3. Solution of equations satisfying the Lipschitz condition by the method of successive approximations.

4. Properties of the solutions.

5. Extension of the solution to a boundary of the region for which the equations are defined.

6. Solution by the Cauchy-Lipschitz method.

7. Solutions of infinite systems of linear differential equations having constant coefficients.

8. Solutions of infinite systems of linear differential equations having periodic coefficients.

LECTURE V. APPLICATIONS OF FUNCTIONS OF INFINITELY MANY VARIABLES.

1. Hill's problem of the motion of the lunar perigee.

2. Solutions of linear differential equations in the vicinity of singular points.

3. The determination of the moon's variational orbit.

4. Determination of periodic solutions of certain finite systems of differential equations.

5. The dynamics of a certain type of infinite universe.

At the close of the colloquium, Professor E. B. Van Vleck expressed the appreciation of those present for the excellence of the lectures, and tendered the thanks of the American Mathematical Society to the University of Chicago for the generous provision it had made for the colloquium, and for the welfare of the participants. An appropriate reply was made by Professor E. H. Moore.

W. A. HURWITZ.

NOTE ON VELOCITY SYSTEMS IN CURVED SPACE OF N DIMENSIONS.

BY PROFESSOR JOSEPH LIPKA.

(Read before the American Mathematical Society April 24, 1920.)

§ 1. *Introduction.*

IN a previous paper,* the author gave a complete geometric characterization of the families of curves (termed natural

* "Natural families of curves in a general curved space of n dimensions," *Trans. Amer. Math. Society*, vol. 13 (1912), pp. 77–95. We shall hereafter refer to this paper as "Natural families."