New Cloth Modeling for Designing Dyed Patterns

<Real Dyeing Process>
Cloth weave → Resist Dyeing (Fold, stitch, clump, bind...) → Add Dye → Dye Transfer → Result

<Computer-Generated Dyeing Framework [1]>
Set weave → Model folded cloth by editing development view [2] → Specify resist regions → Calculate Dye Distribution → Dye Transfer → Result

<Problems of development view editing for 3D folded cloth geometry>
Dyeing requires an order to fold
Folding multi-patterns is difficult
Intuitive stitching operation

Some folding orders exist for one development view.
How to specify a 3D folded cloth of multi-folding patterns?
Specifying folding lines is not intuitive.

<Our System>
Sequential folding
Local folding operation
Stitching operation

View: 3D, 2D

Any folding operation for each separated cloth parts.

Interactive dyeing