The March Meeting of the Metropolitan New York Section

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THE MARCH MEETING OF THE METROPOLITAN NEW YORK SECTION

The thirteenth annual meeting of the Metropolitan New York Section of the Mathematical Association of America was held at St. John's University, Brooklyn, New York, on March 27, 1954. Professor H. F. Fehr, Collegiate Vice-Chairman of the Section, presided at the morning session and Professor W. H. Fagerstrom, Chairman of the Section, presided at the afternoon session.

One hundred two persons attended the meeting, including the following seventy-five members of the Association:

R. G. Archibald, C. Y. Bartholomew, Jonas Beraru, Samuel Borofsky, C. B. Boyer, A. B. Brown, W. F. Cassidy, G. B. Charlesworth, K. P. Clancy, Charles Clos, P. J. Cocuzza, T. F. Cope, Demetrios Counes, W. H. H. Cowles, I. A. Dodes, J. N. Eastham, W. H. Fagerstrom, H. F. Fehr, J. M. Feld, A. B. Finkelstein, A. D. Fleshler, William Forman, R. M. Foster, G. C. Francis, D. H. Frank, E. T. Frankel, E. J. Germino, William Gonzalez, Bernard Greenspan, Harriet Griffin, W. T. Hamilton, C. M. Hebbert, G. C. Helme, E. Marie Hove, Aida Kalish, G. W. Kays, L. S. Kennison, H. S. Kieval, A. E. Kinney, M. S. Klamkin, Charles Koren, Edna Kramer-Lassar, C. H. Lehmann, D. R. Lintvedt, D. M. MacEwen, May H. Maria, Emanuel Mehr, F. H. Miller, Morris Morduchow, A. J. Mortola, Eugene Odin, Maria T. Pan, J. J. Quinn, J. K. Reckzeh, R. M. Reed, H. D. Ruderman, J. P. Russell, John Salerno, Charles Salkind, A. H. Sarno, Seymour Schuster, Abraham Schwartz, Aaron Shapiro, Edward Shapiro, James Singer, Geraldine D. Smith, Morris Smith, E. R. Stabler, Mildred M. Sullivan, R. L. Swain, P. M. Treuenfels, R. M. Walter, Alan Wayne, M. E. White, R. C. Yates.

The following officers were elected for the year 1954–55: Chairman, Professor H. F. Fehr, Teachers College, Columbia University; Collegiate Vice-Chairman, Professor A. B. Brown, Queens College; High School Vice-Chairman, Mr. D. H. Frank, Forest Hills High School; Secretary, Professor E. Marie Hove, Hofstra College; Treasurer, Mr. Aaron Shapiro, Midwood High School, Brooklyn.

At the business meeting, the following report on the activities of the Committee on Contests and Awards for the year 1952–53 was given by its chairman, Professor W. H. Fagerstrom:

The fourth annual contest was held on May 14, 1953. There were 476 schools registered for the contest. Of these, 291 were in the Metropolitan New York area, and the other 185 were distributed throughout 30 states and provinces. Among the schools in this latter group were those in the units operated by British Columbia, Oregon and Western N. Y. each conducting its own state wide contest using the contest questions of the Metropolitan New York Section.

The maximum score available for the school was 450 points, and the maximum for the individual was 150 points. The three highest ranking schools were:

James Madison High School, Brooklyn, N. Y., score 349; Phillips Academy, Andover, Mass., score 336; Talmudical Academy, New York, N. Y., score 325. The three highest ranking students were: E. Alan Phillips, Weston High School, Middlesex, Mass., score 130; Jerrold Rubin, James Madison High School, Brooklyn, N. Y., score 126; Isaac J. Sharon, Talmudical Academy, New York, N. Y., score 126. There were 28 recipients of Certificates of Merit. These certificates are awarded to the highest ranking student in each area, provided his score was 85 or more. Honor keys, given in recognition of the students having won the award for two consecutive years, were awarded to 13 students.

The Committee's receipts for the year were $1687.33. Its expenses were $1680.84, leaving a balance of $6.49.

Very Reverend John A. Flynn, C. M., S. T. D., President of St. John's University, welcomed the people at the meeting, and then the following papers were presented:

1. *Mathematics in communication*, by Dr. Brockway McMillan, Bell Telephone Laboratories, Murray Hill, New Jersey. (By invitation.)

The technology of communication is divided broadly into the fields of transmission (the actual conveying of messages) and switching (the setting up of transmission paths, when needed, out of equipment common to many possible paths). Most transmission is accomplished by devices governed by linear time-invariant differential equations. The relevant applicable mathematics is then centered around the Laplace and Fourier transforms. Switching devices are discrete and quantized; their relevant mathematics is that of logic, general algebra, and combinatorics. In both fields one distinguishes between the study of apparatus *per se* and the study of its performance in the environment of use. The latter study always invokes probability theory in some form. Almost all communication problems invoke linear graphs in their statement or study.

