

**THE PROMOTION AND DEVELOPMENT OF  
APPLIED PROBABILITY:  
A NOTE ON THE CONTRIBUTIONS OF J. GANI**

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In his article in this volume (Gani (1990)), Joe Gani (JG) has given an outline of the genesis of an identity for Applied Probability. His modesty, however, has precluded him from indicating just how important his own role has been in the shaping of this identity. He has mentioned the coining of the term *Applied Probability* for an American Mathematical Society Symposium in 1955 but he has not mentioned his many publications, beginning from 1955, which in no small measure helped to establish the vitality of the newly identified sub-discipline.

This work, initially in dam and storage theory and Markov chains, but later in mathematical genetics, biology and epidemiology, saw the firm establishment of the new principle of specialization in applications of probability, as distinct from occasional forays into the area which had been common.

The time was ripe for such developments. The success of operations research during World War II was a precursor. The early 1950s had seen key publications in storage from Hurst (1951) and Moran (1954), in queues from Kendall (1951) and Lindley (1952) and in inventories from Arrow, Harris and Marschak (1951) and Dvoretzky, Kiefer and Wolfowitz (1952). Through these works a convenient mathematical foundation was laid down for topics which were to be central in applied probability. JG began his Ph.D. studies at the Australian National University under Moran in 1954 in time to ride the ensuing wave of activity. A list of his publications appears in Heyde (1988, pp. 1-13). Amongst the most influential of his early ones is Gani (1957) which provided a comprehensive review and synthesis of the current state of dam and storage theory and which stimulated much subsequent research.

The new activity in probability soon raised publication problems. Mathematical journals tended to favour only the more theoretical of the probability papers and statistical journals favoured applications directly concerned with statistics. Much good probabilistic research was not adequately catered for and the need for new avenues of publication became clear.

The first probability journal to be established was *Teoriya Veroyatnostei i ee Primeneniya* which appeared in 1956 and this was followed by *Zeitschrift für*