Ribaucour families of discrete R-congruences

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In classical differential geometry a 2-parameter family of spheres is called a *Ribaucour congruence* if it admits two enveloping surfaces with corresponding curvature lines. For a generic Ribaucour congruence there exist exactly two such envelopes.
The commonly used counterparts in discrete differential geometry, so called *discrete R-congruences*, are sphere congruences with planar faces (Q-nets in the Lie quadric). However, in the discrete setup, for any discrete R-congruence we obtain a 2-parameter family of enveloping nets.

In this talk we shall investigate this ambiguity and discuss geometric consequences for the enveloping Ribaucour family of nets.

This is joint work with Thilo Rörig from TU Berlin.