



# FOLDSTAR

ADVANCED COMPUTATIONAL SCIENCE SOLUTION

Folded Structures Company LLC

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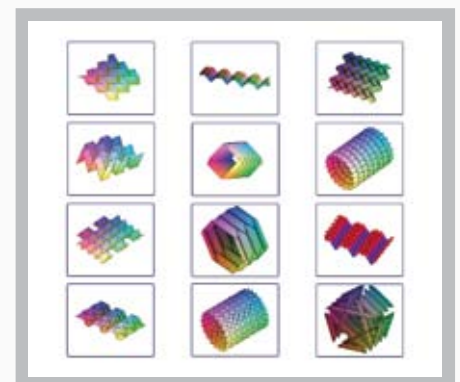
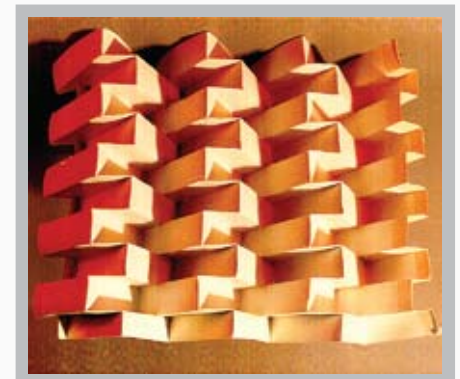
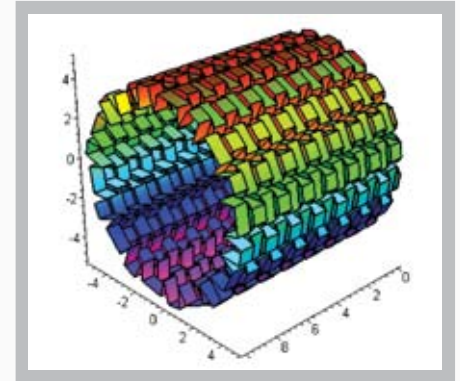
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FoldStar: a new mathematical folding theory for designing deployable structures and composite structural panels. The technology offers diverse capacity to engineer, manufacture, and self-assemble periodically folded sheet material. Many metallic and non-metallic core materials can be used for laminated panels, structural beams, parabolic reflectors, and/or efficient truss systems. These structures can be either static or deployable by a number of active or passive methods.

## THE FOLDING TECHNIQUES COULD YIELD:

- ▶ Kraft paper cores superior to corrugated cardboard.
- ▶ Multi-layer paper blocks to replace Styrofoam for shock absorbing.
- ▶ Replacement for honeycomb cores used in aircraft in the floors & airframe.
- ▶ Doubly periodic folded steel sheets stronger than corrugated structures.
- ▶ Aluminum or steel folded tessellations in flat laminated panels for high strength & lightweight truck beds or auto floors for resilient strength to the frame.
- ▶ Lightweight strength and energy absorbing properties for bumpers, hoods and crash protection.

A software module for use with existing finite element analysis applications is being developed to transfer this know-how to the engineering community. This will provide designers with a user friendly tool to better understand and apply folding techniques directly to problems requiring deployable structures or advanced structural/composite elements.



## FOLDED structures

FSC PROVIDES CONSULTING SERVICES & SOFTWARE TO APPLY ADVANCED MATHEMATICS TO DIFFICULT ENGINEERING PROBLEMS.