1046-A0-220 **Michael J. Bardzell***, Salisbury University, Salisbury, MD. *From groups to graphics: Stories of undergraduate research in visualizing abstract mathematics.*

Undergraduate research is becoming an increasingly important component of a student.s mathematics education at colleges and universities across the country. Finding problems that are suitable for undergraduates, yet still offer a true research experience, can be challenging. In this talk we present examples of successful student research from the *PascGalois Project*, which uses colorful computer graphics to generate structures (cellular automata) over finite groups. Many interesting patterns arise which can be understood using concepts from group theory and number theory. Work from several students, as well as two summer one-week student research retreats, will be highlighted. (Received August 20, 2008)