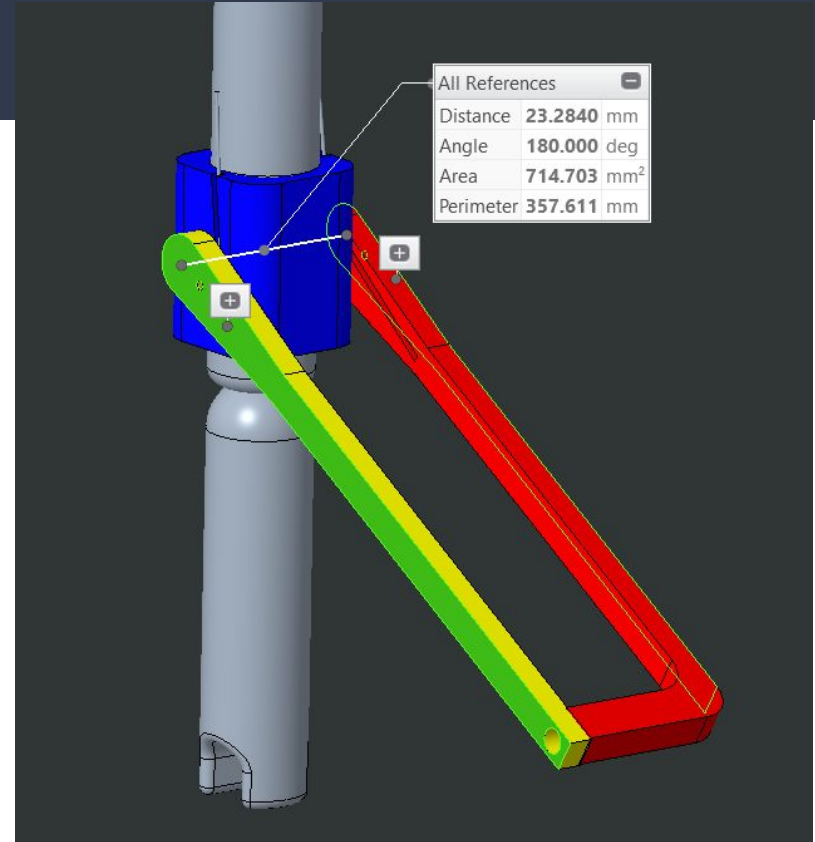


# Team 11: Autonomous Suture Tensioning Management Poster Teaser Presentation

Team members: Nyeli Kratz, Nathan Van  
Damme, Jiawei Liu

Mentors: Prof. Axel Krieger, PhD. Candidate  
Michael Kam

# Prototype



# Testing

- a. Prepare stitch
- a. Apply stitch
- b. Pull up and prepare tension
- c. Tension stitches
- d. Release sutures
- e. Finish placing a stitch

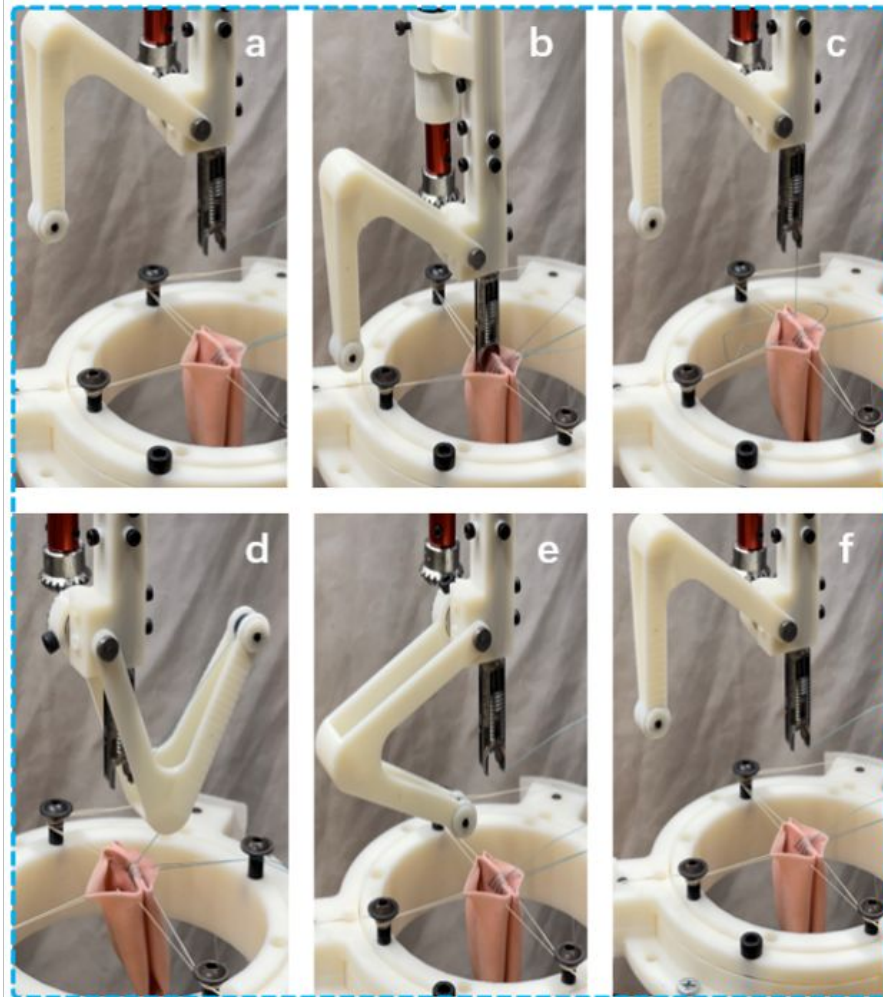


TABLE II: Comparison Results of Suturing Methods

Modality	Time per stitch (second)	Suture spacing (mm)	Bite depth (mm)
STAR (with SMD)	$29.10 \pm 0.42$	$3.20 \pm 0.17$	$6.10 \pm 0.37$
STAR [8] (with robotic assistant)	$23.38 \pm 2.61$	$2.63 \pm 1.66$	$3.29 \pm 1.32$
STAR [8] (with human assistant)	$45.63 \pm 9.46$	$2.60 \pm 1.04$	n/a
LAP [8]	$92.15 \pm 41.93$	$4.22 \pm 2.64$	$3.80 \pm 1.70$
RAS [8]	$103.38 \pm 44.57$	$5.05 \pm 4.24$	$2.30 \pm 1.49$