Istanbul Technical University

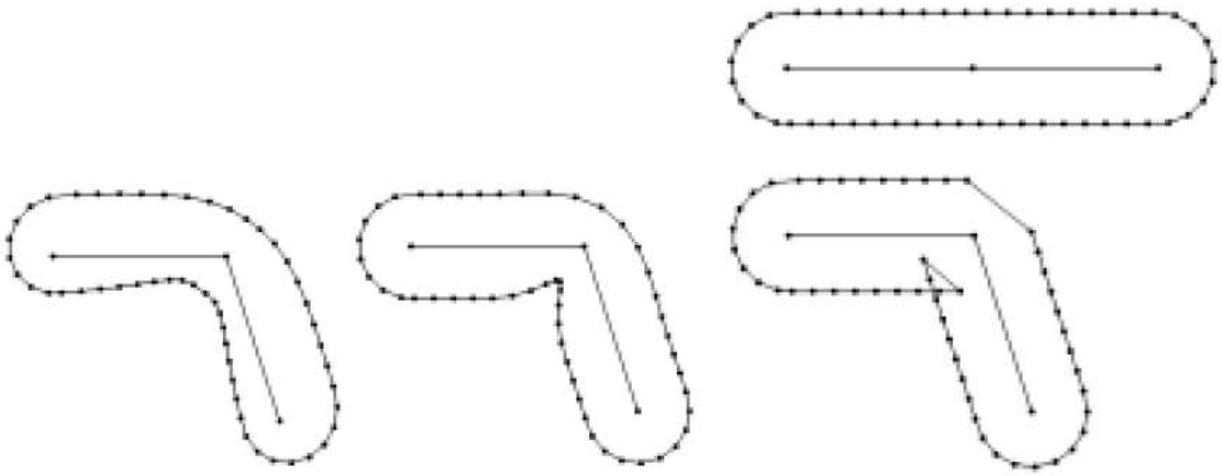
MKS 536E Advanced Computer Aided Design

MKS 536E Advanced CAD Course **Homework 2**
Due date: April 22, 2018 Sunday 23:00

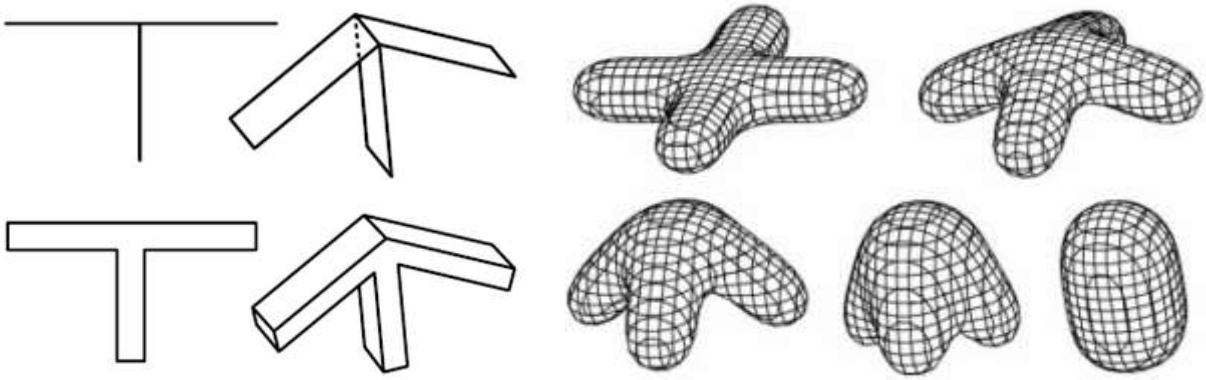
Animate smoothly folding by deform

Problem: Develop a program code, which calculates and draws a 2D/3D B-spline curve/surface covering outside of a selected mechanism. The outside skinning curve/surface may be as shown in following figures. First, you must define the control points of the 2D/3D curve/surface as in the homework-1 assembly mechanism drawing. Then animate the mechanism and its deformed curve/surface skin.

Students should write their own program file (code). Students are free to use any of the calculation software like MathCad, MatLab, Maple, Mathematica, Excel, Java, Pascal, C and Basic programs. The code should draw and animate the mechanism with curve/surface skin.



Articulated skin contours (try to draw smooth corner at joints, Bulge-Free curve/surface)



SAMPLES: One, Two, 3D Skeletons, Smoothly Folding, Bulge-Free Forms.

Homework will be submitted to www.ninova.itu.edu.tr web site. Printed hardcopy is not required. The sample files from the course notes may be helpful to start writing your program. **Homeworks using Surface skin samples will be evaluated with extra grades.**