1067-62-1748   **Katherine A Grzesik*** (`kgrzesik@oswego.edu`), 9409 Elm St., Chadwicks, NY 13319, and **Heather Shappell**, **Michael Donders** and **Chelsea Ross**. *A Poisson Approximation for the Number of kl-Matches I.*

Consider a lecture class with a population N. Suppose a student keeps track of the order of students called upon to answer a question. Each student on the roster has l friends before his/her name and l friends after his/her name. A *kl-match* occurs when two students, who are in each other's list of $2l$ friends or are themselves, are called upon within the k previous questions. Let X_n denote the number of *kl-matches*. The definition of the random variable X_n assumes that each student has a full window of $2l + 1$ friends and a full window of k previous questions. This scenario is built off of Burkhardt, Godbole, and Prengman's (1994) paper about the distribution of k-matches. The distribution of X_n, in an equiprobable case, is approximated by a Poisson random variable if $lk^2 = \mathrm{o}(N)$. In the non-equiprobable case, the distribution is also approximately Poisson. A coupling could decrease the amount of total distance variation incurred in the Poisson approximation. (Received September 21, 2010)

1