Trace formulas for self-adjoint perturbations $V$ of self-adjoint operators $H$ such that $V$ is in Schatten class were obtained in the works of L.S. Koplienko, M.G. Krein, and the joint paper of D. Potapov, A. Skripka and F. Sukochev. In this talk, we discuss an analogous trace formula under the assumptions that the perturbation $V$ is bounded and the resolvent of $H$ belongs to Hilbert-Schmidt class. (Received August 31, 2019)