The 8th International Conference on Lattice Path Combinatorics and Applications
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Title: *The World of Jagdish Narayan Srivastava*

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ABSTRACT: Professor Jagdish Narayan Srivastava (JNS) was the founder of *Journal of Statistical Planning and Inference* (*JSPI*). One of the objectives of this journal under the JNS leadership, vision, and influence was to have a forum where Statistics and Discrete Mathematics "interact freely". The proceedings of the first six *International Conferences on Lattice Path Combinatorics and Applications* appeared as special issues of this journal indicated by volume- number(s)- year: 14 - 1 - 1986, 34 - 1 and 2 - 1993, 54 - 1 - 1996, 101 - 1 and 2 - 2002, 135 - 1 - 2005, 140 - 8 - 2010. JNS passed away on November 18, 2010 after the publication of sixth International Conference proceedings as a special issue of *JSPI* as well as the seventh International Conference, July 2010. At the home page of seventh International Conference web site, it was announced in submission: *As has been the practice, the papers after proper reviewing process will be published in a Special Issue of Journal of Statistical Planning and Inference* (http://www3.unisi.it/eventi/lattice_path_2010/submission.htm).

JNS, a professor emeritus of statistics at Colorado State University (CSU), Fort Collins will be remembered for his leadership in statistics profession; his thought provoking, penetrating, and deeper questions at the professional meetings and conferences; and his pioneering research contributions in design of experiments as well as in multivariate analysis, survey sampling, reliability, coding theory, combinatorial theory, and many other areas of statistics and mathematics. The 1973 conference "Statistical Design and Analysis of Experiments and Linear Models" organized by him in Fort Collins started a new era of statistical design by bringing together leaders from different areas of statistics and with different interests covering many theoretical as well as applied areas and demonstrating that both "good" design and "efficient" inference are fundamental for extracting the pertinent information from the data collected for scientific investigations. With this spirit, JNS found the Journal of Statistical Planning and Inference (JSPI) in 1975 with the cooperation and support from the distinguished statisticians from all over the world. During this period, he introduced "search linear models and search designs" his ground breaking research. His Ph.D. advisor Professor R.C. Bose was a CSU faculty after his retirement in 1971 from the University of North Carolina (UNC), Chapel Hill. Professor Bose remarked in several occasions that his student JNS now truly surpassed him, the recognition of a great mind and a highly spirited advisor. As a Ph.D. student and a post-doctoral researcher at UNC, JNS worked also with Professor S.N. Roy, another great mind and an outstanding individual. JNS was also inspired by Professors R.A. Fisher, J. Neyman, P.C. Mahalanobis, C.R. Rao, J. Kiefer, and H. Chernoff. In design theory, JNS developed the mathematical theory of confounding for

asymmetrical factorial experiments (with Professor K. Kishen), optimum balanced designs for fractional factorial experiments, introducing and studying balanced arrays and multidimensional partially balanced association schemes, leading to the non-commutative algebra of Bose and Srivastava, which is a multi-set generalization of the Bose–Mesner algebra; created the new and influential fields of search linear models and search designs and its application in fractional factorial experiments as well as in figuring out non- additivity presence in row-column designs. In multivariate analysis, he worked on MANOVA with complete as well as incomplete data in estimation, hypothesis testing, classification, and meta-analysis; and a monograph on design and analysis of quantitative multi-response experiments jointly with Professors S.N. Roy and R. Gnanadesikan. In reliability theory, JNS introduced self-relocating designs (SRD) for comparative experiments. In survey sampling, JNS introduced a general class of estimators with almost all of the well-known estimators as the special cases. In coding theory, he introduced ''Srivastava- code'', a class of parameterized error-correcting codes.