Joachim Rosenthal\* (rosenthal@math.uzh.ch), Mathematics Institute, University of Zurich, Winterthurerstr 190, CH-8057 Zurich, Switzerland, Elisa Gorla (elisa.gorla@math.unizh.ch), Mathematics Institute, University of Zurich, Winterthurerstr 190, Zurich, Switzerland, and Felice Manganiello (felice.manganiello@math.uzh.ch), Mathematics Institute, University of Zurich, Winterthurerstr 190, Zurich, Switzerland. Spread Codes for Network Coding, a Grassmannian Approach. Preliminary report.

A a novel framework for random network coding has been recently introduced by Koetter and Kschischang. In this framework information is encoded in subspaces of a given ambient space over a finite field. A natural metric is introduced where two subspaces are 'close to each other' as soon as their dimension of intersection is large. This new framework poses new challenges to design new codes with large distances and to come up with efficient decoding algorithms. In this talk we describe a decoding algorithm for spread codes. (Received February 10, 2008)