Appendix H: Missouri MAA Papers

1916 (St. Louis Central High School)
1. *A Course for Juniors in the School of Education*. Professor L. D. Ames, University of Missouri.
2. *Graphical Solution of Spherical Triangles*. Professor W. H. Roever, Washington University
3. *The Place of the Calculus in the Training of the High School Teacher*. Professor Byron Cosby, Kirksville Normal School.
4. *A Geometric Treatment of the Exponential Function*. Dr. Otto Dunkel, Washington University.
5. *Formulas for Approximate Integration*. Professor Byron Ingold, Christian University
6. *Claims of Mathematics in the High School Course of Study*. Mr. H. P. Stellwagen, Yeatman High School
7. *An Illustration of a Certain Necessary Condition in Minimizing a Definite Integral with a Discontinuous Integrand*. Dr. Paul R. Rider, Washington University
8. *On a Method of Sectioning Freshman and Sophomore Classes in Mathematics*. Mr. Alan Campbell, Washington University.
9. *The Equations and Models of a Large Group of Warped Surfaces*. Professor C. A. Waldo, Washington University.

1917 (Kansas City Public Library)
1. *Some Properties of Plane and Spherical Triangles and their Frequent Analogies*. Professor William H. Zeigel, Missouri State Normal School, Kirksville.
2. *The Value of Mathematics in Secondary Education*. Dr. John W. Withers, Superintendent of Instruction, St. Louis
3. *Sundials and Skylights*. Professor William H. Roever, Washington University, St. Louis
4. *Pure and Applied Mathematics in the Nineteenth Century*. Professor G. R. Dean, Missouri School of Mines, Rolla.
5. *The Equal Parallax Curve for Frontal and Lateral Vision*. Dr. Paul R. Rider, Washington University, St. Louis.
6. *A Simple Derivation of the Derivatives of the Trigonometric Functions*. Professor Otto Dunkel, Washington University, St. Louis.
7. *The Graphical Solution of a Cubic Equation having Complex Roots*. Mr. William A. Luby, Polytechnic Institute, Kansas City.
8. *Applied Mathematics for the Average Student*. Professor J. H. Scarborough, Missouri State Normal School, Warrensburg
9. *The Solution of Linear Differential Equations with Periodic Coefficients*. Dr. James E. McAtee, William Jewell College, Liberty

In the absence of the authors, the papers by Professor Dean and Professor Scarborough were read by title.

1918 (No meeting because of World War I)

1919 (Soldan High School, St. Louis)

    I.   *Recent Advances in Dynamics.* Address of the retiring Vice-President of Section A of the A. A. A. S., Professor G. D. Birkhoff.

    II.   *Some Recent Developments in the Calculus of Variations.* Address of the retiring chairman of the Chicago Section of the American Mathematical Society, Professor G. A. Bliss, University of Chicago.

    III.   *A Suggestion for the Utilization of Atmospheric Molecular Energy.* Mr. H. H. Platt, Philadelphia

1. **Opening address as President of the Association, Professor H. E. Slaught, University of Chicago**
2. *The Determination of Logarithmic Formulas*, Professor E. R. Hedrick, University of Missouri
3. *A Simple Treatment of Fourier's Series*, Professor Louis Ingold, University of Missouri, and Mr. T. W. Jackson, Jamestown College, N. D.
4. *An Elementary Method of Quadrature*, Professor Otto Dunkel Washington University.
5. *Plans of the National Committee on Mathematical Requirements*, Mr. Charles Ammerman, McKinley High School, St. Louis.
6. *Preliminary report of the National Committee on Mathematical Requirements*, Professors Hedrick, Zeigel, and Fleet, Miss Zoe Ferguson and Mr. Alfred Davis.
7. *Geometric Treatment of Certain Optical Problems,* (Illustrated by lantern views and models.) Professor Wm. H. Roever, Washington University, chairman of the Section.

In the absence of the authors the paper by Professor Ingold and Mr. Jackson was read by Professor Hedrick.

1920 (Junior College of Kansas City)

1. *The Relation of Caustics to Certain Envelopes*, Professor O. Dunkel.
2. *A So-Called Russian Multiplication Method*, Professor P. R. Rider.
3. ***Sun-Spot Data and the Methods of Analysis Applied,* Dr. D. Alter, associate professor of astronomy, University of Kansas (invited);**
4. *The Work of the National Committee on Mathematical Requirements*, Dr. Eula A. Weeks.

In the absence of the author, the paper by Professor Dunkel was read by title only.

