Kinematic Synthesis

→ not concerned with masses, accelerations, forces

→ concerned about geometry, trajectories, positions

Elimination Method: parts of least stress are removed from object
(for static structures). algorithm looks at the stress and minimizes weight, deflection

→ created using 3-D printing

Doesn't work for mechanisms

Kinematic Synthesis is not mastered yet, in general

Straight-line mechanism: traces a straight line but does not reference an
existing straight line

→ We copy straight lines all the time but how do we generate the first
straight line

Solution: The Peaucelier

Can a computer do it?

mechanism composed of straight lines and harnessed points. 4 bar mechanism
displacement force. calculate the forces on each node and then move each
node in the direction of the force

think of the bar as springs

Force F affects nodes a,b,c. move them all in the direction of the Force
"relaxation based Kinematics..."