



# Workshop: folded vessels

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May 17, 2026

**Ann Arbor, Michigan, USA**

**CFC 6**

**May 14-17, 2026**

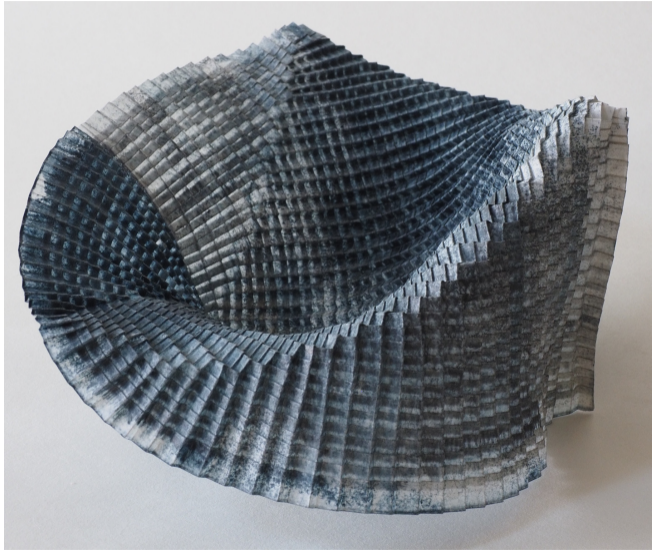
# 50 small vessels from 2023



## Larger vessels



## Larger vessels



## Larger vessels



# Larger vessels



# Topology question

How to stretch/deform a flat sheet to make a vessel?

## Basic topologies

- ▶ Make a cylinder, close one end
- ▶ Make a cylinder, close both ends, open along the seam
- ▶ Fold structure that allows stretching/forming

Show examples

# Seam opening



## Pre-pleated ground

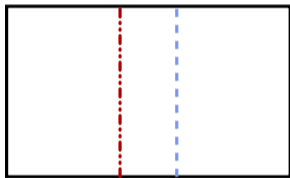
Allows more flexibility in forming  
Provides or allows decoration

# Random pleat ground

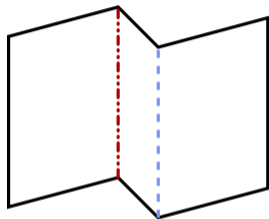


# Pleat

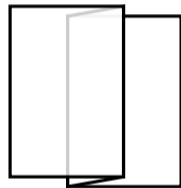
Two (usually) parallel folds of opposite types: one mountain, one valley.



Pleat crease pattern

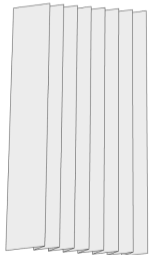
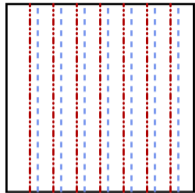


Partially folded pleat

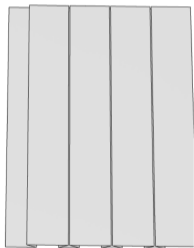
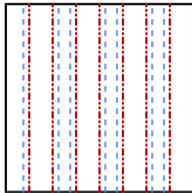


Flat-folded pleat

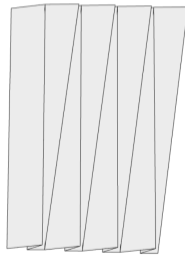
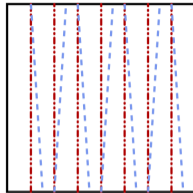
# Pleat types



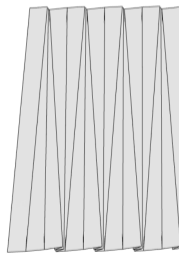
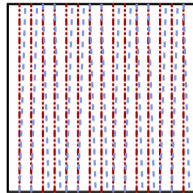
Simple pleats  
(knife pleats).



Double pleats  
(box pleats).



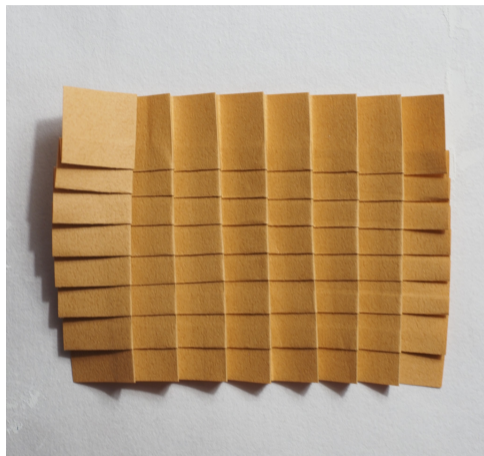
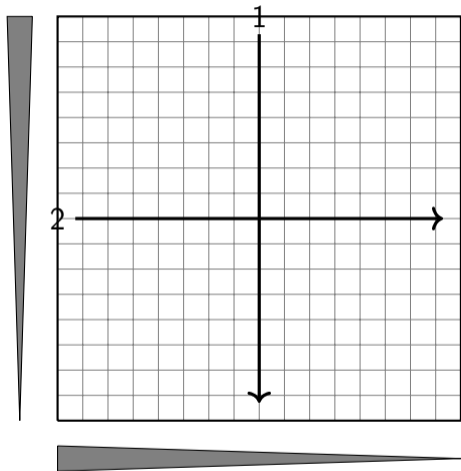
Tilting pleats  
(alternating).



Tilting pleats  
(alternating by two).

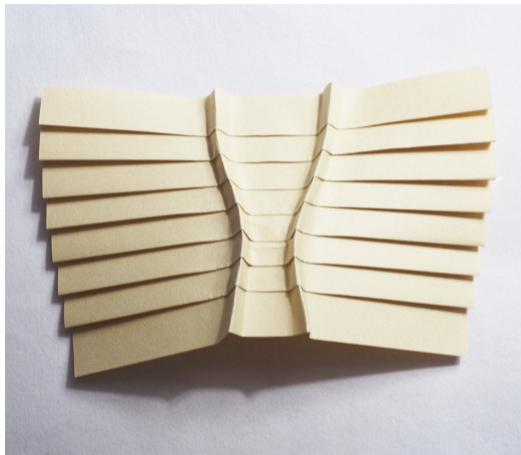
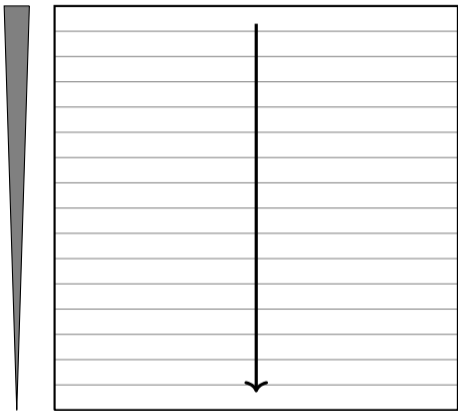
Show pleat samples

## Option 1: grid (pleats across pleats)



First pleat horizontally then vertically.

## Option 2: Curves over pleats



First pleat horizontally then fold curves.

## Other suggestions

With knife pleats the width shrinks to between  $1/3$  and  $1/2$  of original.

With box pleats the width shrinks to about  $1/2$  of original.

With 10" (25cm) paper, 32 pleats is doable.

Leave about  $1/8$  of sheet width for bottom closure.

Reserve one grid unit for seam overlay.

Interleave pleats at the seam if possible.

Glue is helpful to keep things in place permanently.

Thank you