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*The number of linear factors of supersingular polynomials and sporadic simple groups.*

The set of prime numbers  $p$  such that the supersingular  $j$ -invariants in characteristic  $p$  are all contained in the prime field is finite. And it is well known that this set of primes coincides with the set of prime divisors of the order of the Monster simple group. In this talk, I will present analogous coincidence of supersingular invariants in level 2 and 3 and the orders of the Baby monster group and the Fischer's group. The proof uses a connection between the number of supersingular invariants and class numbers of imaginary quadratic fields. (Received January 26, 2019)