or Minimum Vertex Degree Condition for Tight Hamiltonian Cycles in 3-Uniform Hypergraphs

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The study of Dirac type questions for hypergraphs was initiated in the seminal paper by Gyula Y. Katona and Hal Kierstead. Improving upon earlier results, we show that every 3-uniform hypergraph with \( n \) vertices and minimum degree at least \( (5/9 + o(1))(\binom{n}{2}) \) contains a tight Hamiltonian cycle. Owing to known lower bound constructions, this degree condition is asymptotically optimal. This is joint work with Christian Reiher, Vojtěch Rödl, Mathias Schacht, and Endre Szemerédi.