1112-60-251 **Mei Yin*** (mei.yin@du.edu), 2280 S Vine St, Denver, CO 80208. *Asymptotic properties of the (generalized) edge-triangle exponential random graph model.*

The edge-triangle exponential random graph model has been a topic of continued research interest. Chatterjee and Diaconis showed that when the triangle parameter β_2 is non-negative, the model always looks like an Erdős-Rényi random graph in the limit. In further works (see for example, Radin and Yin, Aristoff and Zhu, Yin, Rinaldo and Fadnavis), it was shown that the line $\beta_2 = -\beta_1$, where β_1 is the edge parameter, is of particular importance. The model transitions from being a very sparse graph to a very dense graph as the natural parameters (β_1, β_2) cross this line, completely skipping all intermediate structures. I will present recent extensions of this result, including: When a typical graph is sparse, how sparse is it? When a typical graph is dense, how dense is it? The relevant asymptotic properties of the generalized edge-triangle model considered by Lubetzky and Zhao will also be discussed. (Received August 05, 2015)