

## Discrete and semi-discrete Voss surfaces

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**Abstract:** Discrete Voss surfaces is a class of flexible quad-surfaces characterized by the equality of opposite angles at every vertex. A simple geometric construction replaces equality by complementarity, so that the sum of each pair of opposite angles equals 180 degrees. We call these surfaces anti-Voss. The total angle at each vertex becomes 360 degrees: anti-Voss surfaces are developable.

A semi-discrete analog is a surface made of developable strips where the angles between the rulings and the boundaries are either equal or complementary. In particular, a semi-discrete anti-Voss surface is developable, that is can be made out of a piece of paper by folding it along certain curves.

We will describe the extrinsic geometry of Voss surfaces and methods of their construction.

The talk is based on a joint work with Arvin Rasoulzadeh and Matteo Raffaelli.