

Covering and Uncovering Surfaces

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Multivalued functions and differential forms naturally lead to the concept of covering surfaces and more generally of covering manifolds. This talk will review, illustrate and discretize basic concepts of branched covering surfaces and discuss their appearance in recent geometry processing algorithms including surface and volume parameterization as well as in artistic modeling.

We will also embark on the educational path using scissor and paper as well as the zometool kit.

At the horizon, we envision weaved materials for novel surface representations.