1921 (Soldan High School and Washington University, St. Louis)

1. *Mathematics Clubs in Junior High Schools*, Mr. A. H. Huntington, Cleveland High School, St. Louis.
2. *Some Suggestions in Regard to Mathematics,* Father W. J. Ryan, vice-president of St. Louis University.
3. *Correct Methods of Making Drawings of Space Objects,* Professor W. H. Roever, Washington University.
4. *The Relation of Mathematics to Engineering*, Professor E. R. Hedrick, University of Missouri.
5. *Graphical Methods of Representing a Function of a Function and of Solving Allied Problems*, Professors Hedrick and Roever.
6. *An Elementary Exposition of the Theorem of Bernoulli with Applications to Statistics*, Professor H. L. Rietz, University of Iowa.
7. *Final Report of the National Committee on Mathematical Requirements*, Dr. Eula A. Weeks, Cleveland High School, St. Louis.

In addition to these papers, an informal talk was given by Professor H. E. Slaught, of the University of Chicago, who told the Section of the recent grant to the Association by Mrs. Paul Carus of a sum of money to be used for the publication of expository monographs on mathematical subjects. In the absence of the author, the paper by Professor Rietz was read by Professor C. H. Ashton of the University of Kansas.

1922 (Junior College of Kansas City)
1. *A Study of the Data Determining the Sun-Spot Maximum of 1829,* Professor W. A. Luby, Junior College of Kansas City.
2. *Problems Concerning the Teaching of Secondary Mathematics*, Mr. Alfred Davis, Soldan High School, St. Louis.
3. ***Mathematics in Europe*, Professor S. Lefschetz, University of Kansas (by invitation).**

1923 (University of Missouri, Columbia)
1. ***Suggestions Toward a Comparative Pedagogy of Mathematics* (by invitation), Professor Henry Blumberg, University of Illinois.**
2. *An Elementary Discussion of the Roots of the Cubic,* Professor Otto Dunkel, Washington University.
3. *A Class of Surfaces Applicable to a Sphere*, Mr. C. G. Jaeger, University of Missouri.
4. *Service Mathematics*, Professor Theodosia T. Callaway Stephens Junior College.

1924 (Junior College of Kansas City)
1. "Symbolic calculus Mr. EUGENE STEPHENS, Washington University.
2. "Service mathematics, Professor THEODOSIA T. CALLAWAY, Stephens Junior College.
3. "How and what should freshmen be taught?, Professor R. R. FLEET, Williamn Jewell College.
4. "Simple illustrations of certain types of statistical series, Professor P. R. RIDER, Washington University.

1925 (Replaced by the National MAA Meeting in Kansas City)
1. *The Heine-Borel Theorem and Allied Problem,* Professor T. H. Hildebrandt, University of Michigan, Vice-president of the American Mathematical Society.
2. *The Algebraic Numbers and Division*, Professor J. C. Fields, University of Toronto, retiring vice-president of Section A.
3. *Robert Adrain and the Beginnings of American Mathematics,* retiring presidential address, Professor J. L. Coolidge, Harvard University.
4. *The Definition of Function and its Effect on Elementary and Advanced Instruction*, Professor E. R. Hedrick, University of California, Southern Branch.
5. *Determinants and Their Principal Minors*, Professor E. B. Stouffer, University of Kansas.
6. *The Course in Statistics in the Department of Mathematics*, Professor A. R. Crathorne, University of Illinois.
7. *Some Applications of Mathematics to Architecture,* Professor E. C. Phillips, Georgetown University.
8. *A New Method of Determining a Series Solution of Linear Differential Equations with Constant or Variable Coefficients,* Mr. W. O. Pennell, Chief engineer, Southwestern Bell Telephone Company, St. Louis.

1926 (Junior College of Kansas City)
1. *Causes of the Present Popular Attitude Toward Mathematics,* Professor R. A. Wells, Park College.
2. *Desirable Courses for Students Intending to Do Graduate Work in Mathematics,* Professor W. D. A. Westfall, University of Missouri.
3. *Unified Courses in Mathematics,* Professor Byron Ingold, Culver Stockton College.
4. *Some Mathematical Questions in Missouri History,* Miss Kathryn Wyant, University of Missouri.
5. *Old and New Concepts of Mathematics,* Professor B. F. Finkel, Drury College.
6. *Ten Years of the Missouri Section,* Professor P. R. Rider, Washington University

1927 (Washington University, St. Louis)
1. *The Foundation of the Theory of Ideals,* Miss Kathryn Wyant, University of Missouri.
2. ***The Trigonometry of Hyperspace,* Miss Nola Lee Anderson, University of Missouri. (By invitation.)**
3. ***Some Canonical Forms and Associated Canonical Expansions in Projective Differential Geometry,* (at the joint session with SW Sec. of AMS), Professor E. B. Stouffer, University of Kansas (by invitation of the program committee).**

1928 (Junior College of Kansas City)
1. ***On the Chi-Square Test of the Closeness of Agreement of Theoretical and Observed Frequencies,* Professor H.L. Rietz, University of Iowa.**
2. ***The Mathematics Teacher and the History of Mathematics,* Professor U.G. Mitchell, University of Kansas.**
3. Numerical Differentiation and Mechanical Quadrature as Astronomical Tools, Professor J.M. Young, Washington University.
4. Quadratic Number Fields, Professor G.E. Wahlin, University of Missouri.

