

**Abstract:**

I will describe some recent and on-going joint work with Karl Rubin where we make use of current results (due in alphabetical order to—among many others— Bertolini, Cornut, Darmon, Greenberg, Kato, Kolyvagin, Nekovar, Vatsal) to provide a nicely general (although conjectural) picture giving us the expectation of very controlled, and very large, quantities of Mordell-Weil ranks of elliptic curves, as one ascends certain specific towers of number fields. The only part of this picture that is "conjectural" is that we must assume finiteness of  $p$ -primary components of Shafarevich-Tate groups.