THE APRIL MEETING IN CHICAGO

The five hundred thirteenth meeting of the American Mathematical Society was held at the University of Chicago, Chicago, Illinois, on Friday and Saturday, April 22–23, 1955. Attendance was approximately 220, including 203 members of the Society.

By invitation of the Committee to Select Hour Speakers for Western Sectional Meetings, Professor A. H. Taub addressed the Society on the topic *Determination of flows behind shock waves* at 2:00 P.M. on Friday, April 22.

There were five sessions for contributed papers, two on Friday morning, two on Friday afternoon, and a final session which included late papers on Saturday morning. Presiding officers for the various sessions were Professors Tibor Radó, M. E. Shanks, Ralph Hull, G. B. Price, and L. M. Graves.

The files of the Mathematical Sciences Employment Register were available to interested parties during the course of the meeting.

The Society was entertained by a tea in the Common Room of Eckhart Hall on Friday afternoon, an occasion at which the ladies of the local Department of Mathematics acted as hostesses.

Abstracts of the papers presented follow. The name of a paper presented by title is followed by "*t.*" In the case of joint authorship, the name of the person presenting the paper is followed by (p).

ALGEBRA AND THEORY OF NUMBERS

530. A. A. Albert (p) and Mrs. M. S. Frank: *New classes of simple Lie algebras.*

Let $B_n = F[x_1, \cdots, x_n]$ be the algebra of all polynomials in $x_1, \cdots, x_n$ with coefficients in a field F of characteristic p subject only to the condition that $x_1^p = \cdots = x_n^p = 0$. Then it is shown that the set of all derivations $A = (a_1, \cdots, a_n)$ with divergence equal to the sum of coordinates is a simple Lie algebra of dimension $(n-1)p^n$ over F. The set of all derivations $D(\phi)$ defined by $a_i = \partial\phi/\partial x_{i+m}$, $a_{i+m} = -\partial\phi/\partial x_i$, where $n = 2m$ and the leading coefficient of ϕ is zero, forms a Lie algebra of dimension $p^{2m} - 2$. This algebra is simple but has the same dimension as a classical matric algebra. It is proved that it is isomorphic to the classical algebra if and only if $m = 1$ and $p = 3$. The algebra suggests the definition of a class of Lie algebras defined by the multiplication table $u_\alpha u_\beta = f(\alpha, \beta)u_{\alpha+\beta}$ where the subscripts range over the elements of an elementary p-group which is abelian and of order p^n, and where f is a functional. Using this definition we construct algebras which yield simple Lie algebras of dimensions p^m, $p^m - 1$, and $p^m - 2$ for every integer $m > 1$ and every odd prime p. (Received March 3, 1955.)

531. J. R. Büchi (p) and J. B. Wright: *Invariant theory in groups.* Preliminary report.