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**J. Yunier Bello Cruz** and **Nghia Tran\*** (nttran@oakland.edu). *On the convergence of the proximal forward-backward splitting method with linesearches.*

In this talk we focus on the convergence analysis of the proximal forward-backward splitting method for solving nonsmooth optimization problems in Hilbert spaces when the objective function is the sum of two convex functions. Assuming that one of the functions is Fréchet differentiable and using two new linesearches, the weak convergence is established without any Lipschitz continuity assumption on the gradient. Furthermore, we obtain many complexity results of cost values at the iterates when the stepsizes are bounded below by a positive constant. (Received August 04, 2015)