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Hamiltonicity of Graphs on Surfaces

Kenta Ozeki

 $National\ Institute\ of\ Informatics$

Japan

Tutte proved that every 4-connected plane graph has a hamiltonian cycle. Beginning with Tutte's result, many researchers have considered Hamiltonicity of graphs on non-spherical surfaces. In particular, we are interested in a famous conjecture by Grünbaum and Nash-Williams; every 4-connected graph on the torus has a hamiltonian cycle. In this talk, we will mention recent results around this conjecture.

This is a joint work with K. Kawarabayashi (National Institute of Informatics, Japan).