Due to the fact that Professor Wahlin was marooned at Bloomington by the flood, [his] paper was read by title.

1929 (Washington University, St. Louis)
1. *A Symbolic Method for Solving a System of Simultaneous Ordinary Linear Differential Equations of any Order with Constant Coefficients,* Professor Eugene Stephens, Washington University.
2. *Vector Methods in Analytic Geometry,* Professor Louis Ingold, University of Missouri.
3. *A Modification of a Proof by Steiner,* Professor Otto Dunkel, Washington University.

1930 (University of Missouri, Columbia)
1. *A Visualization of Homogeneous Coordinates,* Professor W. H. Roever, Washington University.
2. *External Brocard Points of a Triangle,* Professor Louis Ingold, University of Missouri.

II. A Symposium on Advanced College Courses in Algebra

3. *Advanced Algebra for the Undergraduate*, Professor G. H. Jamison, Northeast Missouri State Teachers College.
4. *Algebra as an Instrument of Research*, Professor G. E. Wahlin, University of Missouri.
5. General discussion.

1931-1936 (no meetings)

1937 (Washington University, St. Louis)
1. *Sets of Conjugate Operators in the Groups of Order 32*, Professor D. T. Sigley, University of Kansas City.
2. *Certain Diophantine Equations of Degree Two*, A. E. Ross, St. Louis University.
3. *Theory and Construction of Sun-Dials*, Professor W. H. Roever, Washington University.
4. *Note on a Theorem Characterizing Geodesic Arcs in Complete, Convex Metric Spaces*, Professor L. M. Blumenthal, University of Missouri.
5. *Poristic Systems of Doubly Quadratic Equations*, H. S. Murray, Fulton, Mo.
6. *Integration of Linear Differential Equations in Series by the Operational Method*, Professor Eugene Stephens, Washington University.
7. *On Certain Qualitative Properties of the Solutions of Second Order Linear Differential Equations*, Professor Gabriel Szego, Washington University.
8. The Orbit of the Visual Binary Star, Omicron Sigma 298, Professor Jessica Y. Stephens, Washington University.
9. *Cauchy's Method of Forming Normal Equations from a Set of Linear Observation Equations*, Professor H. R. Grummann, Washington University.
10. *Quartic Surfaces Invariant under the Symmetric Group G24*, Professor H. E. Crull, Park College

1938 (Missouri School of Mines and Metallurgy, Rolla, if there was a meeting - no details)

1939 (Drury College, Springfield)
1. *The Characteristics of a System of Conics*, Professor W. H. Lyons, Kansas State College of Agriculture.
2. *Sufficient Conditions for an Ordinary Problem in the Calculus of Variations*, Dr. G. M. Ewing, University of Missouri.
3. *A Generalization of a Special Class of Groups*, Professor D. T. Sigley, Kansas State College of Agriculture.
4. *An ab Initio Derivation of the Derivatives of ax and sin^{-1} x*, Professor B. F. Finkel, Drury College.
5. *Analytic Geometry without Coordinates*, B. E. Gillam, University of Missouri, introduced by Professor Blumenthal.
6. *A Numerical Solution of Quadratic Congruences*, J. F. Wulftange, St. Louis University, introduced by Professor Sigley.

1940 (Central Missouri State Teachers College, Warrensburg)
1. *Tabulation of Positive Reduced Binary Quadratic Forms*, Raymond Allen, St. Louis University, introduced by the Reverend J. E. Case.

2. *The Altitude Quadric of a Tetrahedron,* Professor J. H. Butchart, William Woods College.
3. *Curves of the Fourth Harmonic of a C_n with Respect to Conics*, the Reverend J. E. Case, St. Louis University.
4. *On Approximate Cubature,* Professor G. M. Ewing, University of Missouri.
5. *Testing Infinite Series,* Professor W. C. Doyle, Rockhurst College, introduced by the Secretary.
6. *On the Theory of Matrices in a Non-Commutative Field,* L. J. Heider, St. Louis University, introduced by the Reverend J. E. Case.
7. *On a New Method of Tabulation of Reduced Indefinite Binary Quadratic Forms,* A. Lorenz and J. Andrews, St. Louis University, introduced by the Reverend J. E. Case.
8. *Some Remarks Concerning a New Class of Spaces,* Professor L. M. Blumenthal, University of Missouri.

1941 (University of Missouri, Columbia)
1. *Special Homeomorphisms,* Dr. G. E. Schweigert, University of Missouri, introduced by Professor Blumenthal.
2. *Isogonal Conjugates as Foci of Tangent Conics and Quadrics,* Professor J. H. Butchart, William Woods College.
3. *A Nowhere Differentiable Arc,* Professor L. M. Blumenthal, University of Missouri.
4. *A New Derivation of the Basic Formulas of Trigonometry,* Professor Herman Betz, University of Missouri, introduced by the Secretary.
5. *Remarks on Cauchy's Integral Formula,* Dr. M. E. Shanks, University of Missouri.

