Chapter 3: Program Features

Program Highlights

The original purpose of the Oklahoma-Arkansas Section of the MAA was stated as follows in the 1933 By-Laws: "to assist in promoting the interests of mathematics in the State of Oklahoma (and later in the State of Arkansas also), especially in the collegiate field, by holding meetings for the presentation and discussion of papers, by conducting investigations for the purpose of improving the teaching of mathematics, by assisting in the building of the mathematical libraries, by cooperating with other organizations whenever this may be desirable for attaining these and other similar results." The section has continually strived to meet these goals during its first fifty years. Sectional meetings have been a forum for mathematical research as well as a catalyst for the development of improved mathematics teaching at the collegiate and secondary level. Nowhere is this more evident than in examining the programs for the contributed papers and the panel discussions at section meetings since the first section meeting was held in 1934. In this brief history we have reproduced some of the program highlights to prove the commitment of the section to its charter purposes. For example, Chapter 1 of this history has the complete programs for the first section meeting, the October 1955 meeting, the March 1956 meeting, and the April 1957 meeting.

There are other ways to see the commitment of the section to its purposes. In this chapter we present the distinguished list of mathematics educators and researchers that were invited by the section to present the fruits of their mathematical activity to Oklahoma and Arkansas members of the MAA. In 1972 the section instituted the N. A. Court Lectures. The N. A. Court Lecture Series guaranteed that the annual program for the Oklahoma-Arkansas Section would provide section members with two invited lecture presentations. The Court Lectures are presented in this chapter as well.

Highlights of the many activities of the section are:

High School Mathematics Contest

The High School Mathematics Contest was initiated in the section in 1958. By spring 1959 the High School Mathematics Contest Committee reported that 57 schools participated in the contest and that Booker T. Washington High School of Idabel, Oklahoma, had the highest team score in Region 8, which includes Wyoming, Utah, Colorado, Oklahoma, Texas, New Mexico, and Arizona. The High School Contest showed increased participation in 1963 with 3200 students participating in Oklahoma and Arkansas.

Solicitation of Mathematical Papers by High School Students

At the October 25, 1957 meeting Professor R. B. Deal of Oklahoma State University was appointed representative from the section to the Oklahoma Junior Academy of Science Advisory Committee. The purpose of the committee was to encourage mathematical projects from high school students in the area of the section. One year later Professor Deal reported to the section at its business meeting that 50 papers had been submitted by high school students and from this group 25 were selected for the Oklahoma Junior Academy program.

Committee of Chairpersons

At the section meeting in 1979 at Oklahoma State University in Stillwater, Secretary-Treasurer John Jobe initiated the idea to have the Chairpersons of the Departments of Mathematics from all the colleges and universities in the section meet as a special group, called the Committee of Chairpersons. Professor Jobe believed that bringing these administrators together would result in good mathematical brainstorming that would be translated into real programs, because these were the "movers and shakers" of the mathematical community of the section. The Committee of Chairpersons has been responsible for a number of successful events and actions since coming into existence. For example, at its first meeting in 1979, this Committee established a section newsletter on a two-year pilot basis. Professors William O. Murray and Cecil McDermott of Hendrix College, Conway, Arkansas volunteered to be co-editors of the newsletter during these initial two years. The section has published a newsletter every year since then. In 1981 this Committee took on the task of mounting a campaign to publicized the growing shortage of secondary school mathematics teachers in the section and in the nation. In 1982 they commissioned a subcommittee to explore the feasibility of organizing a workshop for our section in the summer, 1983. The result was that an MAA Regional Computer Literacy Workshop was conducted June 2-4, 1983 in Fort Smith, Arkansas. A special workshop on the teaching of calculus was organized for the 1988 section meeting at Hendrix College at the specific recommendation of the Committee of Chairpersons.

