

Equivalence of Half-Quadratic Minimization and the Relaxed Fixed Point Iteration

Raymond Chan¹

rchan@math.cuhk.edu.hk

DEPARTMENT OF MATHEMATICS, THE CHINESE UNIVERSITY OF HONG KONG, HONG KONG

Mila Nikolova

CENTRE DE MATHÉMATIQUES ET DE LEUS APPLICATIONS, ENS DE CACHAN, FRANCE

In this talk, we focus on the minimization of regularized objective functions using the popular half-quadratic approach introduced by Geman and Reynolds in 1992. We show that whenever applicable, this approach is equivalent to the very classical gradient linearization approach, known also as the fixed point iteration.

¹This work was supported by HKRGC Grant CUHK 400503.