R. William Gosper and his Identities

by

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Abstract: I will say something about Bill Gosper and his work. I will present some of the identities he discovered and where they come from and the mathematical concepts behind them. The left-hand sides of some sample formulas are:

\[ \sum_{n=1}^{\infty} \frac{1}{n^2} \cos \left( \frac{\pi}{n + \sqrt{n^2 + 1}} \right) = ?? \]

and

\[ 1 + \sum_{n=1}^{\infty} (x^{1/2} - c)(x^{1/4} - c) \cdots (x^{2^{-n}} - c) = ?? \]

for \(|1 - c| < 1, x \not\in (-\infty, 0)\). If interested try to fill in the ?? in the right-hand sides. The second identity is not very difficult to prove but the first is harder.

Date: 3 February 2010 (Wednesday)
Time: 4:30pm – 5:30pm
Venue: Room B6605 (College Conference Room)
Blue Zone, Level 6
Academic Building
City University of Hong Kong

(Tea, coffee and cookies will be provided at the Faculty Conference Room in B6605 before the colloquium from 4:00 to 4:30pm. Please come and join us.)

** All interested are welcome **
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