Secondary School Lecture Program

In 1958 the section initiated an investigation into the possibility of providing a limited "visiting lectureship service" for high schools in the area. At the April 19, 1958 meeting the section voted that the sum of fifteen dollars be given to the Committee on the Oklahoma Visiting Lecture Service for the committee to use to determine the type of lecture program desired by Oklahoma and Arkansas high schools, if any, and if possible, to implement the program before the fall meeting. The committee was also instructed to secure lecturers and that both the lecturers and their topics be subject to the approval of the committee. At that meeting Professor Katherine Mires of Northwestern State College and Chairperson of the committee reported that the committee had considered several possible types of visiting-lecture programs suitable for high schools but found itself stopped from further action by lack of time and funds. Efforts to obtain outside funding for this service from the Oklahoma and Arkansas Academies of Science and the National Science Foundation were unsuccessful.

A visiting lectureship service was finally initiated by the section in 1980. It was called the Secondary School Lecture Program and it continues as a program today, successfully promoting mathematics to high school students in Oklahoma and Arkansas. The idea for implementing the current program originated in the section's Committee of Chairpersons. With the backing of the Chairpersons of the section, the Oklahoma-Arkansas section provided funds to prepare and mail a brochure listing participating colleges and universities in the section, individual faculty, and their high school presentations. The brochures were mailed to high schools throughout Oklahoma and Arkansas. High Schools could then request a speaker from a nearby college or university to present a mathematical talk to their students. The participating college or university would pick up the cost of travel to a nearby high school and thereby share in the expenses of the Lecture Program while, at the same time, hold the expenses to a minimum. This approach helped to solve some of the funding difficulties that were encountered when such a program was attempted in 1958. Professor Robert McMillan of Oklahoma Christian College was charged with organizing the program for Oklahoma and Professor John Watson of Arkansas Tech University was given responsibility for the program in Arkansas. The numbers of section members and colleges and universities in Oklahoma and Arkansas who volunteered to establish this program was most gratifying; during the first year of the program fifteen schools participated in Oklahoma and eight schools participated in Arkansas. This network of colleges and universities and the commitment of the Committee of Chairpersons insured that the expense of the program would be evenly distributed among the participating colleges and universities of the section. The success of this program can best be measured by the report that Professors McMillan and Watson gave at the Oklahoma-Arkansas business meeting in 1986. They reported that there had been a total of 117 talks given in the section that year, 97 in Oklahoma and 23 in Arkansas.

The Section's Putnam Mathematical Competition Award

In 1973 the Oklahoma-Arkansas Section began the annual recognition of the undergraduate student who achieved the highest score on the William Lowell Putnam Mathematical Competition among participants from Oklahoma and Arkansas. The first such recognition was presented to Mr. W. D. Clinger of Oklahoma Christian College at the banquet on the evening of April 6, 1973, Claremore Junior College, Claremore, Oklahoma.

Oklahoma-Arkansas Section Newsletter

The first Oklahoma-Arkansas Section Newsletter was published in 1980. The idea for a section newsletter originated in the Committee of Chairpersons at their inaugural meeting in 1979. The newsletter was tried on a pilot basis for two years. The co-editors of the first two editions of the section newsletter were Professors William O. Murray and Cecil McDermott of Hendrix College, Conway, Arkansas. The newsletter editors have been

1980 – 1981 William O. Murray and Cecil McDermott   Hendrix College

        1982 – 1983 Raymond Beasley and James Yates   Central State Univ

        1984 – 1987 Allan Cochran and Bernard Madison   University of Ark

        1988   Douglas Punke and JoAnne Brooks   Arkansas College.

Recognition of Outstanding Secondary School Mathematics Teachers

        In 1984 the section began an annual program to recognize the outstanding secondary school mathematics teachers in Oklahoma and in Arkansas. Two mathematics teachers are recognized annually in each state, one at the junior high level and one at the senior high level. The pool of applicants for this recognition is generated by the Presidential Awards Committee in each state. The award to be presented to the recognized teachers is a plaque and it is presented at a professional meeting of secondary teachers.

Panel Discussions

        1. *The Development of a Sophomore Mathematics Course*. October 28, 1955, Oklahoma City University, Oklahoma City, Oklahoma.

        A panel discussed the basic problems which have arisen in the development of a new course in sophomore mathematics based on the premise that the student has had an introduction to polynomial calculus in the freshman year, and what should and should not be included in such a course.

