

# Cal Poly Department of Mathematics

## Puzzle of the Week

Feb 14 - 20, 2013

From Tom O'Neil:

Compute

$$\int_0^{\infty} \left( x - \frac{x^3}{2} + \frac{x^5}{2 \cdot 4} - \frac{x^7}{2 \cdot 4 \cdot 6} + \dots \right) \left( 1 + \frac{x^2}{2^2} + \frac{x^4}{2^2 \cdot 4^2} + \frac{x^6}{2^2 \cdot 4^2 \cdot 6^2} + \dots \right) dx$$

*Solutions should be submitted to Morgan Sherman:*

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Office: bldg 25 room 310*

*before next Thursday. Those with correct and complete solutions will have their names listed on the puzzle's web site (see below) as well as in next week's email announcement. Anybody is welcome to make a submission.*

<http://www.calpoly.edu/~sherman1/puzzleoftheweek>