Bell Numbers in Matsunaga's and Arima's Genjikō Combinatorics: Modern Perspectives and Local Limit Theorems

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Abstract

In this talk, we will introduce the contributions of Yoshisuke Matsunaga (1694?-1744) to the computation of Bell numbers in the eighteenth century (in the Edo period), providing modern perspectives to some unknown materials that are by far the earliest in the history of Bell numbers. Later clarification and developments by Yoriyuki Arima (1714-1783), and several new results such as the asymptotic distributions of a few closely related sequences are also given.