2. *Fundamental preparation in mathematics for college study in engineering science—What the colleges need and expect*, by Professor F. H. Miller, Cooper Union.

Topics, concepts and techniques needed by the engineering student for college work in mathematics were discussed. Some of the items are essential prerequisites; others are highly desirable if the requirements of physics and engineering departments are to be adequately met. Specific examples of various topics and applications of techniques were cited, reference being made to *A Report on Mathematics Preparation for Engineering Colleges*, by F. H. Miller and S. G. Roth, published in the Journal of Engineering Education, April, 1947, and to other reports bearing on the subject.

3. *Fundamental preparation in mathematics for college study in engineering science—What the high school can do*, by Mr. D. H. Frank, Forest Hills High School.

Difficulties in meeting the needs of the engineering school are: 1) Too little mathematics taken too long before entering college, 2) too many non-essentials taught, 3) lowering of standards, 4) requirements the same for all students, 5) small numbers entering engineering resulting in difficulty in separating them from the others, 6) interest in science and engineering not necessarily accompanied by interest in mathematics.

The ways to meet these problems are: 1) separation in classes or segregation within classes, 2) integration where possible, 3) rewriting of syllabus so that each student is exposed to all the

branches of mathematics for every term of the subject, 4) discontinuation of solid geometry as separate subject and distribution over all grades, 5) weeding out all non-essentials, 6) teaching elements of differential and integral calculus in last year with stress on all necessary concepts and techniques, 7) at all times teaching for the necessary disciplines so well exemplified in mathematics.

4. *On informal symbolic logic and its place in mathematical education*, by Professor E. R. Stabler, Hofstra College.

The speaker outlined some key topics for an informal treatment of symbolic logic. These included propositions, propositional functions, quantified propositions, and classes. Then he presented examples of the potential usefulness of these topics in promoting the objectives of high school and college mathematics courses. Finally, considering the possible role of informal logic in the curriculum, he proposed: 1) an experimental twelfth grade course in logic and logical aspects of mathematics; 2) incorporation of some informal symbolic logic in college mathematics courses for general students; 3) a basic college course including informal symbolic logic, and related foundational topics, for students majoring in mathematics.

E. MARIE HOVE, *Secretary*

THE MARCH MEETING OF THE MICHIGAN SECTION

The annual meeting of the Michigan Section of the Mathematical Association of America was held on March 27, 1954, at the University of Michigan, Ann Arbor, in conjunction with the meetings of the Michigan Academy of Science, Arts and Letters. Professor J. S. Frame of Michigan State University presided at both morning and afternoon sessions and at the luncheon and business meeting.

A total of one hundred thirty-two persons attended the meetings, including the following sixty-six members of the Association:

A. C. Andersen, K. J. Arnold, J. L. Bagg, J. W. Baldwin, R. C. F. Bartels, F. A. Beeler, J. H. Bell, W. S. Bicknell, J. W. Bradshaw, Fred Brafman, C. H. Butler, A. T. Butson, C. D. Calhoon, Y. W. Chen, R. V. Churchill, D. F. Coffey, S. D. Conte, J. W. Coy, C. C. Craig, D. A. Darling, P. S. Dwyer, C. M. Erikson, N. C. Fisk, K. W. Folley, J. S. Frame, J. W. Gaddum, Casper Goffman, G. W. Grotts, V. G. Grove, Frank Harary, Gerald Harrison, G. E. Hay, H. M. Heater, Fritz Herzog, T. H. Hildebrandt, E. F. Ingalls, L. G. Johnson, L. S. Johnston, P. S. Jones, Leo Katz, A. F. Lampen, J. F. Lanahan, Harry Langman, H. D. Larsen, K. B. Leisenring, J. F. Manogue, J. E. McLaughlin, L. E. Mehlenbacher, G. E. Meike, D. M. Mesner, E. E. Moise, W. K. Moore, H. W. Nace, A. L. Nelson, P. A. Nurnberger, Mary H. Payne, Emily C. Pixley, H. H. Pixley, J. H. Powell, P. H. Raker, H. F. Stelson, Brother Andrew Stephen, B. M. Stewart, J. G. Sowul, Leonard Tornheim, R. L. Wilder.

At the business meeting the nominating committee consisting of Professors H. D. Larsen, B. M. Stewart, and L. E. Mehlenbacher proposed Professor R. V. Churchill, University of Michigan, for chairman and Professor S. D. Conte, Wayne University, for Secretary-Treasurer for the year 1954–55. The slate was elected unanimously.

A motion was made by Professor R. V. Churchill and seconded by Professor V. G. Grove that the By-Laws of the Section be changed, if necessary, to allow the Sectional Governor to be a member of the Executive Committee of the Section. The motion was passed.