1054-20-242   **Arkady Berenstein*** (`arkadiy@math.uoregon.edu`), 4936 Mahalo Drive, Eugene, OR 97405, and **Yuri Bazlov** (`y.bazlov@warwick.ac.uk`), Mathematics Institute, University of Warwick, Coventry, England. *q-commuting Dunkl operators and braided Cherednik algebras.*

In my talk I will introduce q-commuting analogues of Dunkl operators that are acting on q-symmetric algebras. I will explain the q-commutation phenomenon by constructing braided Cherednik algebras for which the above operators form a representation.

The classification of braided Cherednik algebras is achieved in terms of braided doubles that Yuri Bazlov and myself introduced earlier. Besides ordinary rational Cherednik algebras and their braided tensor products, we obtained new algebras with triangular decomposition attached to an infinite family of subgroups of even elements in complex reflection groups, so that the corresponding Dunkl operators pairwise anti-commute. (Received September 15, 2009)