        2. *What To Do About College Freshmen Not Prepared for Mathematics Courses at the College Level*? Moderated by Professor L. W. Johnson, Oklahoma A and M College; October 26, 1956, Oklahoma City University, Oklahoma City, Oklahoma.

        The report of this panel discussion should be of interest to the current generation of Oklahoma-Arkansas section members. It details a lively discussion related to the continuing and frustrating problem that colleges and universities still face today, that is, the teaching of remedial mathematics to entering college freshmen.

        Professor Johnson introduced three proposals:

A.   That Oklahoma colleges cease teaching high school courses such as solid geometry, elementary and intermediate algebra and similar remedial courses during the regular term and that remedial mathematics be taught only during the summer term when college plants and staffs are not overtaxed.

It was pointed out that this would provide better utilization of both professional staff and space and that it would operate to improve the economic status of both college and high school mathematics teachers by expanding the opportunity for 12-month employment.

It was argued that the inconvenience to both parents and graduating high school seniors would operate to return the problem to the high school, where it properly belongs; also, that, "The shock to parents in learning that their children are not adequately prepared for college should occur while the children are in the local community, not later when they are away in college." It is hoped that the policy might eventually cause high schools to provide their own remedial instruction.

B.   That the major colleges band together in this action, and in devising an examination to be given in the high schools during either the junior or senior year to let students who are so weak they must take remedial mathematics know about it in time to make proper preparation before attempting to enter a college or university in September.

It was recognized that some sort of High School "Exit" Examinations would have to be inaugurated to determine who would be required to attend college the summer before entering college in the fall. The feasibility of such examinations was discussed.

C.   That high schools be encouraged to offer remedial courses to 12th grade students desiring them before they leave high school.

There was not complete agreement that proposals were workable, but the consensus of opinion was that they had much merit and should given serious consideration.

As a postscript to this panel discussion held in 1956, Oklahoma State University and University of Oklahoma have joined forces to convince the Oklahoma State Department of Education to administer the Early Placement Examination in Mathematics (EPEM) to high school juniors on a trial basis with the purpose to provide placement information on the student's readiness for college mathematics while they still have a year remaining in high school to correct mathematical deficiencies. The EPEM program will be administered during the school year 1988 – 1989. It will be interesting to see if the problem of remedial work in mathematics at the college level will be solved when the section has its centennial celebration.

3. *Coming Practices in High School and College Mathematics, A Symposium*. October 25, 1957, Oklahoma City University, Oklahoma City, Oklahoma.

Participators in this symposium were: Eunice Lewis, University High School, Norman; Roy B. Deal, Oklahoma State University, Stillwater; Thomas Hill, Classen High School, Oklahoma City; William N. Huff, University of Oklahoma, Norman; E. Truman Wester, Central State College, Edmond; W. R. Orton, University of Arkansas, Fayetteville; Richard Johnson, Smith College Northampton, Mass.; Katherine C. Mires, Northwestern State College, Alva; and W. A. Rutledge, University of Tulsa, Tulsa.

Some of the points made by various participating speakers continue to be of interest today.

Several high schools in the state are currently giving good courses in freshmen college mathematics and the universities are responding by permitting well-prepared incoming freshmen to skip the first semester or even the first year of mathematics. After 1959-60, remedial mathematics (Elementary Algebra and Geometry), will not be given at University of Oklahoma, except in summer school. A sharp increase in enrollments in college mathematics was noted in most institutions. One school reported almost a 300% increase this term. It was pointed out that, as far as general academic preparation is concerned, the state of Oklahoma is, at least on paper, better situated than most states since 95% of all teachers (grade school, junior high school and high school) have received bachelor's degrees from recognized institutions, and 40% have master's degrees. Relatively few of these degrees are in mathematics (as opposed to mathematics education). However, the belief was expressed that five years of training (rather than the present four) may soon be required for the standard (five year) teaching certificate in mathematics and science. Oklahoma no longer issues "life certificates." Discussion was lively concerning the need for competent mathematicians to help develop courses for high school teachers which would cut across the boundaries of the usual graduate courses and present in an integrated course, the aspects of modern mathematics most needed by high school teachers. Several speakers urged the requirement of more modern abstract algebra.

