

geometry of Riemann surfaces will find it an indispensable reference. The general reader will find the presentation lucid but will have to look elsewhere for the many applications of this material. Some of them can be found in references [1, 2, 3, 5, 6, and 7] below.

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CLIFFORD J. EARLE

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Limit theorems for sums of exchangeable random variables, by Robert L. Taylor, Peter Z. Daffer, and Ronald F. Patterson. Rowman and Allanheld, Totowa, New Jersey, 1985, 152 pp., \$22.50. ISBN 0-8476-7435-5

Independent, identically distributed (i.i.d.) random variables form a cornerstone of theoretical statistics and the behavior of sums of such random variables constitutes a significant portion of probability theory. A natural generalization is from i.i.d. to exchangeable random variables, that is, to random variables $\{X_n, n \geq 1\}$ whose joint distributions are invariant under finite permutations. Indeed, the two notions are intertwined in a number of ways.

If n points are selected at random in the interval $[0, 1]$, then these n i.i.d. random variables (when ordered) partition the unit interval into $n + 1$ sub-intervals whose lengths $X_i, i = 1, \dots, n+1$ are exchangeable random variables.

Alternatively, if N balls are cast at random into n cells labelled $1, 2, \dots, n$ and Y_j is the number of the cell containing the j th ball, then Y_1, \dots, Y_N are i.i.d. However, if X_{ni} equals 1 or 0 according as the i th cell is or is not empty, then $\{X_{ni}, 1 \leq i \leq n, n \geq 1\}$ is a double array which, for each n , encompasses a finite collection of exchangeable random variables. The row sum $\sum_{i=1}^n X_{ni}$ is, of course, the number of empty cells.

If two infinite sequences of i.i.d. random variables with common distributions F and G are selected with probabilities α and $1 - \alpha$ respectively then the