1114-46-59 **Jake Fillman*** (fillman@vt.edu), **David Damanik** and **Milivoje Lukic**. *Spectra of Limit-Periodic Schrödinger Operators.*

We will discuss the spectral theory of limit-periodic Schrödinger operators on the real line. For an explicit dense set of potentials, the spectrum is a homogeneous set in the sense of Carleson, and the spectral type is purely absolutely continuous. In contrast, a generic limit-periodic potential exhibits purely singular continuous spectrum supported on a Cantor set of zero Lebesgue measure. We also construct a dense set of potentials whose spectra have Hausdorff dimension zero. One can incorporate a coupling constant into the constructions, and then the aforementioned results hold simultaneously for all positive values of the coupling constant. We will discuss the relationship between our work and Deift's conjecture on almost-periodic initial data for the KdV flow. (Received August 04, 2015)