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## **Title: Scope of Various Random Number Generators in Ant System Approach for TSP**

Abstract: Experimented on heuristic, based on an ant system approach for traveling Salesman problem, are several quasi and pseudo-random number generators. This experiment is to explore if any particular generator is most desirable. Such an experiment on large samples has the potential to rank the performance of the generators for the foregoing heuristic. This is just to seek an answer to the controversial performance ranking of the generators in probabilistic/statically sense.

Syamal K Sen is currently a professor in the Dept. of Mathematical Sciences, Florida Institute of Technology (FIT), Melbourne, Florida. He did his Ph.D. (Engg.) in Computational Science from the prestigious Indian Institute of Science (IISc), Bangalore, India in 1973 and then continued as a faculty of this institute for 33 years. He was a professor of Supercomputer Computer Education and Research Centre of IISc during 1996-2004 before joining FIT in January 2004. He held a Fulbright Fellowship for senior teachers in 1991 and worked in FIT. He also held faculty positions, on leave from IISc, in several universities around the globe including University of Mauritius (Professor, Maths., 1997-98), Mauritius, Florida Institute of Technology (Visiting Professor, Math. Sciences, 1995-96), Al-Fateh University (Associate Professor, Computer Engg, 1981-83.), Tripoli, Libya, University of the West Indies (Lecturer, Maths., 1975-76), Barbados..

He has published over 130 research articles in refereed international journals such as Nonlinear World, Appl. Maths. and Computation, J. of Math. Analysis and Application, Simulation, Int. J. of Computer Maths., Int. J Systems Sci., IEEE Trans. Computers, Internl. J. Control, Internat. J. Math. & Math. Sci., Matrix & Tensor Qrtly, Acta Applicande Mathematicae, J. Computational and Applied Mathematics, Advances in Modelling and Simulation, Int. J. Engineering Simulation, Neural, Parallel and Scientific Computations, Nonlinear Analysis, Computers and Mathematics with Applications, Mathematical and Computer Modelling, Int. J. Innovative Computing, Information and Control, J. Computational Methods in Sciences and Engineering, and Computers & Mathematics with Applications.

Besides, he has coauthored seven books including the most recent one entitled "Computational Error and Complexity in Science and Engineering (with V. Lakshmikantham), Elsevier, Amsterdam, 2005. He had also authored several book chapters. All his research and book publications are in several areas mainly in computational science. He has been teaching several courses in areas such as stochastic and deterministic operations research, applied statistical analysis, and computational mathematics since late sixties.

Further, he has been a member of the editorial board of international journals such as Computer Science and Informatics (India), and Neural, Parallel and Scientific Computations (USA). He has also been cited in Marquis Whos Who (Sep 2005).

**Gholam "Ali" Shaykhian** is a Software Engineer with Engineering Directorate, NASA KSC. Shaykhian has worked at KSC since 1986. He joined NASA in April 2000. He is a professional member of the American Society for Engineering Education (ASEE), serving as the Program Chair for the Minorities in Engineering Division of ASEE and is a senior member of the Institute of Electrical and Electronic (IEEE). He teaches graduate courses at Florida Institute of Technology, University College, Melbourne, Florida.