

# Class invariants for quartic CM fields

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Abstract: I shall survey theoretical results obtained recently with Kristin Lauter (Microsoft Research) on the class invariants for CM fields I've constructed with DeShalit. Among those, bounds on the primes and their powers appearing in the factorization of these class invariants. However, I shall focus on more recent results on the nature of the primes that may appear; these results show that the difficulties of constructing units by means of modular forms are perhaps even more inherent than previously suspected.