

**Meeting:** 1003, Atlanta, Georgia, MAA CP B1, MAA Session on My Favorite Demo: Innovative Strategies for Mathematics Instructors, I

1003-B1-442      **Deane Eugene Arganbright\*** ([arganbright@math.kaist.ac.kr](mailto:arganbright@math.kaist.ac.kr)), Department of Mathematics, Korea Advanced Inst. of Science & Technology, 305-701 Daejeon, South Korea. *Interpolation Polynomials, Bezier Curves, and Cubic Splines with Excel.*

Most of the important topics and algorithms of numerical analysis can be implemented in a natural manner using a spreadsheet. This presentation consists of an interactive demonstration that has been used in the classroom to introduce the topics of polynomial interpolation, Bezier curves, and cubic splines in numerical analysis, linear algebra, and special topics courses. This demonstration shows the construction of the curves in a way that introduces and illustrates the underlying mathematics through interactive, visual, and animated Excel models. Such demonstrations help students to visualize these topics, while it further provides them with a creative tool for constructing their own models for further exploration. (Received September 14, 2004)