1942 (Continental Hotel, Kansas City)
1. *Inscribing Triangles in Simple Closed Plane Curves*, Dr. J. V. Wehausen, University of Missouri.
2. *A Two Dimensional Representation of Vectors and Scalars*, Dr. F. P. Beer, University of Kansas City.
3. *Mathematics in the C. P. T. Program*, W. E. Ferguson, University of Missouri.
4. *Why Not a Thorough Revision of Freshman Mathematics?* Father W. C. Doyle, Rockhurst College, introduced by Dr. Shanks.
5. *Pointless Geometry*, Dr. M. E. Shanks, University of Missouri.

1943-1947 (no meetings)

1948 (University of Kansas City)
1. *Almost Periodic Functions*, Mr. Asger Aaboe, Washington -University, introduced by Professor Walter Leighton.
2. *Convergence Regions for Continued Fractions*, Professor W. J. Thron, Washington University, introduced by Dr. C. W. Mathews.
3. *The Definition of the Dirac δ-Function,* Professor G. M. Ewing, University of Missouri.
4. *The Exponential Function in Applied Science*, Professor Herman Betz, University of Missouri, introduced by Professor L. M. Blumenthal.
5. *Rational Right Triangles*, S. G. Campbell, University of Kansas City, introduced by Professor J. S. Rosen.
6. *A Theorem on Determinants*, Professor G. B. Price, University of Kansas.

7. *The Importance of Computational Technique in Applied Mathematics*, Y. L. Luke, Midwest Research Institute, Kansas City, Missouri, introduced by Professor J. S. Rosen.
8. *A New Trigonometric Shifting Theorem*, Professor Eugene Stephens, Washington University, introduced by Professor P. R. Rider.
9. *The Real Representation of Imaginary Loci*, L. E. Laird, Kansas State Teachers College.
10. *The Convergence in Probabilities of Statistical Sequences*, Dr. Maria Castellani, University of Kansas City, introduced by Professor J. S. Rosen.
11. *Mathematics Placement Tests at the University of Kansas*, Professor G. W. Smith, University of Kansas.
12. *Preparation for College Mathematics*, Professor W. C. Doyle, Rockhurst College.

1949 (University of Missouri, Columbia)

1. ***Some Aspects of the Concept of Convexity* (invited), Professor Karl Menger of the Illinois Institute of Technology.**
2. *An Approximate Solution of Stieltjes Integral by Use of Cantelli's Inequality*, Dr. Maria Castellani, University of Kansas City, introduced by the Secretary.
3. *The Metrization of Torsion*, Dr. L. M. Blumenthal, University of Missouri.
4. *A Reorganization of General Mathematics of Colleges*, Dr. Margaret F. Willerding, Harris Teachers College.
5. *The Trends in Mathematical Education in High Schools*, Prof. G. H. Jamison, Northeast Missouri State Teachers College.
6. *Use of Mnemonic Devices in Mathematics*, C. W. Mathews, Washington University.

1950 (Washington University, St. Louis)

1. ***The Geometry of Polyhedra*, Professor S. S. Cairns, University of Illinois.**
2. *Notes on Martin's Ergodic Function*, Professor W. R. Utz, University of Missouri.
3. *Symmetry in Four Dimensions*, Mr. E. W. Bold, St. Louis University
4. *Hurwitz Polynomials in Engineering Mathematics* Professor Herman Betz, University of Missouri, introduced by the Secretary.
5. *Distribution Law of the Product of Two Variables Independently Distributed in Pearson's Type I Laws*, Mr. John S. Hagen, St. Louis University, introduced by the Secretary.
6. *On quasi-analytic functions of analytic functions*, I. I. Hirschman, Jr., Washington University.
7. *A Method of Uniformizing Grades*, Marlow Sholander, Washington University, introduced by the Secretary.

1951 (Central College, Fayette)

1. *The Distance Set for the Cantor Discontinuum*, Professor W. R. Utz, University of Missouri.
2. *Modern Mathematics for College Freshmen*, Rev. W. C. Doyle, Rockhurst College.
3. *What's Wrong with Mathematics Textbooks?* Professor C. A. Johnson, School of Mines and Metallurgy of the University of Missouri.
4. *An Attempt to Broaden the Background of Prospective Teachers of Mathematics*, Professor Nola A. Haynes, University of Missouri.
5. *On the Maximum Likelihood Estimation of a Single Parameter*, C. A. Bridger, Bureau of Vital Statistics.
6. ***Generalized Quaternions*, Professor Gordon Pall, Illinois Institute of Technology.**

