1127-42-52   **Ji Li**, **Rob Rahm*** (`robertrahm@gmail.com`) and **Brett Wick**. *Fractional Integral Operators Associated to Schrodinger Operators.*

Consider the Schrödinger operator $Lf(x) = -\Delta f(x) + V(x)f(x)$. We investigate weighted inequalities for the fractional integral operator $I_\alpha = (L)^{-\alpha/2}$. More precisely, let $0 < \alpha < n$ and $1/p - 1/q = \alpha/n$, we would like to estimate the operator norm of I_α as an operator from $L^p(w^p)$ to $L^q(w^q)$ in terms of a fractional Muckenhoupt condition adapted to L. I_α has better decay properties than the classical fractional integral operator but is highly "non-local"; this is one of the obstructions to establishing the weighted estimate. (Received January 13, 2017)

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