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**Charles Rezk\*** ([rezk@illinois.edu](mailto:rezk@illinois.edu)), Urbana, IL. *Looijenga line bundles and complex analytic elliptic cohomology*. Preliminary report.

We present some calculations, which (1) show how the moduli stack of complex analytic elliptic curves is encoded in the cohomology of the moduli space of smooth genus 1 surfaces equipped with a line bundle which admits a flat connection, and (2) show how certain natural line bundles over  $d$ -fold products of complex analytic curves (Looijenga's line bundles), are encoded in a similar way by moduli of  $U(1)^d$ -bundles with prescribed vanishing of a degree four characteristic class. Then we speculate recklessly on the relevance of these calculations to the construction of complex analytic elliptic cohomology, in the sense of Grojnowski. (Received August 18, 2016)