ON THE COMPLEXITY OF ENTOPY REGULARIZED GROMOV WASSERSTEIN

- [Hard] Matching rows of similarity matrices usually becomes a quadratic assignment problem (Loiola et al., 2007), which is NP-hard.
- Relaxed (~Kantorovich) version (GW) is still non-convex
- [Peyre et al.]:
  - For certain class of losses, can compute L (C, C') (x) T in O(n^3)
  - Convergence almost (but not completely) guaranteed in theory, observed in practice
  - For L=L_2, equal to softassign procrustes, convergence proof by Rangarajan [only ensures convergence of the functional values (not of the iterates), and not for general C]