

**Baylor Undergraduate Lecture Series
in
Mathematics
Seventh Annual Lectures**



Arthur Benjamin
Professor of Mathematics
Harvey Mudd College

**Combinatorial Trigonometry
(and a method to DIE for)**

**Tuesday, October 21, 2014 • 4:00 p.m.
Baylor Sciences Building D109**

Many trigonometric identities, including the Pythagorean theorem, have combinatorial proofs. Furthermore, some combinatorial problems have trigonometric solutions. All of these problems can be reduced to alternating sums, and are attacked by a technique we call D.I.E. (Description, Involution, Exception). This technique offers new insights to identities involving binomial coefficients, Fibonacci numbers, derangements and Chebyshev polynomials.

Mathemagics!

**Tuesday, October 21, 2014 • 7:00 p.m.
Baylor Sciences Building B110**

Dr. Arthur Benjamin is a mathematician and a magician. In his entertaining and fast-paced performance, he will demonstrate and explain how to mentally add and multiply numbers faster than a calculator, how to figure out the day of the week of any date in history, and other amazing feats of mind. He has presented his mixture of math and magic to audiences all over the world.



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