vol. 5 (1939) pp. 784–788), the general canonical line as the line of intersection of the osculating planes of the projective geodesics in the directions $\overline{D}_k$ results. (Received October 2, 1942.)

83. Y. C. Wong: *Some Einstein spaces with conformally separable fundamental tensors.*

When the fundamental tensor $^*g_{\alpha\beta}$ of a Riemannian m-space is of the form $^*g_{ij}=[\rho(x^\alpha)]^{-2}g_{ij}(x^k)$, $^*g_{ip}=0$, $^*g_{pq}=[\sigma(x^\alpha)]^{-2}g_{pq}(x^r)$, $\alpha,\beta=1,\cdots,m$; $i,j,k=1,\cdots,n$; p, q, $r=n+1,\cdots,m$, it is said to be conformally separable; $^*g_{ij}$ and $^*g_{pq}$, with x^r and x^k, respectively, as parameters, are called its component tensors. The author studies in this paper the conformally separable tensor which is the fundamental tensor of an Einstein m-space and each of whose component tensors either is of dimension less than three or is a family of fundamental tensors of Einstein spaces. It is found that the constructions of such a conformally separable tensor is invariably reduced to the construction of the fundamental tensor g_{ij} of an Einstein n-space or a Riemannian 2-space for which the equation $y_{,ij}=-Ig_{ij}$ admits a non-constant solution for y, where the comma denotes covariant differentiation with respect to g_{ij} and I is an unspecified scalar. The author is content with this result, because the latter problem has already been considered in detail by H. W. Brinkmann in his study of Einstein spaces which are conformal to each other. (This paper will be published in the Trans. Amer. Math. Soc.) (Received October 2, 1942.)

Numerical Computation

84. H. E. Salzer and Abraham Hillman: *Exact values of the first 120 factorials.*

Due to their fundamental importance, the exact values of the first 120 factorials were computed and checked. 120! contains 199 digits. 100! agreed with Uhler's value (Proc. Nat. Acad. Sci. U.S.A. vol. 28 (1942) p. 61). When these values were compared with Potin's table of the first 50 factorials (*Formules et tables numériques*, p. 836) errors were found in Potin's values for 18!, 38!, 45!, and 50!. (Received November 11, 1942.)

Statistics and Probability

85. J. H. Curtiss: *A note on the theory of moment generating functions.*

The moment generating function (m.g.f.) of a variate X is defined as the mean value of exp (αX), the characteristic function (c.f.) as the mean value of exp (itX), where α and t are real. The purpose of this note is to place on record careful statements and proofs of the appropriate analogues for the m.g.f. of the well known uniqueness and limit theorems for the c.f. For example, Levy's continuity theorem assumes the following form: Let $F_n(x)$ and $G_n(\alpha)$ be, respectively, the d.f. and m.g.f. of a variate X_n. If $G_n(\alpha)$ exists for $|\alpha|<\alpha_1$ and for all $n\geqq n_0$, and if there exists a function $G(\alpha)$ defined for $|\alpha|\leqq\alpha_2<\alpha_1$, $\alpha_2>0$, such that $\lim_{n\to\infty}G_n(\alpha)=G(\alpha)$ uniformly, $|\alpha|\leqq\alpha_2$, then there exists a variate X with d.f. $F(x)$ such that $\lim_{n\to\infty}F_n(x)=F(x)$ uniformly in each finite interval of continuity of $F(x)$. The m.g.f. of X exists for $|\alpha|\leqq\alpha_2$ and is equal to $G(\alpha)$ in that interval. (Received October 9, 1942.)