

## Mark Yim

Professor  
Mechanical Engineering and Applied Mechanics (MEAM)

[Email](#) | [Research Webpage](#)

Honors and Awards: Christian R. and Mary F. Lindback Award for Distinguished Teaching - 2009

Research Expertise: Robotics | Mechanical Systems | Mechanical Design

Mark's research interests began with modular robots that are made up of identical active components that can be arranged to form many different configurations, ranging from a snake robot to a humanoid to a 17 legged centipede. These systems can also self-reconfigure, changing the robot's shape to suit the task. In addition to self-reconfiguring and self-assembling robots, Mark has also started work on flying robots, and task specification, working to figure out how to specify a task so that a robot configuration can optimally satisfy that task.

Member of:

- [General Robotics, Automation, Sensing and Perception \(GRASP\) Lab](#)

Education:

PhD Mechanical Engineering 1994 - Stanford University  
MS Mechanical Engineering 1989 - Stanford University  
BS Engineering Mechanics 1987 - Johns Hopkins University

Recent Publications 

- [An underactuated propeller for attitude control in micro air vehicles](#), Paulos, J. | Yim, M., IEEE International Conference on Intelligent Robots and Systems, 2013
- [Assembly planning for planar structures of a brick wall pattern with rectangular modular robots](#), Seo, J. | Yim, M. | Kumar, V., IEEE International Conference on Automation Science and Engineering, 2013
- [Modular advantage and kinematic decoupling in gravity compensated robotic systems](#), Eckenstein, N. | Yim, M., Journal of Mechanisms and Robotics, 2013
- [The X-fa An improved planar passive mechanical connector for modular self-reconfigurable robots](#), Eckenstein, N. | Yim, M., IEEE International Conference on Intelligent Robots and Systems, 2012
- [ModLock: A manual connector for reconfigurable modular robots](#), Davey, J. | Sastra, J. | Piccoli, M. | Yim, M., IEEE International Conference on Intelligent Robots and Systems, 2012

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