1952 (Lindenwood College, St. Charles – "The Gauss Meeting")
1. *Gauss and Gottingen*, Professor Herman Betz, University of Missouri
2. *Tensor Aspects of the Calculus of Variations*, Dr. Paolo Lanzano, St. Louis University.
3. *Mathematics and College Students*, Professor C. V. Fronabarger, Southwest Missouri State College.
4. *On a Criterion of Non-Oscillation*, Professor Choy-tak Taam, University of Missouri
5. *Why a Converse?* Mr. W. A. Couch, Washington University.
6. ***A Critical Look at Undergraduate Mathematics*, Dean W. L. Ayres, Purdue University.**
7. ***A Tribute to Karl Friedrich Gauss and a Presentation of the Members of the Gauss Family Residing in St. Charles, Missouri*, Professor S. A. E. Betz, Department of English, Lindenwood College.**

1953 (William Jewell College, Liberty)
1. Symposium on Algebra, Professor W. R. Utz, University of Missouri, Leader.
   a. *Algebra in the High School*, Superintendent W. F. Williams, Oregon High School.
   b. *Is the Algebra Taught in College Really "College Algebra"*, Professor Margaret F. Willerding, Harris Teachers College.
   c. *Remarks Concerning Mathematics for College Freshmen*, Professor F. F. Helton, Central College.
   d. *The Algebra Program at Washington University*, Professor Marlow Sholander, Washington University.
2. ***The Undergraduate Curriculum in Mathematics and its Relation to the Training of Mathematics Teachers*, Dr. C. V. Newsom, New York State Education Department. (By invitation).**

1954 (University of Missouri, Columbia)
1. *Some Remarks Concerning Tetrahedra*, Professor L. M. Blumenthal, University of Missouri.
2. *Mathematics in General Education*, Professor J. A. Seeney, Lincoln University, introduced by the secretary.
3. *The Missouri Traveling Exhibit,* Miss Frances Story, St. Charles High School, introduced by the secretary.
4. *General Mathematics-Pupil Attitude and Teacher Understanding,* Mr. E. J. Jackson, St. Louis Public Schools, introduced by the secretary.
5. *Mathematics in Missouri Schools*, Mr. I. F. Coyle, State Department of Education, introduced by the secretary.
6. *Report of the Committee Appointed to Study Improvement of Mathematical Education*, Professor R. J. Michel, Southeast Missouri State College.
7. ***A Serious Look at College Mathematics*, Professor C. A. Hutchinson, University of Colorado, Boulder, Colorado. (By invitation.)**

1955 (University of Kansas City)
1. *The Significance and Derivation of the Formula,* Mr. N. Q. Hubbard, Lincoln High School, Kansas City.
2. *A Differential Equation Applicable to Population Problems,* Mr. C. A. Bridger, Bureau of Vital Statistics, Jefferson City.
3. *Birth, Death, and Waiting in Line,* Dr. Ernest Koenigsberg, Midwest Research Institute,

Kansas City, introduced by the Secretary.

4. *Reorientation in Economic Theory: Linear and Non-Linear Programming,* Professor E. Altschul, University of Kansas City, introduced by the Secretary.
5. *Some Sign and Rank Tests in Statistics,* Professor W. A. Vezeau, St. Louis University.
6. *Rational Function Approximations for the Exponential Function,* Mr. Y. L. Luke, Midwest Research Institute, Kansas City, introduced by the Secretary.
7. *Infinite Symmetric Groups,* Professor W. R. Scott, University of Kansas.
8. *Phase Plane Solution of Non-Linear Differential Equations,* Dr. S. L. Levy, Midwest Research Institute, Kansas City.
9. **The use of Television in Mathematics Education, Professor P. S. Jones, University of Michigan. (By invitation).**

1956 (Fontbonne College, St. Louis)
1. *A Report of a Conference between High School and College Teachers of Mathematics and Science,* Professor C. A. Johnson, University of Missouri, School of Mines and Metallurgy at Rolla.
2. *College Arithmetic for Prospective Teachers,* Professors Marie A. Moore and Jesse Osborn, Harris Teachers College, presented by Professor Moore.
3. *The Boolean Geometry of the Integers,* Professor J. L. Zemmer, University of Missouri.
4. *Analytical Functionals and Symbolic Calculus,* Professor Maria Castellani, University of Kansas City.
5. *Recreational Mathematics for Use in the Elementary Classroom,* Mrs. Ruth H. Nies, Ladue School System, introduced by the Secretary.
6. *What Position for Recreation in High School Classrooms?,* Mrs. Mattie B. Ryland, Higginsville High School, introduced by the Secretary.
7. *Glimpses of Mathematical Recreations on the College Campus,* Professor Margaret F. Willerding, Harris Teachers College.
8. **Mathematics in the Liberal Arts Curriculum, Professor A. E. Ross, Notre Dame University. (By invitation.)**

