1086-VN-2440 **Rigoberto Florez*** (rigo.florez@citadel.edu), 171 Moultrie St., Dept of Mathematics and Computer Science, The Citadel, Charleston, SC 29409, **Eva Czabarka** (czabarka@math.sc.edu), Dept of Mathematics, LeConte College, University of South Carolina, 1523 Greene Street, Columbia, SC 29208, and **Leandro Junes** (junes@calu.edu), 250 University Ave, Dept of Mathematics, Computer Science, California, PA 15419. *Convolutions on the Geometry of Hosoya's Triangle.* Preliminary report.

The generalized Hosoya's triangle is an arrangement of numbers where each entry is a product of two generalized Fibonacci numbers. We define a discrete convolution based on the entries of generalized Hosoya's triangle.

Using generating functions we prove that this convolution is a combination of generalized Fibonacci numbers and Lucas numbers. We discuss how a simple formula, resulting from a particular case of the convolution, applies to count words in formal languages. (Received September 25, 2012)