IMPLEMENTATION and TESTING
RANDOM NUMBER GENERATORS

MIXMAX NETWORK MEETING
3 July 2015
and
SUMMER RESEARCH WORKSHOP
6 July - 17 July
CERN, Geneva

1. Demokritos National Centre for Scientific Research, Greece
2. PH-SFT CERN, Switzerland
3. Nanjing University, China
4. Niels Bohr Institute, Copenhagen University, Denmark
5. A. I. Alikhanyan National Science Laboratory, Armenia

Programme, July 3

Morning section chair G. Savvidy
9:00-9:05 J. Harvey. Welcome.
9:05-9:40 L. Moneta. Random number generators in ROOT.
10:20-10:40 Coffee Break
10:40-11:15 G. Karyan. Statistical tests for MIXMAX RNG.
11:50-12:30 F. James. Overview of RNG’s.

12:30-14:00 Lanch

Evening section chair L. Moneta
14:00-14:45 J. Apostolakis. Use cases and requirements from Detector Simulation
14:45-15:30 A. Görlich. Monte-Carlo Simulations in Quantum Gravity and RNG’s
15:30-16:00 G. Savvidy. RNG based on Anosov-Kolmogorov systems: the entropy, periodic trajectories, Galois field and RNG’s
16:00-17:00 Round Table Discussion
SUMMER RESEARCH WORKSHOP, July 6 - July 10

July 6. Random number generators in ROOT.
July 7. Implementation of the MIXMAX random number generator.
July 8. Kolmogorov-Smirnov statistical tests in various dimensions.
July 10. Comparison of statistical properties of random number generators.

SUMMER RESEARCH WORKSHOP, July 13 - July 17

July 13. Use cases and requirements from Detector Simulation
July 14. Monte-Carlo Simulations in Quantum Field Theory and Gravity
July 15. Anosov and Kolmogorov dynamical systems
July 16. The entropy of the Anosov C-systems.
July 17. Periodic trajectories of C-systems and RNG’s.