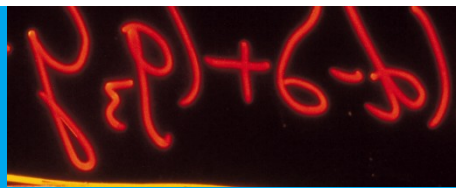
DESY
Physics Seminar



Fifty Years Later, Are Those Random Numbers Finally Good Enough?

Fred James (CERN)

Tuesday, 19 February 2013, 16:45 h
DESY Auditorium

As a grad student in 1962, I discovered that the funny MC results I was getting were caused by a poor random number generator. Thirty years after that, the Phys Rev Letters paper of Ferrenberg et al showed that things had not yet improved, relative to the increased complexity of problems we were trying to solve. Then suddenly, due to the work of theoretical physicists, the situation changed dramatically, both with respect to pseudorandom numbers (the kind most of us use) and quasirandom points (the kind that are supposed to give convergence faster than 1/sqrt(N)). But very few MC users seem to be aware of the recent results in this field traditionally reserved for number theorists.

The seminar is integrated in the Helmholtz-Alliance-Workshop "Monte Carlo Methods in Natural Sciences, Engineering and Economics":

http://mc2013.desy.de

Accelerators | Photon Science | Particle Physics

Deutsches Elektronen-Synchrotron
A Research Centre of the Helmholtz Association