We consider a nonlinear Schrödinger type equation with nonlocal nonlinearity, of a convolution type, called the generalized Hartree equation. In the focusing case we investigate global behavior of solutions and formation of stable singularities. In the inter-critical regime we first obtain a dichotomy for global vs finite time existing solutions exhibiting two methods of obtaining scattering: one via Kenig-Merle concentration - compactness and another one is using Dodson-Murphy approach via Morawetz on Tao's scattering criteria. Next, we investigate stable blow-up solutions in a critical regime and describe the blow-up dynamics, which is similar to NLS. This work is a part of the PhD dissertation under the supervision of Svetlana Roudenko. (Received September 19, 2018)