1957 (Southeast Missouri State College, Cape Girardeau)
1. *Some Roman Mathematics,* Professor J. F. Daly, St. Louis University.
2. *The Lebesgue Integral for Sophomores,* Professor H. M. MacNeille, Washington University.
3. *Two-Fold Generalization of Cauchy's Lemma,* Professor D. E. Coffey, Missouri School of Mines and Metallurgy.
4. *A Unique Construction,* Mr. H. J. Johnson, Engineer, American Telephone and Telegraph Company, St. Louis.
5. *Continued Fractions, an Elementary Treatment,* Mr. C. A. Bridger, Missouri Division of Health, Jefferson City.
6. **The Teaching of Elementary Mathematics, Professor A. H. Copeland, Sr., Univer-sity of Michigan. (By invitation.)**

1958 (University of Missouri, Columbia)
1. *Convergence of a Certain Continued Fraction,* Professor David Dawson, University of Missouri.
2. *A Natural Metric Group Associated with a Metric Space,* Professor J. W. Riner, St. Louis

University.

3. *Summer Institutes,* Professor C, A. Johnson, Missouri School of Mines and Metallurgy.
4. *Nonassociative Algebras*, Professor L. A. Kokoris, Washington University.
5. *A Representation Symbol Applied to Waring's Theorem, Modulo p*, Professor J. D. Elder, St. Louis University.
6. **Electronic Computers, Information and Education (by invitation), Professor P. C. Hammer, University of Wisconsin.**

1959 (Lindenwood College, St. Charles)
1. **On Phases of the Work of the School Mathematics Study Group, Professor E. E. Moise, University of Michigan.**
2. **What Is this Modern Mathematics Anyway?, Professor R. V. Andree, University of Oklahoma.**

1960 (Central Missouri State College, Warrensburg)
1. **Euclidean Geometry without Postulates (by invitation), Professor L. M. Blumenthal, University of Missouri.**
2. **Reckoning and Reasoning (by invitation), Professor R. C. Fisher, The Ohio State University.**

1961 (University of Missouri, Columbia)
1. **Multiplicative Functions with Special Reference to Ramanujan's Trigonometrical Function $C_m(n)$, Professor M. V. S. Rao, Department of Mathematics, Sri Venkateswara University, Triupati, India; Visiting Professor, University of Missouri.**
2. *The Advanced Placement Tests for Missouri High School Seniors*, Professor J. J. Andrews, St. Louis University.
3. **Recommendations for the Training of Teachers of Mathematics, Professor W. R. Orton, Jr., University of Arkansas.**

1962 (Missouri School of Mines and Metallurgy, Rolla)
1. *Convex Sets*, Professor J. N. Younglove, University of Missouri.
2. *Factoring Mersenne Numbers*, Professor Edgar Karst, Evangel College.
3. *Sums of Powers of Integers*, Professor E. G. Eigel, Jr., St. Louis University.
4. *Bell-Shaped Functions*, Professor I. I. Hirschman, Washington University.
5. *Developments in Computer Programming Techniques*, Mr. R. F. Keller, University of Missouri.
6. **Frames, Games, and Mathematics, Professor F. E. Hohn of the University of Illinois, MAA Visiting Lecturer.**
7. Panel discussion: *Applied Mathematics in the University, Government, and Industry,* presided over by Dr. Hohn with Mr. Andrew Cochran of the U. S. Bureau of Mines, Mr. R. J. Katzman of IBM, and Professor C. A. Johnson of the Missouri School of Mines

1963 (Southwest Missouri State College, Springfield)
1. *Separability, Compactness, and Point-Wise Paracompactness,* Professor J. N. Younglove, University of Missouri.
2. *A 3-Point Property in Straight Line Spaces,* Professor R. W. Freese, St. Louis University.

3. *A Convex Cone of Super-(L) Functions*, Professor F. W. Ashley, Jr., Southwest Missouri State College.
4. *What is Boolean Geometry?*, Professor J. L. Zemmer, University of Missouri.
5. ***Where Do We Go from Here* (luncheon), W.T. Guy. Jr., Texas.**
6. ***CUPM Recommendations on Pre-Graduate Training and Honors Programs* (invited), E.A. Coddington, UCLA.**

1964 (University of Missouri, Columbia)
1. *A Result in Number Theory*, Frank Gillespie, University of Missouri.
2. *On the Estimation of a Parameter*, Gerald Haas, School of Mines and Metallurgy.
3. *On Some Problems in Theory and Automatic Control*, David Gorman, Washington University.
4. *The Madison Project: A Supplementary Mathematics Program for Elementary School Teachers*, Miss Katherine Kharas, Webster College.
5. ***Homogeneity* (invited), Professor R. H. Bing, President of the MAA.**

1965 (University of Missouri, Columbia)
1. *Theoretical Considerations in Information Storage and Retrieval*, W. K. Winters, University of Missouri at Rolla.
2. *A Survey of the Computer Facilities at the University of Missouri*, D. E. Amos, University of Missouri.
3. *Integrals Related to Bessel's Equation*, Gary Walls, Macon High School.
4. ***On the Distribution of p-Combinatorials* (invited address), Charles Hatfield, University of Missouri at Rolla.**
5. Algebras Associated with Projective Geometries, F. S. Gillespie, Southwest Missouri State College.
6. *Wild Arcs in the 3-Sphere*, S. J. Lomonaco, St. Louis University.
7. *What is an Integral?* (Film), Edwin Hewitt, University of Washington.

