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The May Meeting of the Indiana Section

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the ray $\theta=\exp(2\pi i/n)$, thence along this ray to the origin. The integral along this ray equals $-\exp[(m+1)2\pi i/n]\int_0^R x^m dx/(x^n+a)$. Thus we get $\int_0^\infty x^m dx/(x^n+a)=\pi/\{na^{(n-m-1)/n}\sin[(m+1)\pi/n]\}$.

6. *On iterations with errors*, by Professor Peter Frank, Syracuse University.

The iterates of a contraction mapping T converge to the fixed point of the mapping. While computing T an error can be made. The two cases where the errors are uniformly bounded and "random" were discussed.

7. *Maximality and reflexive-symmetric relations*, by Professor A. R. Bednarek, University of Buffalo.

If R is a reflexive and symmetric relation over the space X, a set $S\subset X$ is called R-scattered if and only if X non Ry for every pair of distinct elements x, $y\in S$. E. J. Mickle and T. Rado (*On covering theorems*, Fund. Math., vol. 45, 1957, pp. 325–331) proved that given R as above there exists an R-scattered subset S of X such that $X=R(s)$; where $R(S)=\bigcup_{x\in S}R(x)$ and $R(x)=\{y\,|\,y\in X$ and $yRx\}$. In the present paper it is shown that this result is equivalent to the assertion of the existence of a maximal R-scattered set $S\subset X$ and to the proposition that every R-scattered subset of X is contained in a maximal R-scattered subset of X. By a particularization of R, some of the set-theoretic maximality principles were shown to be immediate consequents of the above.

8. *A generalization of the contracting mapping theorem and its numerical application*, by Professor W. C. Rheinboldt, Syracuse University.

The contraction mapping theorem is well known and various generalizations have been proposed. For numerical applications it is very advantageous to consider iterations of the form $x_{n+1}=F_n(x_n)$, where F_n is a convergent sequence of operators in a suitable metric space. A convergence-proof for such a type of iteration has been given by H. Ehrmann. Under rather general conditions another simple proof can be obtained by using the original contraction mapping theorem. Several examples of practical applications underline the usefulness of the method.

9. The M.A.A. films *Mathematical Induction*, with Professor L. A. Henkin, were shown.

N. G. GUNDERSON, *Secretary*

THE MAY MEETING OF THE INDIANA SECTION

The spring meeting of the Indiana Section of the Mathematical Association of America was held on Saturday, May 6, 1961, at Rose Polytechnic Institute, Terre Haute, Indiana. Professor T. P. Palmer of Rose Institute presided at the morning session and Professor John Yarnelle of Hanover College at the afternoon session. The meeting was attended by 62 persons, of whom 42 were members of the Association.

Officers for the year 1961–62, elected at the afternoon session, are Professor John Yarnelle, Hanover College, Chairman; Professor Ernst Snapper, Indiana University, Vice Chairman; and Professor P. T. Mielke, Wabash College, Secretary-Treasurer.

Professor Ernst Snapper delivered the invited hour address entitled "The Foundations of Mathematics" in which he sketched the history of the Russell Paradox and its effect upon the foundations of mathematics. The following short papers were presented:

1. *A preliminary report on the use of teaching machines in teaching mathematics to engineering and science students*, by Professor A. R. Schmidt, Rose Polytechnic Institute.

2. *Dexsinal gauges*, by Mr. Aaron Miller, Indianapolis, Indiana.

3. *A student's eye view of the Rose curriculum*, by Mr. S. D. Burton, Rose Polytechnic Institute.

4. *A comparison of five recent texts in unified calculus*, by Professor P. T. Mielke, Wabash College.

The texts reviewed were those of Johnson and Kiokemeister; Haaser, LaSalle and Sullivan; G. B. Thomas's 3rd Edition; Federer and Jonsson; and J. F. Randolph. The first three have been used at Wabash.

5. *A preliminary report on the Lynn Reeder Astronomical Laboratory*, by Professor I. P. Hooper, Rose Polytechnic Institute.

In addition to the short papers, Professor C. E. Maudlin, Rose Polytechnic Institute, conducted a tour of the Waters Computing Laboratory and supervised a demonstration of the Institute's Bendix G15d computer.

P. T. MIELKE, *Secretary*

PROFESSIONAL OPPORTUNITIES IN MATHEMATICS

A fifth edition of this popular booklet was published by the Association in September 1961. The new edition is a completely revised version of an article which appeared originally in the January 1951 number of this MONTHLY. It was prepared by a committee consisting of A. H. Bowker, C. R. Phelps, Mina S. Rees, S. A. Robertson, C. E. Sealander, and J. S. Frame, Chairman.

Although the new edition has been increased in size from 24 to 32 pages, the price remains at 25 cents for single copies and 20 cents each for five or more copies. Orders with payment should be sent to the Buffalo office of the Association.

CALENDAR OF FUTURE MEETINGS

Forty-fifth Annual Meeting, Sheraton-Gibson Hotel, Cincinnati, Ohio, January 24–26, 1962.

Forty-third Summer Meeting, University of British Columbia, Vancouver, August 27–29, 1962.

The following is a list of the Sections of the Association with dates of future meetings so far as they have been reported to the Associate Secretary.

ALLEGHENY MOUNTAIN, Chatham College, Pittsburgh, Pennsylvania, Spring, 1962.

ILLINOIS, North Central College, Naperville, May 11–12, 1962.

INDIANA, Butler University, Indianapolis, May 5, 1962.

IOWA, Wartburg College, Waverly, April 13–14, 1962.

KANSAS, Bethel College, North Newton, April 28, 1962.

KENTUCKY, University of Kentucky, Lexington, Spring, 1962.

LOUISIANA-MISSISSIPPI, Tulane University, New Orleans, Louisiana, February 16–17, 1962.

MARYLAND-DISTRICT OF COLUMBIA-VIRGINIA, Catholic University, Washington, D. C., December 2, 1961.

METROPOLITAN NEW YORK

MICHIGAN, University of Michigan, Ann Arbor, March 24, 1962.

MINNESOTA, Moorhead State College, November 4, 1961.

MISSOURI, Missouri School of Mines, Rolla, Spring, 1962.

NEBRASKA, University of Nebraska, Lincoln, April 13–14, 1962.

NEW JERSEY, St. Peter's College, Jersey City, November 4, 1961.

NORTHEASTERN, November 24, 1962

NORTHERN CALIFORNIA, University of California, Davis, January 13, 1962.

OHIO

OKLAHOMA, Oklahoma City University, October 27, 1961.

PACIFIC NORTHWEST, Western Washington College, Bellingham, June 14, 1963.

PHILADELPHIA, Ursinus College, Collegeville, Pennsylvania, November 25, 1961.

ROCKY MOUNTAIN, South Dakota School of Mines, Rapid City, Spring, 1962.

SOUTHEASTERN, Woman's College, University of North Carolina, Greensboro, March 30–31, 1962.

SOUTHERN CALIFORNIA, Long Beach State College, March 9, 1962.

SOUTHWESTERN

TEXAS, Rice University, Houston, April, 1962.

UPPER NEW YORK STATE, Clarkson College of Technology, Potsdam, Spring, 1962.

WISCONSIN, Marquette University, Milwaukee, May 12, 1962.