4. *CUPM Recommendations for Teacher Training in Mathematics.* Moderated by Professor J. H. Zant, Oklahoma State University and Mr. F. R. Born, Oklahoma State Department of Education; October 28, 1960, Oklahoma City University, Oklahoma City, Oklahoma.

5. *Advantages and Disadvantages of the CUPM Program from my School's Viewpoint.* Moderated by Professor Leslie Dwight, Southeastern State College, Professor Lysle Mason, Phillips University, and Professor R. B. Deal, Oklahoma State University; April 1, 1966, Oklahoma Baptist University, Shawnee, Oklahoma.

6. *Credit for the CLEP Examinations in Mathematics.* Moderated by Professor James Scroggs, University of Arkansas, Fayetteville; March 26, 1976, Hendrix College, Conway, Arkansas.

7. *Precollege Mathematics Education in the United States.*
Moderated by Katherine Layton, Beverly Hills High School, Beverly
Hills, California. Panel members were: Professor R. D. Anderson, Past
President of the MAA; Mr. Dale Franks, Superintendent of the Hope
Public School System, Hope, Arkansas; Mr. Dave McCurdy, United States
Congressman, 4th District Representative, Oklahoma; and Charles Watson,
Mathematics Specialist, Department of Education, Arkansas. March 18,
1983, University of Oklahoma, Norman, Oklahoma.

The Invited Speakers

The invited speakers of the section have been:

1. *Some Considerations Relating to Irrational Numbers* by
Professor U. G. Mitchell, University of Kansas; February 7, 1936,
First Methodist Church, Oklahoma City, Oklahoma.

2. *Some Glimpses into the History of Mathematics* by Professor U.
G. Mitchell, University of Kansas; February 7, 1936, First
Methodist Church, Oklahoma City, Oklahoma.

3. *Problems or Personalities* by Dr. E. J. Ortman, School of
Education, University of Oklahoma; February 7, 1936, First
Methodist Church, Oklahoma City, Oklahoma.

4. *The Place of Mathematics in General Education* by Professor
Raleigh Schorling, University of Michigan; February 10, 1939,
Tulsa, Oklahoma.

5. *On New Methods in Differential Equations with Applications to
the Structural Analysis of Airplanes* by Professor Stefan
Bergmann, Brown University; February 13, 1942, Oklahoma City,
Oklahoma.

6. *Teacher Education and the College Entrance Examination Board
Commission on Mathematics and Modernizing the Secondary School
Mathematics Curriculum* by Professor Henry Van Engen; Editor,
Mathematics Teacher, Iowa State Teachers College; October 26,
1956,Oklahoma City University, Oklahoma City, Oklahoma.

7. *The Mathematics Project of the University of Illinois
Committee on School Mathematics: Content, Method, and Modus
Operandi* by Professor Gertrude Hendrix, University of Illinois;
October 25, 1957, Oklahoma City University, Oklahoma City,
Oklahoma.

8. *General Aims and Purposes of the CUPM Recommendations for
Teacher Training in Mathematics* by Professor Robert Wisner,
Executive Director, Committee on the Undergraduate Program of the
Mathematical Association of America, Washington, D. C.; October
28, 1960, Oklahoma City University, Oklahoma City, Oklahoma.

9. *An Applied Mathematician Among the Atoms* by Dr. G. M. Wing of
Sandia Corporation; March 15, 1963, Oklahoma Center for
Continuing Education, Norman, Oklahoma.

10. *Homogeneity* by Dr. R. H. Bing, President of the Mathematical Association of America, Washington, D. C.; April 10, 1964, East Central State College, Ada, Oklahoma.

11. *Quadric Surfaces Associated with a Tetrahedron* by Dr. Nathan A. Court, Professor Emeritus, University of Oklahoma; April 10, 1964, East Central State College, Ada, Oklahoma.

12. *The CUPM Recommendations on College Mathematics Offerings* by Professor G. Baley Price, University of Kansas; April 1, 1966, Oklahoma Baptist University, Shawnee, Oklahoma.

