998-46-125 Helga Fetter* (fetter@cimat.mx), CIMAT, Apartado Postal 402, 36000 Guanajuato, Guanajuato, Mexico. An attempt to generalize some metric fixed point theorems to topological vector spaces. Preliminary report.

Fixed point theorems are derived for topological vector spaces from the known results for nonexpansive mappings in a Banach space. In order to do that we introduce a norm related to weakly closed, balanced, convex and weakly bounded set D, study its relationship to the original topology and apply Banach's contraction principle and Kirk's fixed point theorem. (Received February 20, 2004)