

## Mathematics and Art at JMM

Ryan Miller

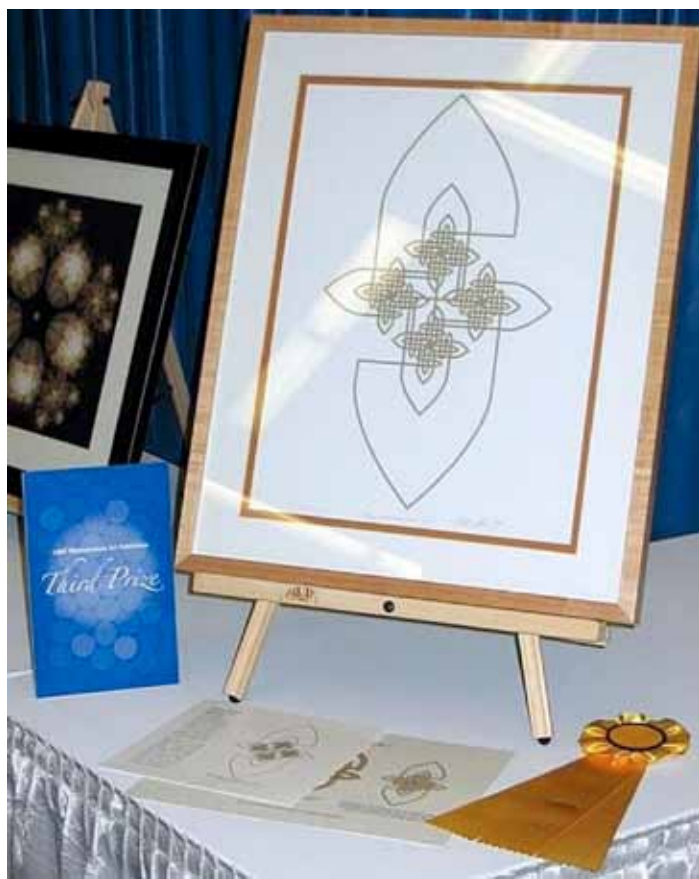
A number of different styles were on display at the 2009 Mathematical Art Exhibition at the Joint Mathematics Meetings in Washington, D.C. as 36 artists presented their best works of mathematical art. While this was not the first Mathematical Art Exhibit at the Joint Meetings, this was the first time prizes were awarded to the top three pieces.

Four judges, two appointed by the MAA and two by the American Mathematical Society, were faced with the difficult challenge of selecting three works of art that stood above the rest.

Arizona State Professor Goran Konjevod was awarded first prize and \$500 for his origami piece titled, “Wave (32), 2006.” The work, which was folded from a square sheet of paper,



First place winner “Wave (32), 2006” by Professor Goran Konjevod.



Third place winner “Twice Iterated Knot No. 1, 2008” by Robert Fathauer.

is a pleat tessellation with a peculiar symmetry and tension created by locking the edges to cause the corners to bulge in opposite directions.

University of California, Berkeley Professor Carlo Séquin’s “Figure-8 Knot, 2007,” on the cover of this issue of MAA FOCUS, was awarded the \$300 second prize. The knot is the second simplest which can be drawn in the plane with as few as four crossings. Séquin’s particular realization has been modeled as a B-spline along which a crescent-shaped cross section has been swept.

Third place and \$200 was awarded to Robert Fathauer for his piece, “Twice Iterated Knot No. 1, 2008.” His knot starts with a nine-crossing knot that has been carefully arranged to allow for seamless iteration. The end result was a complex knot possessing self similarity.

The prizes “for aesthetically pleasing works that combine mathematics and art” were established in 2008 through an endowment provided to the AMS by an anonymous donor who wished to acknowledge those whose work demonstrate the beauty and elegance of mathematics expressed in a visual art form. 🏆