



The Abdus Salam
International Centre
for Theoretical Physics
50th Anniversary 1964-2014



MATHEMATICS SEMINARS 2014

Thursday, 6 November, at 16.30 hrs.

Don B. Zagier
(ICTP)

Asymptotics (Basic Notions Seminar)

1. What does it mean, and why is true, that

$$1^5 + 2^5 + 3^5 + 4^5 + \dots = \frac{-1}{252} ?$$

2. How does one compute the slowly convergent series

$$\sum_{n \geq 0} \binom{-1/2}{n}^4 = \sum_{n \geq 0} \binom{2n}{n}^4 \frac{1}{28^n}$$

to 500 digits quickly?

Both problems and many others from every part of mathematics, can be solved using ideas of asymptotic analysis. I will try to show how some of these things work.

VENUE: Luigi Stasi Seminar Room
(ICTP Leonardo da Vinci Building, first floor)