118. Professor P. F. Smith: *On planar element strips*.

A strip of planar elements is a union of planar (surface) elements along a curve as defined by Sophus Lie. The differential geometry (classical) of element strips in space includes that of curves in spaces, and by it many theorems for surfaces are established. An element strip has three characteristic functions by which it is determined except as to position in space. Equations in series form for a strip are obtained, and also equations involving quadratures for certain special strips. Simultaneous differential invariants are derived for a strip and a surface upon which the strip lies. Two moving trihedrals (the tangent trihedral and the conjugate trihedral) are employed to give dual theorems. Spheres on three (four) consecutive points of strips are studied, and, dually, spheres on three (four) consecutive planes. The problem of two associated strips is discussed, and two examples (dual) when the strips have for corresponding elements a common center and radius of first (second) curvature are solved. (Received February 20, 1932.)

ERRATUM

Volume 37, page 818, abstract No. 343 (by L. E. Ward): substitute for the last sentence the following: "Conditions are given for the formal series for a function to converge uniformly to that function." The form in which this sentence appeared was due to clerical error.