13. *Manpower Questions in the Mathematical Sciences* by Dr. John Jewett, Oklahoma State University; March 29, 1968, Federal Aviation Administration Aeronautical Center, Oklahoma City, Oklahoma.

14. *Qualifications for a College Faculty in Mathematics* by Dr. Richard Anderson, Louisiana State University; March 29, 1968, Federal Aviation Administration Aeronautical Center, Oklahoma City, Oklahoma.

15. *Geometric Transformations and their Role in Secondary and College Mathematics* by Professor Seymour Schuster, Carleton College; March 22, 1969, Arkansas State University, Jonesboro, Arkansas.

16. The administration of Arkansas State University supported a Seminar on Differential Equations and Variational Theory at the Oklahoma-Arkansas Section meeting March 22, 1969, Arkansas State University, Jonesboro, Arkansas. The invited lecturers for the seminar and the titles of their talks were:

   Formulation of Problems of the Calculus of Variations, the Choice of Admissible Functions and of Methods by G. M. Ewing, University of Oklahoma.

   Oscillation Theorems for Third Order Differential Equations by R. W. Utz, Jr., University of Missouri.

   The Differential Equations of Stochastic Control Theory by E. J. McShane, University of Virginia.

   Generalized Polar Coordinate Transformations for Differential Equations by W. T. Reid, University of Oklahoma.

17. *Professor R. L. Moore -- The Teacher* by Professor O. H. Hamilton, Oklahoma State University; March 20, 1970, Southwestern State College, Weatherford, Oklahoma.

18. *Topological Methods in Analysis* by Professor Gail S. Young, Tulane University; March 20, 1970, Southwestern State College, Weatherford, Oklahoma.

19. *Numerical Methods of Solving Elliptic Partial Differential Equations* by Dr. Ivo Babuska, Institute of Fluid Dynamics and

Mechanics, University of Maryland and Mathematical Institute of the Academy of Science, Prague; March 12, 1971, University of Tulsa, Tulsa, Oklahoma.

20. *Convex Polytopes and Linear Programming* by Professor Victor Klee, University of Washington; March 10, 1972, State College of Arkansas, Conway, Arkansas.

21. *Signs of Derivatives and Analytic Behavior* by Professor Ralph P. Boas, Northwestern University; April 6, 1973, Claremore Junior College, Claremore, Oklahoma.

22. *How to Make and Break Codes* by Professor Dorothy Bernstein, Goucher College; April 5, 1974, University of Arkansas at Little Rock, Little Rock, Arkansas.

23. *On the Nature of Mathematics Work in Industry* by Dr. Henry O. Pollak, Bell Laboratories; April 4, 1975, Central State University, Edmond, Oklahoma.

24. *The Graph of a Group as Seen by a Nonexpert* by Professor J. W. Keesee, University of Arkansas at Fayetteville; March 26, 1976, Hendrix College, Conway, Arkansas.

25. *Prime Generating Functions and Congruencies* by Professor H. L. Alder, University of California at Davis; April 1, 1977, Oral Roberts University, Tulsa, Oklahoma.

26. *Algebraic Number Theory* by Professor David Roselle, Virginia Polytechnic Institute and State University and MAA Secretary; March 31, 1978, Henderson State University, Arkadelphia, Arkansas.

27. *What is Your Geometric I. Q.*? by Dr. Philip Davis, Brown University; March 30, 1979, Oklahoma State University, Stillwater, Oklahoma.

28. *Algorithmically Defined Functions* by Dr. R. D. Anderson, Louisiana State University; March 28, 1980, Westark Community College, Fort Smith, Arkansas.

29. *Optimal Strategies in Sports* by Dr. Leonard Gillman, University of Texas at Austin; March 27, 1981, Oklahoma Christian College, Oklahoma City, Oklahoma.

30. *The Isoperimetric Theorem* by Professor Ivan Niven, University of Oregon; March 26, 1982, University of Arkansas, Fayetteville, Arkansas.

31. *Report on the National Science Board Commission and Precollege Education in Mathematics* by Katherine Layton, National Science Board Commission on Precollege Mathematics, Science, and Technology; March 18, 1983, University of Oklahoma, Norman, Oklahoma.

