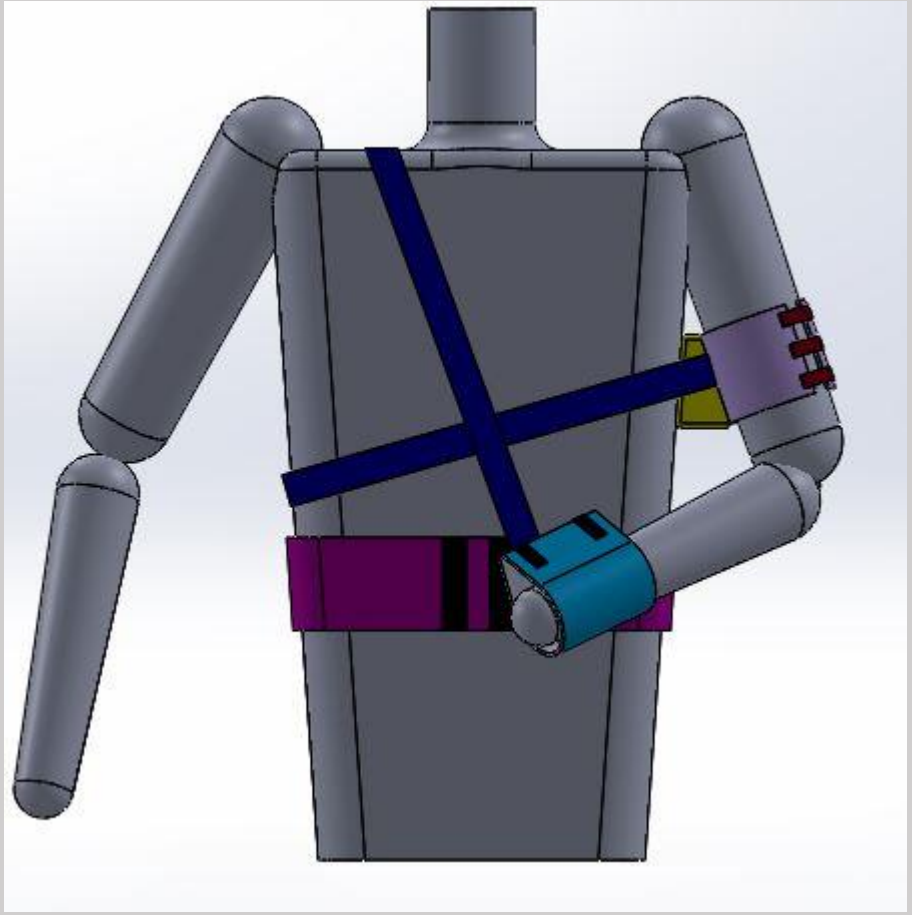
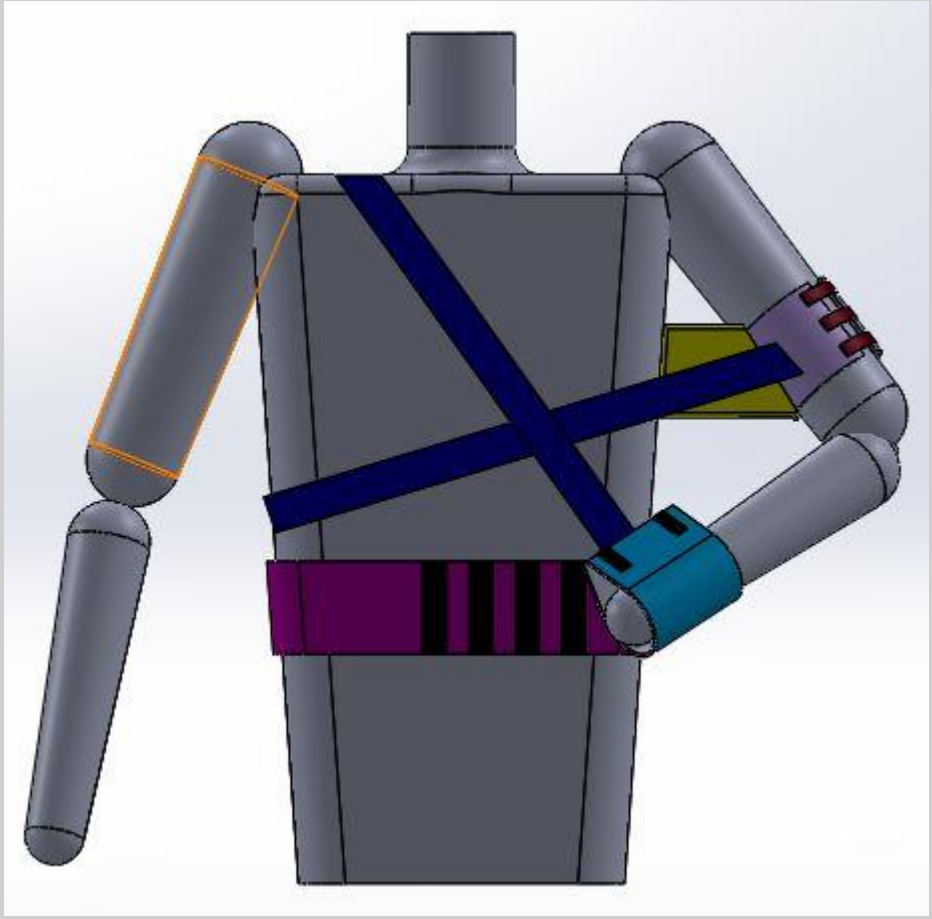
Virtual 3D Model

