Abstract: A function \( f \) continuous on the real line \( \mathbb{R} \) is said to be operator Lipschitz if

\[
\|f(A) - f(B)\| \leq c \|A - B\|
\]

for all self-adjoint operators \( A \) and \( B \), where a number \( c \) depends on \( f \) only. Clearly, every operator Lipschitz function \( f \) satisfies the usual Lipschitz condition: \( |f(x) - f(y)| \leq c|x - y| \) for all \( x, y \in \mathbb{R} \). It is well known that the converse is not true.

I am going to present a short introduction to the theory of operator Lipschitz functions.