

Formula (3.19) in the published version (or (4.19) in the arxiv version) has a typo: the signs of  $i\alpha$ ,  $i\beta$ , and  $i\gamma$  should be switched. The error can be traced to Goldfeld's book, where Theorem 6.5.15 (and other locations) have the wrong signs on the Langlands parameters in the gamma factors. In Goldfeld's proof of Theorem 6.5.15 he quoted a result of Bump, but Bump and Goldfeld use different definitions of the  $I_\nu$  function, so  $\nu_1$  and  $\nu_2$  should be switched. The same error propagated through Goldfeld's book. We thank Jan Möllers for pointing this out to us. This typo has no significant effect on the paper.