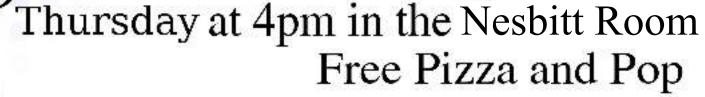
Michigan Math Club Thursday at 4pm in the Nesbitt Room



Approximating π for approximate π day

David Speyer

This talk will feature identities like

$$\pi = \frac{3}{\cos(\frac{\pi}{12})\cos(\frac{\pi}{24})\cos(\frac{\pi}{48})\cos(\frac{\pi}{96})\cdots}$$

$$\pi = 12\tan^{-1}(\frac{1}{7}) + 8\tan^{-1}(\frac{1}{8}) + 8\tan^{-1}(\frac{1}{18})$$

$$\pi = \sum_{n=0}^{\infty} \frac{(-1)^n}{4^n} \left(\frac{2}{4n+1} + \frac{2}{4n+2} + \frac{1}{4n+3}\right)$$

and explain how they have been used to compute π .