32. *Another Approach to Riemann-Stieltjes Integrals* by Dr. Kenneth Ross, University of Oregon and MAA Secretary; March 30, 1984, Arkansas Tech University, Russellville, Arkansas.

33. *Some Functions That Count* by Professor Gerald L. Alexanderson, University of Santa Clara; March 29, 1985, University of Tulsa, Tulsa, Oklahoma.

34. *Mathematics in the Kitchen* by Professor Jerome A. Goldstein, Tulane; April 4, 1986, Arkansas College, Batesville, Arkansas.

35. *Calculus of the Future* by Professor Lida Barrett, Northern Illinois University; March 27, 1987, East Central University, Ada, Oklahoma.

36. *The History of the MAA* by Professor Ivan Niven, University of Oregon; April 15, 1988, Hendrix College, Conway, Arkansas.

The N. A. Court Lectures

The N. A. Court Lectures of the section have been:

1. *Triangulated Polygons and Frieze Patterns* by Professor H. M. S. Coxeter, University of Toronto; April 6, 1973, Claremore Junior College, Claremore, Oklahoma.

2. *A Geometric Derivation of the Basic Theorem for a Rigid Motion* by Professor Emeritus Lloyd Wayne Johnson, Oklahoma State University; April 5, 1974, University of Arkansas at Little Rock, Little Rock, Arkansas.

3. *Memories of Professor Court and the Early Days of the Oklahoma Section* by Professor Emeritus John C. Brixey, University of Oklahoma; April 4, 1975, Central State University, Edmond, Oklahoma.

4. *A Role for Speculation* by Professor R. Creighton Buck, University of Wisconsin at Madison; March 26, 1976, Hendrix College, Conway, Arkansas.

5. *Geometry that Counts* by Professor Arthur Bernhart, University of Oklahoma; April 1, 1977, Oral Roberts University, Tulsa, Oklahoma.

6. *Mathematics as a Hobby* by Professor R. B. Deal, Jr., University of Oklahoma Health Sciences Center; March 31, 1978, Henderson State University, Arkadelphia, Arkansas.

7. *On the Relationship Between Applications of Mathematics and the Teaching of Mathematics* by Dr. Henry O. Pollak, Bell Laboratories; March 30, 1979, Oklahoma State University, Stillwater, Oklahoma.

8. *Set Theory - An Offspring of Harmonic Analysis* by Professor Walter Rudin, University of Wisconsin at Madison; March 28, 1980, Westark Community College, Fort Smith, Arkansas.

9. *The Art of Teaching* by Professor Harold V. Huneke, University of Oklahoma; March 27, 1981, Oklahoma Christian College, Oklahoma City, Oklahoma.

10. *Does Mathematics Have Elements*? by Professor Paul R. Halmos, Indiana University; March 26, 1982, University of Arkansas, Fayetteville, Arkansas.

11. *Some Mathematical Surprises* by Professor Victor Klee, University of Washington; March 18, 1983, University of Oklahoma, Norman, Oklahoma.

12. *Transitions* by Professor Jeanne LeCaine Agnew, Oklahoma State University; March 30, 1984, Arkansas Tech University, Russellville, Arkansas.

13. *What is Geometry; Euclid, Riemann, Weil, or Bing*? by Professor Saunders MacLane, University of Chicago; March 29, 1985, University of Tulsa, Tulsa, Oklahoma.

14. *Generalizations of the M Plus N Equals One Theorem* by Professor John Keesee, University of Arkansas at Fayetteville; April 4, 1986, Arkansas College, Batesville, Arkansas.

15. *Babylonian Mathematics and Mathematical Astronomy and Their Legacy* by Professor Asger Aaboe, Yale University; March 27, 1987, East Central University, Ada, Oklahoma.

16. *Going in Circles* by Professor Emeritus Lysle Mason, Phillips University; April 15, 1988, Hendrix College, Conway, Arkansas.

