

Forcing Hamiltonicity for locally finite claw-free graphs via forbidden induced subgraphs

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Hamiltonicity is a central theme of finite graph theory, which has been transferred to infinite graphs. Following the topological approach of Diestel and Kühn [2,3] we define infinite cycles of a locally finite connected graph G via its Freudenthal compactification $|G|$: A homeomorphic image of the unit circle $S^1 \subseteq \mathbb{R}^2$ in $|G|$ is called an *infinite cycle of G* . Analogously to finite graphs, we call G *Hamiltonian* if there exists an infinite cycle of G containing all vertices of G .

We examine how to force Hamiltonicity via forbidden induced subgraphs and present recent extensions of results for Hamiltonicity in finite claw-free graphs [1,4,5] to locally finite ones.

References

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