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Alexander N. Shumakovitch* (Shurik@gwu.edu), The George Washington University,
Department of Mathematics, Monroe Hall, 2115 G St. NW, room 240, Washington, DC 20052.
Patterns in odd Khovanov homology. Preliminary report.

In this talk we discuss an odd version of the Khovanov homology recently introduced by Peter Ozsváth, Jacob Rasmussen and Zoltán Szabó. We investigate experimental data obtained by computing this odd homology for all prime knots with up to 15 crossings and discuss its properties that appear to be drastically different from those of the ordinary (even) Khovanov homology. We present numerous applications of the odd Khovanov homology such as finding upper bounds for the Thurston-Bennequin number and detecting quasi-alternating and transversely non-simple knots. Finally, we consider interconnections between several generalizations of the odd Khovanov homology due to Krzysztof Putyra. (Received September 16, 2008)