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Prime polynomial values of linear functions in short intervals

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Abstract: In this talk I will present a function field analogue of a conjecture in number theory. This conjecture is a combination of several famous conjectures, including the Hardy-Littlewood prime tuple conjecture, conjectures on the number of primes in arithmetic progressions and in short intervals, and the Goldbach conjecture. I prove an asymptotic formula for the number of simultaneous prime values of n linear functions, in the limit of a large finite field. A key role is played by the computation of some Galois groups.