1143-90-86 **Radu V. Balan*** (rvbalan@math.umd.edu), Department of Mathematics, University of Maryland, College Park, MD 20742, and **Naveed Haghani**. *Optimizations using Deep Learning.* Preliminary report.

This talk will present a deep network architecture to solve a binary assignment problem. The classical solution using transport theory turns the problem into a convex optimization problem, specifically a linear program. A deep network is designed and trained to solve the similar problem. Various strategies will be analyzed, and numerical performance will be presented. (Received July 31, 2018)