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**Wencai Liu\***, 410 P, Rowland Hall, IRVINE, CA 92697. *WKB and absence of the singular continuous spectrum for perturbed periodic Schrödinger operators.*

In this talk, we consider the Schrödinger operator,

$$Hu = -u'' + (V_0(x) + V(x))u,$$

where  $V_0(x)$  is 1-periodic and  $V(x)$  is a decaying perturbation. We show that if the perturbed potential  $V \in \ell^p(L^1)$  for some  $1 \leq p < 2$ , then an essential support of the absolutely continuous spectrum equals the spectral bands. Moreover, if the potential  $V$  belongs to  $\ell^p(L^1)$  with respect to a weight  $|x|^\gamma$  with  $\gamma > 0$ , the optimal upper bound of the Hausdorff dimension of the singular component of the spectral measure is established. By additional spectral analysis, we show that  $\sigma_{sc}(H) = \emptyset$  if  $\limsup_{x \rightarrow \infty} x|V(x)| < \infty$ . (Received September 19, 2018)