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Symmetric generalised polygons

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The finite classical generalised polygons have as automorphism groups the finite Lie type groups $\mathrm{PSL}(3, q)$, $\mathrm{PSp}(4, q)$, $\mathrm{PSU}(4, q)$, $\mathrm{PSU}(5, q)$, $G_2(q)$, ${}^4D_3(q)$, ${}^2F_4(q)$ and they exhibit as much symmetry that is possible for such a geometry: distance transitivity on points and lines. Thus it is natural to ask whether we can characterise the classical examples by their symmetry. In this talk, we will present highlights of the known results on global symmetry of generalised polygons, and give some recent new results.

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