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Locally 2-Arc Transitive Graphs

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Let Γ be a finite, simple, connected graph. For a subgroup G of the automorphism group of Γ, we say that Γ is locally (G,s)-arc transitive if for any two s-arcs α and β starting at the same vertex, there exists an element of G mapping α to β. These graphs arise in many areas of mathematics, including certain finite geometries, and are very interesting in their own right. I will discuss basic definitions and results, in particular the case when s = 2, and mention some recent work on locally (G,2)-arc transitive graphs when G is an almost simple group of Suzuki type.

No previous knowledge of algebraic graph theory or group theory will be assumed.
