1116-49-195   **Minh Ngoc Dao*** (`minhdn@hnue.edu.vn`), 3333 University Way, Kelowna, BC V1V 1V7, Canada. *On the Douglas-Rachford algorithm: inconsistency and finite convergence.*

The Douglas-Rachford algorithm is one of the most successful methods for solving optimization and feasibility problems. In this talk, we present convergence results when the underlying constraints are possibly inconsistent but one constraint is an affine subspace. We also provide novel conditions sufficient for finite convergence in the context of convex feasibility problems. (Received August 12, 2015)