



Berlin
Mathematical
School

BMS Friday Colloquium

Friday, 18 June 2010, 3:30 pm

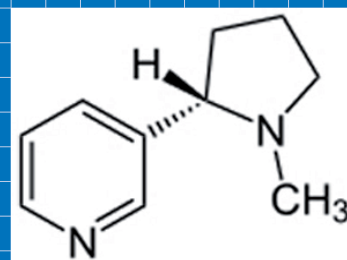
BMS Loft, Urania
An der Urania 17, 10787 Berlin



Doron Zeilberger (Rutgers U):

"The Number of Isomers of Nicotine"

In 1843 **Louis Melsens** (1814-1886) discovered the "empirical formula" of **Nicotine**, $C_{10}H_{14}N_2$, but its structure remained a challenging open problem in chemistry for fifty years, until University of Berlin chemist, Prof. Dr. Geheimrat **Adolf Pinner** (1842-1909) discovered it in 1893. (See the Ency. Britannica 11th edition (1911) **entry**).



But there could have been many other possibilities. How many? No one knows! In this talk, Doron Zeilberger will try and explain how to use today's combinatorial enumeration know-how, combined with the powerful computing resources we have today, to approach such problems.

[Note: He will try to figure out the answer by himself until the talk, but he would like it even better if any of the BMS students could come up with the answer themselves, and he is offering a prize of 100 EU for the first (correct) answer.]