Undergraduate Research in the Section

Professor E. K. McLachlan of Oklahoma State University was elected Secretary-Treasurer of the section in spring, 1970. As we have written earlier, one of the major responsibilities of the Secretary-Treasurer is to build a program for the section's annual meeting. Professor McLachlan's first program was for the 1971 meeting at the University of Tulsa, Tulsa, Oklahoma. This meeting began the tradition in the Oklahoma-Arkansas section to include sessions for contributed papers by undergraduate students.

The first session of the section to be headed "Papers by Undergraduates" listed the following papers:

Inequalities by Douglas Foster, Oral Roberts University

Computer Game Strategy by Roger D. Morton, Oklahoma Christian College

A Continuous and Discrete Triangular Density Function in Monte-Carlo Simulation by Terence Aitken, Northwestern State University.

The next year the section meeting was held at State College of Arkansas in Conway, Arkansas. The number of sessions for papers by undergraduates had grown to two. But even more significant was the fact that this marked the beginning of the Hendrix College leadership and influence on undergraduate research at our section meetings.

In 1970 Dr. Temple Fay of Hendrix College received a grant from the Arkansas Educational Research Stimulation Project funded by the Commission on Coordination of Higher Education Finance. This grant set up the beginnings of the Undergraduate Research Program at Hendrix. Under the supervision of Dr. Fay and Dr. David Moon of State College of Arkansas (UCA), sophomore students from Hendrix and UCA engaged in directed independent research projects using a combination of the "Moore" or "Texas" method and the "scientific method" of inquiry. By 1971 one Hendrix student, E. G. Houston, had published his results in the Journal of Undergraduate Mathematics. Then, at the sectional MAA meeting at State College of Arkansas in 1972, three math juniors from Hendrix, David Groggans, J. N. Lovett, and Marilyn Martin, presented papers on their independent projects, thus beginning the tradition of student paper presentations at our sectional meetings. Since that time the Undergraduate Research Program at Hendrix has grown to regional and national prominence, and Hendrix students have presented over sixty papers at our sectional meetings, as well as attending numerous regional and national conferences for undergraduate mathematics.

Following the Hendrix College lead, Oklahoma State University began to emphasize mathematical research and mathematical projects among its undergraduate majors. The OSU undergraduate research program was helped along by the work of Professors Jeanne Agnew and Marvin Keener and their NSF-funded project to develop case-study problems in applied mathematics obtained from industry. In fact an entire session was devoted to the Agnew-Keener case-study approach to applied mathematics at the section meeting at Oral Roberts University in 1977 and again at the national MAA meeting in Atlanta, Georgia in 1978. This session featured Professors Agnew and Keener detailing the case-study approach to applied mathematics as well as undergraduate and graduate students presenting papers on applied mathematics. Oklahoma State University undergraduates have also used the section meeting to present the results of their work in the National Mathematical Modeling Competition since the competition began in 1985.

As a result of the interest generated by the Oklahoma-Arkansas section in undergraduate mathematical research and mathematical projects, research activity in our section by undergraduates has reached national prominence. The national Conference on Undergraduate Research has been held in our section three times in the last decade, twice at Hendrix College and once at Oklahoma State University.

The MAA Certificate of Meritorious Service

The MAA Board of Governors instituted the Certificate of Meritorious Service at its meeting in Louisville, Kentucky in January, 1984. This certificate is to be awarded every five years to a member of our section that has made significant contributions to the MAA on the national and/or section level. The Oklahoma-Arkansas Section nominated Dr. John Jobe of Oklahoma State University as the first recipient of this service award from our section. Dr. Jobe has served as the Secretary-Treasurer of our section since 1978. At the national level he has served the MAA through his work on the MAA's Mathematics at Work in Society (MAWIS) project, funded by the National Science Foundation, the Teaching Experiential Applied Mathematics (TEAM) project, funded by the U. S. Department of Education, and most recently, the Applications in Mathematics (AIM) project, funded by the National Science Foundation. At the annual MAA meeting in Anaheim, California in January, 1985, the MAA Board of Governors approved our nomination of Dr. John Jobe for the MAA Certificate of Meritorious Service. Dr. Jobe was presented this Certificate at the MAA's summer, 1985 meeting in Laramie, Wyoming.