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# Results from lattice studies of maximally supersymmetric Yang–Mills

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I will present results from numerical lattice studies of maximally (N=4) supersymmetric Yang–Mills theory with gauge group SU(2), based on a lattice formulation that exactly preserves one supersymmetry. While the pfaffian of the lattice theory is not manifestly real, direct measurements of the pfaffian show it to be approximately real and positive on all accessible lattice volumes. Studies of the static potential show that the system exhibits coulombic behavior at both weak and strong coupling, with Coulomb coefficients in agreement with leading-order perturbation theory. In addition to these results, I will discuss ongoing studies of gauge groups SU(3) and SU(4), with which we aim to access the large-N limit.

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