1966 (University of Missouri at Rolla)
1. ***The CUPM General Curriculum in Mathematics for Colleges*, Professor Guido Weiss, Washington University**
2. *A Projective Method for Linear Equations*, R. F. Keller, University of Missouri, Columbia.
3. *Solution of a Difference Equation by Means of a Contour Integral*, Gary Walls, Northeast Missouri State Teachers College.

4. *Some Vector Families in E^3 with Integral Components, Integral Length and Useful Orthogonality Properties*, J. F. Gray, Society of Mary, Kirkwood.
5. *On Arbitrary Large Postulate Sets for the Propositional Calculus*, John Bridges, Southwest Missouri State College, Springfield

1967 (Northeast Missouri State Teachers College, Kirksville)
1. ***Convex Sets* (invited), Professor Neil Foland, Southern Illinois University.**
2. *Nontopological Character of Completeness*, Ralph Jones, University of Missouri at Kansas City.
3. *Geometry and Composite Functions*, J. J. Andrews, St. Louis University, St. Louis.

4. *Optimization and Elementary Calculus*, J. R. Foote, University of Missouri at Rolla.
5. *Bivariate Probability Distributions Satisfying a Certain Summability Condition*, A. G. Haddock, University of Missouri at Rolla and V. Seshadri, McGill University.
6. *A Mathematical Model for Musical Composition*, H. A. Padberg, R.S.C.J., Maryville College of the Sacred Heart, St. Louis.
7. *A Brief Biography of Professor George H. Jamison*, Mary Jane Kohlenberg, Northeast Missouri State Teachers College

1968 (Lindenwood College, St. Charles)
1. ***What is a Truth Table?*, F. B. Wright, Tulane University (invited address).**
2. *Cross-Ratio in Geometry*, C. E. Kelley, Central Missouri State College.
3. *Generalizations of Krull Domains*, Elbert Pirtle, University of Missouri, Kansas City.
4. *Elementary Linkage Analysis of Research Competencies in the Sciences*, Ron Moss, Northwest Missouri State College.
5. Discussion of the CUPM report, *Qualifications for a College Faculty in Mathematics*, led by R. H. McDowell of Washington University.

1969 (St. Louis University)
1. *On Semigroups of Functions on Topological Spaces*, A. G. Haddock and T. L. Hicks, University of Missouri, Rolla.
2. *The Cartan-Brauer-Hua Theorem*, Franklin Haimo, Washington University.
3. *Semirings and Their Homomorphisms*, Elbert Pirtle, University of Missouri, Kansas City.
4. ***What Computers Are Doing to College Mathematics*, R. V. Andree, University of Oklahoma (invited address)**.
5. *Functional Analysis and Linear Operator Theory in Linear Spaces with Quaternion and Cayley- Number Scalars*, A. J. Penico, University of Missouri, Rolla.
6. *The Limits of Functions in Terms of Sequences*, Henry Polowy, Lincoln University.
7. *Perturbations of a Matrix by Additive Rank-One Matrices*, J. R. Foote, University of Missouri, Rolla.
8. *Uniform Differentiation*, Sam Lachterman, Saint Louis University.
9. *A Recursion Formula for Finite Partition Lattices*, T. J. Brown, University of Missouri, Kansas City.

1970 (Central Missouri State College, Warrensburg)
1. ***Topological Methods in Analysis*, Professor G. S. Young, Tulane (invited address).**
2. *On Green's Functions for the Bethe-Salpeter Equation*, W. B. DeFacio, University of Missouri, Columbia.
1. *The Henstock Integral*, G. E. Peterson, University of Missouri, St. Louis.
2. *Use of Subjective Knowledge in Objective Inference*, S. K. Katti, University of Missouri, Columbia.
3. *Small Sample Properties of Minimum Chi-Square Estimators*, Iris Moore, Florida State University.
4. *Completeness in Quasi-Uniform Spaces*, John Carlson and T. L. Hicks, University of Missouri, Rolla.
5. ***Solutions of Linear Congruences*, Professor P. J. McCarthy, University of Kansas, (invited address).**

6. *Note on a Deceptive Differential Equation*, J. R. Foote, University of Missouri, Rolla.
7. *Extraction of Monotonic Sequences from a Random Process*, D. M. Davierwalla, Washington University, St. Louis.
8. *Quotient-Difference Algorithm for Finding the Zeros of a Polynomial,* Dean Swisher, University of Missouri, Rolla.
9. Panel discussion: *Undergraduate Abstract Algebra*, Moderator, Franklin Haimo, Washington University, St. Louis; panel members, J. F. Daly, St. Louis University, St. Louis; C. J. Stuth, University of Missouri, Columbia.

