Bounded Variation Conditions and Absolutely Continuous Spectrum

MILIVOJE LUKIC
Rice University

Abstract. For one-dimensional Schrödinger operators (and similarly for Jacobi and CMV matrices), it is known that $L^1$ potentials have purely a.c. (absolutely continuous) spectrum, and $L^2$ potentials have a.c. spectrum, on $(0, \infty)$. A growing body of results shows that, similarly, various $L^1$ or $L^2$ conditions on the variation of the potential imply purely a.c. spectrum or a.c. spectrum on suitable intervals. In this talk, we will present some new results which relate $L^1$ and $L^2$ variation conditions to absolutely continuous spectrum.