

# RIVIER COLLEGE MATHEMATICS AND COMPUTER SCIENCE LECTURE SERIES (SPRING 2006)\*

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## Mathematics and Computer Science Lecture Series 2006

**March 23, 2006, 7:45 pm - 8:45 pm, Education Center Auditorium EDU 305**

**“New Methods of Software Reliability: Estimations and Projections”**

**David J. Dwyer, BAE Systems**

David J. Dwyer is a reliability engineer at BAE Systems, Nashua, NH. He has a M.S. in Computer Science from Rivier College (1999), M.S. in Electrical Engineering from Northeastern University (1980), and B.S. in Physics from Providence College (1963).

The presentation addressed methodology in estimating and projecting software reliability. It will help academic audience to find answers to vital questions: How reliable are industrial software products? Can software reliability be measured exactly? New methods are offered for estimating the test time required and software failures to be corrected to reach reliability goals of the test-and-fix programs. Slides are available at <http://www.rivier.edu/departments/mathcs/Resources/LectureSeries/SoftwareReliability.ppt>.

**Thursday, April 20, 2006, DeMoulas Room, Education Center**

**Origami activity: 11:45 AM -12:10 PM**

**Presentation: 12:15 PM –1:00 PM**

*Humanity Series Presentation*

*Co-Sponsored by the Department of Mathematics and Computer Science (Dr. Teresa Magnus)*

**“Mathematics and the Origami Revolution”**

**Amanda Serenevy, Boston University**

Amanda Serenevy is completing her mathematics Ph.D. work at Boston University on synchrony and suppression in networks of inhibitory neurons, a mathematical study of the rhythms of neurons in the brain, but her interests in mathematics are more diverse. She has taught courses and presented workshops to mathematical research groups, college students, high school students, and elementary students on such topics as biodynamics, mathematical origami, perspective drawing, knots and topology, polytopes, and fractal geometry. She has taught in the nationally recognized Math Circle enrichment program and at the Boston Museum of Science. Amanda has begun a project “Math on the Street” in which her goal is to introduce the beauty and universality of mathematics to people who might not otherwise be exposed to it. Origami is one of several topics that she uses to share her enthusiasm for mathematics with general audiences.

Abstract:

In the last few decades, paper folders have revolutionized origami by using mathematics to address questions arising naturally in their art. This revolution has resulted in folded figures that were traditionally considered impossible and new genres of origami. It has also spawned a new field of mathematics and produced exciting technologies.

During this presentation, we have explored the amazing new developments that have resulted from the interplay of mathematics and origami. We have seen how a simple module can be used to make origami polyhedra in a wide range of shapes. Finally, we have encountered mathematical origami more directly by tackling a number of challenge questions relating to these polyhedra.

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\* WEB: <http://www.rivier.edu/departments/mathcs/Resources/LectureSeries.htm>