

A refinement of Conway-Gordon's theorem

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Abstract. In 1983, Conway and Gordon showed that for every spatial complete graph on 6 vertices, the sum of linking numbers over all of the constituent 2-component links is congruent to 1 modulo 2, and for every spatial complete graph on 7 vertices, the sum of Arf invariants over all of Hamiltonian knots is also congruent to 1 modulo 2. In this talk, we give an integral lift of Conway-Gordon's theorem and its applications.