Project Title	Shoulder Brace Solution Post Rotatory Cuff Repair Surgery

Front View

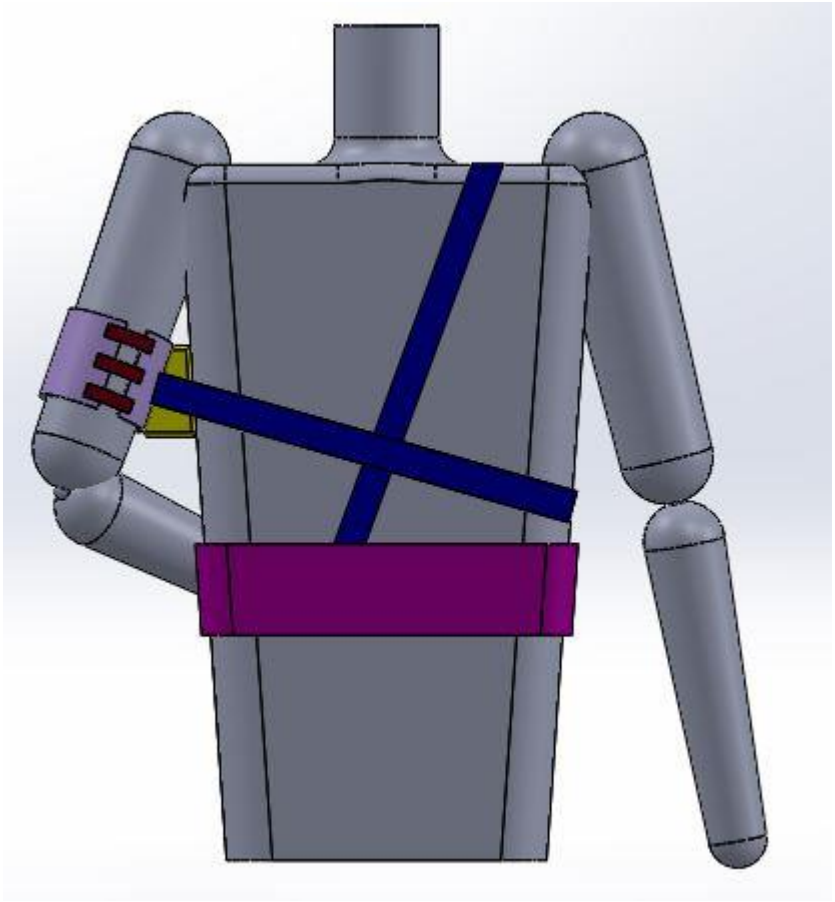


Deflated Balloon

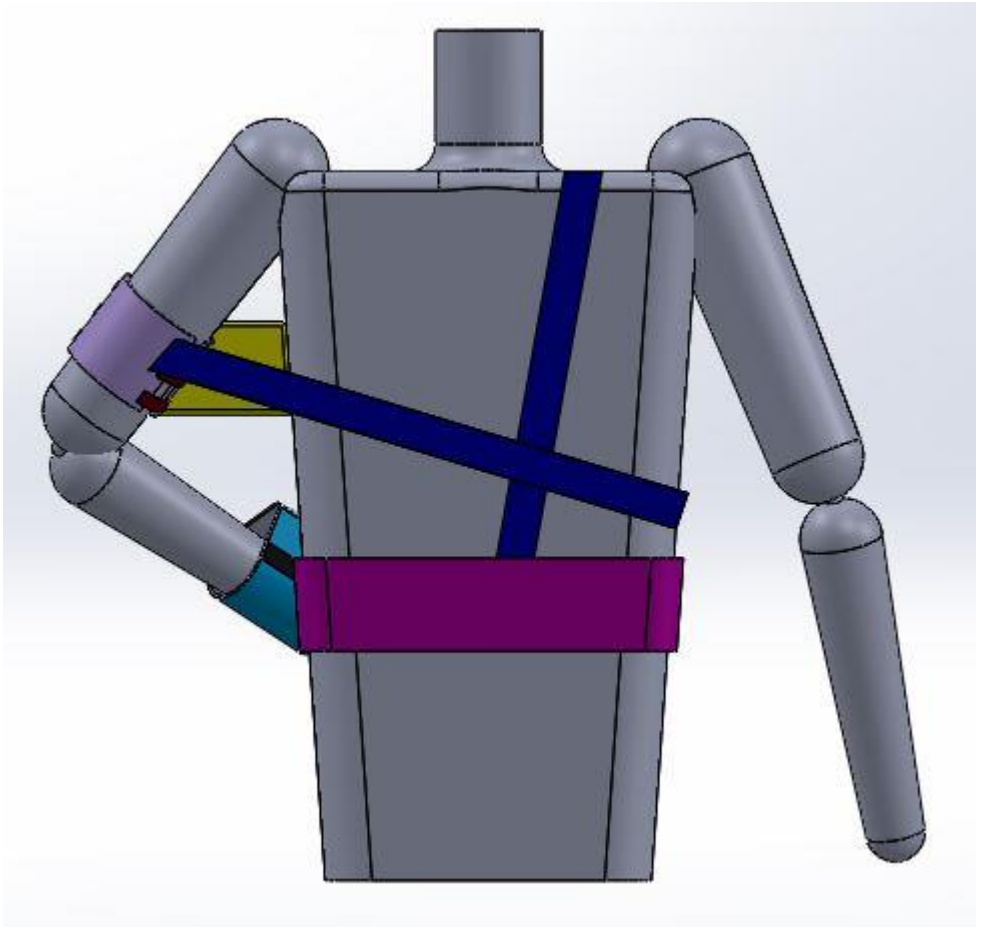


Inflated Balloon

Back View

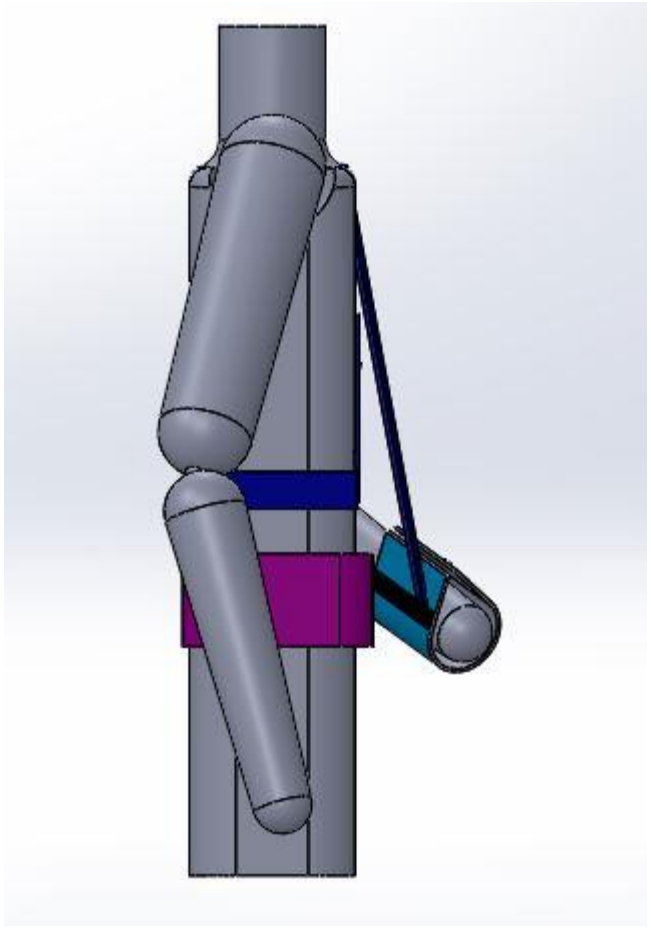


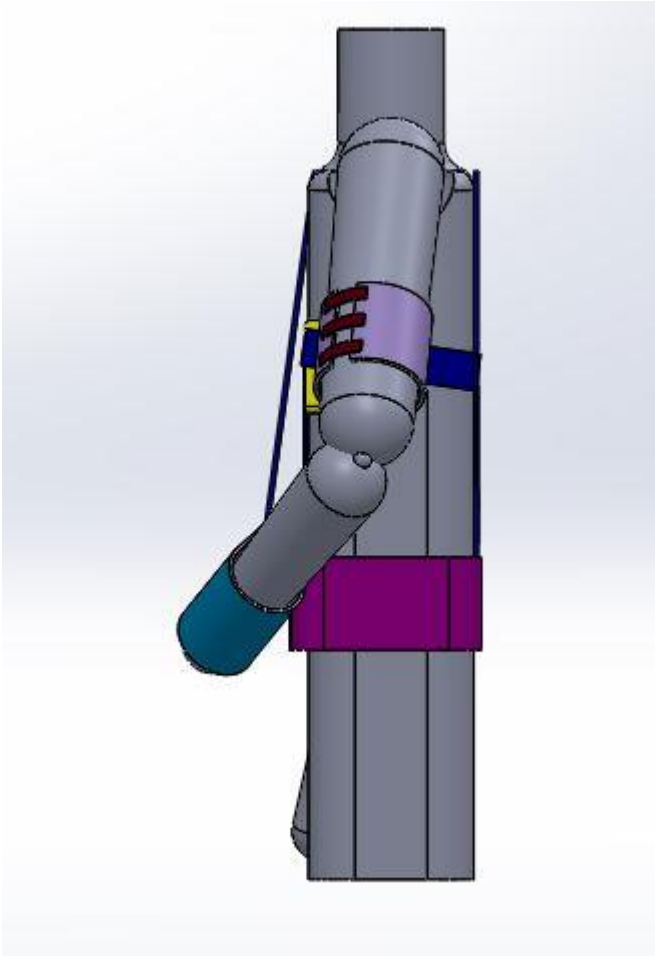
Deflated Balloon



Inflated Balloon

Side View





Feedback on Concept

Feedback 1

Name - Dr. Rajani Mullerpatan (B. Sc PT, M. Sc PT, PhD)

Designation – Professor- Director MGM School of Physiotherapy, MGMIHS, Kamothe, Navi Mumbai

Experience – 20-25 years

Suggestions –

- Mechanism for sustaining pressure and self-inflation deflation so the subject can perform exercises at home with respect to current global pandemic condition and fear of exposure through multiple visits for rehabilitation; Forearm Position; placement of abduction measuring tool at lower end of balloon

What part of concept he/she like –

- The overall structure and its new approach.
- the concept of maintaining abduction angle, compact designing

Feedback 2

Name – Dr. Mamta Shetty (PT)

