

1077-B1-290      **Andrzej K Brodzik\*** ([abrodzik@mitre.org](mailto:abrodzik@mitre.org)), 202 Burlington Road, Bedford, MA 01730.

*Between pattern and chance.*

Identification or design of “interesting” patterns is at the center stage of many mathematical and artistic investigations. Yet it is often not the pattern itself but the process of pattern generation that is of most interest. In 1913 Marcel Duchamp introduced the three standard stoppages which he subsequently used, by dropping them from a height of one meter in a random manner on a canvas, to create a painting. Since then the insertion of chance into the creative process in general and into pattern creation in particular became widely accepted. In this talk we consider the intimate relationship between pattern and chance in the mathematical and concrete arts. In particular, we examine the intertwining of pattern and chance in popular in many branches of science and engineering algebraic constructions known as ideal sequences and in their extensions, ideal quilts. (Received August 18, 2011)