

An Overview of the Caccetta-Haggkvist Conjecture

Adrian Bondy (Lyon)

The Caccetta-Haggkvist Conjecture asserts that every oriented graph on n vertices in which each vertex has outdegree at least d contains a directed circuit of length at most $\lceil n/d \rceil$. The conjecture has been verified for small values of d . At the other extreme, when $d \geq n/3$, showing that there must exist a directed triangle has proved remarkably elusive. At least two workshops have been devoted to the topic. One of these was held earlier this year at the American Institute of Mathematics. I shall report on the state of our knowledge.