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1003-65-1625 **M. Zuhair Nashed*** (znashed@mail.ucf.edu), Department of Mathematics, University of Central Florida, Orlando, FL 32816-1364. *Continuous and Semicontinuous Analogues of Iterative Methods of Cimmino and Kaczmarz with Applications to Moment Discretization of Inverse Problems.* Preliminary report.

Kaczmarz's method and Cimmino's method are iterative methods for matrix equations that converge even if the system is singular or inconsistent. We describe continuous and semicontinuous analogues of these iterative methods for ill-posed problems in reproducing kernel Hilbert spaces, and indicate their applicability to numerical inversion of the Radon transform and other inverse problems. (Received October 05, 2004)