Pure Mathematics Seminar

A Tour of DNA Tile Self-Assembly

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In the 1990s, Ned Seeman and Erik Winfree developed a method for programming sets of short DNA strands to spontaneously assemble into desired nanoscale structures. Simultaneously, Winfree formalized these systems as the *abstract DNA tile self-assembly model*. In this model, square *tiles* attach edgewise via matching bonding sites to form polyomino-shaped structures.

Since then, the study of both experimental and theoretical DNA tile self-assembly has grown tremendously. In this talk, we explore the theoretical half of this work. Starting with its roots in the Ph.D. thesis of Winfree, we trace the proliferation of models, problems, and techniques, ending with ongoing work to develop a "structural complexity theory for tile assembly".

Date: **Friday, March 3, 2017**
Time: **12:00 pm**
Place: **Edinburg:** EMAGC 1.302, **Brownsville:** BLIBR 2.206

The talk will delivered live at the *Edinburg* campus and will be streamed to the Brownsville campus

Coffee (and maybe cookies) will be served.

For further information or for special accommodations, please contact Dr. Sergey Grigorian via email at [sergey.grigorian@utrgv.edu], or Dr. Alexey Garber at [alexey.garber@utrgv.edu], or visit the webpage http://www.utrgv.edu/math/news-events/seminars/puremath/index.htm