Designation – Assistant Professor (Musculoskeletal Physiotherapy)

Experience – 4 years clinical experience, 3 years academic experience

Suggestions –

- Incorporation of movement of hand opening and closing simultaneously occurring with shoulder abduction and adduction using exoskeletal hand designing (this trains subject affected with different conditions; will be aiding in daily living activities participation)

What part of concept he/she like –

- Easy assessment and measurement of abduction angles, simple designing, helps is stabilizing the shoulder and motivates self-exercise within brace, reduces the hospital visit in the view of global pandemic and helps in breaking chain

Feedback on Concept

Feedback 3

Name: Dr. Shrutika Parab (PT)

Designation: Assistant Professor (Neuro-Physiotherapy)

Experience: 3 years of academic experience

Suggestions:

- To use hand and wrist movement for dynamic activities first with abduction maintenance and gradually progressing it to the changes in angle. It will help train comprehensive upper extremity functions in patients with stroke

What part of concept she liked-

- wrist band fixing at waist band while walking that protects the shoulder and at the same time creates more stability at shoulder whilst maintaining the position post-operation as well as in weeks during rehabilitation it will provide better balance and improved activity and participation

Feedback 4

Name: Dr. Triveni Shetty (PT)

Designation: Associate Professor

Experience - 5 years in academic and research

Suggestion:

- Maintaining pressure within inflated balloon when the arm drops or subject might apply excessive pressure due to pain that can lead to deformation and deflation of the balloon

What part of concept she liked-

- Compact designing
- light weight, easily accessible for adult and early old population

Changes as per feedback

Changes as per feedback –

1. Mechanism to keep stable pressure
2. Pressure dial that will allow us to know at what pressure will the trunk arm distance
3. Changing the material of wrist sling will allow adequate movement and also be help in self-exercising and adherence to immobilization