1139-55-633   **Yuri Berest*** (`berest@math.cornell.edu`), Department of Mathematics, Cornell University, Ithaca, NY 14853-4201. *Representation homology and Macdonald conjectures.*

In 1982, generalizing some earlier work of A. Selberg, F. Dyson, G. Andrews and others, I. G. Macdonald formulated several remarkable conjectures on the constant terms of certain Laurent polynomial expressions associated with root systems. These conjectures motivated a lot of interesting developments in representation theory, combinatorics and mathematical physics over the past 30 years, leading, in particular, to the discovery of Dunkl operators and Cherednik's theory of double affine Hecke algebras. In this talk, I will give a new *topological* interpretation of Macdonald's conjectures and discuss some natural generalizations. The existence of such generalizations answers a question posed by Macdonald in his original paper. (Received February 20, 2018)