

This note presents a distributed optimization scheme over a network of agents in the presence of cost uncertainties and over switching communication topologies. Inspired by recent advances in distributed convex optimization, we propose a distributed algorithm based on dual sub-gradient averaging. A convergence rate analysis for the offline optimization, and a regret analysis for the online case, as a function of the underlying dynamic network topology are then presented for both classes of uncertainties. Application of the proposed setup is then discussed for uncertain sensor networks.