

## Computer Science Seminar Series

### National Capital Region

## Foldability Analysis of Polyhedral Nets

**Speaker: Dr. Jyh-Ming Lien**  
**Computer Science Department,**  
**George Mason University**  
**Friday, Sept 27, 2019**  
**1-2PM, NVC 214**

### Abstract

In this talk, I will present our recent development in creating 2D structures that can be easily folded into 3D structures. Many existing methods have been proposed to produce 2D foldable structures from 3D models, but the resulting foldable structures obtained from these methods can be extremely complex and challenging to fold. A foldability-aware structure can significantly increase the feasibility of its physical realization that can be folded either manually by humans or autonomously by robots or self-folding machines. Several computational approaches will be discussed in this talk to achieve this important objective. This talk will be concluded with on-going efforts lead by our group at GMU and our collaborators on applying these foldable structures to STEM education and novel material design.

### Biography



Prof. Jyh-Ming Lien is an Associate Professor in the Department of Computer Science and is affiliated with the Motion and Shape Computing (MASC, <https://masc.cs.gmu.edu/>) group and the Autonomous Robotics Laboratory at George Mason University. His research is in the areas of geometric processing and computational geometry. Details of his current work can be found at <https://cs.gmu.edu/~jmlien/>.