

MANY CHEERFUL FACTS

presents

Divergent Series

a talk by Theo Johnson-Freyd

13:10 – 14:00 on Thursday, October 18, in room 1015.

Mathematicians through the ages have varied from terrified of divergent sums to only mildly scared of them: Euler, most famously, made great use of divergent series, whereas Abel called them “the invention of the devil”. In this talk, I will survey the most important methods of summing divergent series, and make general vague remarks about them. I will quote many results, but will studiously avoid proving anything.

*I am the very model of a modern Major General,
I've information vegetable, animal, and mineral,
I know the kings of England, and I quote the fights historical
From Marathon to Waterloo, in order categorical;
I'm very well acquainted, too, with matters mathematical,
I understand equations, both the simple and quadratical,
About binomial theorem I'm teeming with a lot o' news,
With many cheerful facts about the square of the hypotenuse!*

- Gilbert & Sullivan $P \circ P$

The website for Many Cheerful Facts is
<http://www.math.berkeley.edu/~mcf>