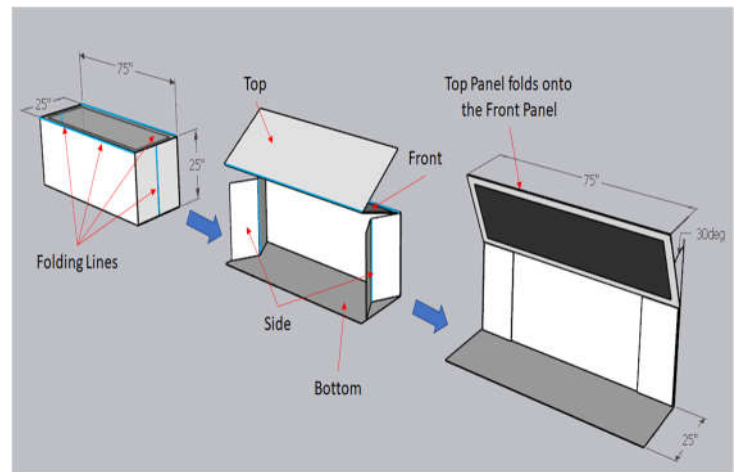


## STUDENT DESIGN CHALLENGE

### General Information

Building on the theme of the conference – **Reconfigurable Mechanisms and Robots** – the ReMAR2021 Student Design Challenge (SDC) encourages submissions to design a foldable furniture that can be open and closed in a very compact space.

Figure on the right illustrates basic folding requirement. When closed as shown on the left, it serves as a cubic box. When open, the two sides are required to fold inward to the back panel, as shown in the middle. The front panel is required to fold over the top panel and together both are required to turn upward to a given angle, as shown on the right. While the panel weights are deemed negligible, a 15 kg load attached to the top panel must be considered.



### Submission Guideline

Submissions include a poster and a video and deadline is on July 16, 2021.

The poster is one page and a template will be posted on the conference website. It should contain three parts: 1) Problem Statement, 2) Methodology, 3) Results. Posters are submitted to the conference through EasyChair at [www.remar2021.com](http://www.remar2021.com).

The video should be submitted to YouTube/Vimeo, not exceeding 3 minutes. The password protected uploads are accepted if they are accessible by the conference.

### Competition Rubric

Element	Basic	Advanced	Outstanding
Mechanism	Realizing all open & close motions	Hidden mechanism from front view	Reconfigurable mechanism
Actuation	Manual (spring)	Actuator	Smart material
Locking	Simple (latch)	Automatic (solenoid)	Smart switch
Prototyping	Simulation	Manual	Automatic

Prizes: 1<sup>st</sup> place \$500, 2<sup>nd</sup> place \$300, 3<sup>rd</sup> \$200, all in CAD and with award plaques.