

## **Colloquium**

### **Synthetic Morphogenesis: 3D curved structures from flat sheets**

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We provide generic methods to produce curved surfaces from flat sheets. These methods do not involve any cutting and gluing which is a property they share with origami. The first method is motivated by the standard tailoring approach of producing an approximately curved surface from a cloth where curvilinear triangular wedges ('darts') from the cloth are cut and discarded and then the edges of the remaining cloth are stitched together. The second method aims to bring about the desired new Riemannian metric via an appropriate pattern of local contractions. The third method is based on triangulation and seeks to induce the desired local distances. The second and the third methods, and also the first method for the special case of surfaces of revolution, are algorithmic in nature.

***Wednesday, Feb 5<sup>th</sup> 2020***

***4:00 PM (Tea/Coffee at 3:30 PM)***

***Auditorium, TIFR-H***