James Madison University

# SUMS Conference 2011









### Ruth Charney, Brandeis University

*From Robotics to Geometry*

Children build models with 3-dimensional cubes; mathematicians build them with higher dimensional cubes! Many physical systems can be represented by geometric models based on cubes of varying dimensions. Using an example from robotics, we will investigate how such models are constructed and what can we learn from their strange, but beautiful geometry.



### Sir Randolph Bacon III, cousin-in-law to Colin Adams, Williams College

*Blown Away: What Knot to Do When Sailing*

Being a tale of adventure on the high seas involving great risk to the tale teller, and how an understanding of the mathematical theory of knots saved his bacon. No nautical or mathematical background assumed.

# Saturday
# October 22

**Advance registration by Oct. 7**
**Student talks/posters by Oct. 7**
**Funding requests by Sept. 22**

**www.jmu.edu/mathstat/sums**