1971 (Missouri Southern State College, Joplin)
1. ***England Was Lost on the Playing Fields of Eton: A Parable for Mathematics, Professor A. B. Willcox, MAA Executive Director (invited address).***
2. *On Schauder Decompositions, Two Norm Spaces and Pseudo Reflexivity,* P. K. Subramanian, Missouri Southern College.
3. *The Lattice of Faces of a Convex Cone II*, G. P. Barker, University of Missouri, Kansas City.
4. *A Note on Topology,* Troy Hicks, University of Missouri, Rolla.
5. *A Geometric Introduction to Stability Theory and Liapunov Functions*, Stephen Bernfeld, University of Missouri, Columbia.
6. *Indefinite Finsler Spaces*, J. K. Beem, University of Missouri, Columbia.
7. *Criteria Involved in the Formulation of Definitions Involving Sets,* Henry Polowy, Lincoln University.
8. ***Weakly Continuous Cohomology Theories, Professor J. W. Keesee, Arkansas (invited address).***
9. Panel discussion on *Accreditation and Certification*: Professor Glen Haddock, moderator; panel members: Paul Burcham, University of Missouri, Columbia; L. T. Shiflett, Southwest Missouri State College; Ray Balbes, University of Missouri, St. Louis; and Charles Stuth, Stephens College.

1972 (Stephens College, Columbia - Theme: The Role of Mathematics in Industry and Educational Implications)
1. ***My Experience in Industrial Statistics or What Life Can Be Like Without Students or Committees (invited), George P. Steck, Sandia Corporation.***
2. *The Equations of Fluid Flow Through Porous Media*, E.L. Roetman, UMC.
3. *On a Variety of Nonlinear Equations Arising from Acoustical Theory,* Ervin Y. Rodin, WU.
4. ***A Contemporary Approach to Mathematics Education Suggested by Industrial Applications (invited), W.J. Jameson, Spectra Associates Inc.***
5. *A Lattice Point Problem*, Dana Nau (student), UMR.
6. *Computerized Registration for High Schools*, Kenneth Fore (student), UMR.
7. *The Lighthouse: A Case Study in Computer Aided Design,* A.K. Rigler, UMR.
8. ***The Role of the Industrial Mathematician (invited), Yudell L. Luke, UMKC.***

1973 (Southeast Missouri State University, Cape Girardeau)
1. *What is a Non-Archimedean Field?* Leon Palmer, Southeast Missouri State University.
2. *The 10-Adic Integers*, Lyle Pursell, University of Missouri-Rolla.
3. *An Out-of-Date Computer Program*, Dana Nau, Student, University of Missouri-Rolla.
4. *Newton: The Man,* Randy Makin, Student, Drury College.

5. *Problems and Open Questions in Mathematics that Originate in Computer Science,* Paul Blackwell, University of Missouri-Columbia.
6. *Adaptive Statistical Inference,* S. K. Katti, University of Missouri-Columbia.
7. ***What is an Automaton?* (banquet address), F. E. Hohn, University of Illinois.**
8. ***Consequences of Continuity,* R. P. Boas, Northwestern University, President of the MAA.**
9. ***The Counter-Revolution in Mathematics Education* (invited), Shirley Hill, University of Missouri- Kansas City.**

1974 (University of Missouri - Rolla)
1. *On Difference Equations,* Charles Hatfield, University of Missouri-Rolla.
2. *One Answer to the Challenge of the Open Door Policy,* Frances S. Mangan, Meramec Community College.
3. *Mathematical Modeling,* Carolyn T. MacDonald, University of Missouri-Kansas City.
4. ***Convergence, Summability, and Applications* (invited address), S. M. Shah, University of Kentucky.**
5. ***Employment Prospects in Mathematics* (banquet address), John Jewett, Oklahoma State University.**
6. *Study of Small Sample Estimators,* S. K. Katti, University of Missouri-Columbia.
7. *A Simple Proof of Cauchy's Group Theorem and Applications,* R. Friedlander, University of Missouri-St. Louis.
8. ***Innovative Ways of Teaching Undergraduate Mathematics* (invited address), Alex Rosenberg, Cornell University, Editor of the *Monthly*.**

1975 (Missouri Western State College, St. Joseph - first meeting with parallel sessions)
1. *Examples of Problem Solving,* Richard Friedlander, University of Missouri-St. Louis.
2. *An Experimental Project to Increase Women in the Sciences,* Barbara A. Currier, University of Missouri-Kansas City.
3. *nth Root Groups,* R. E. Kennedy, Central Missouri State University.
4. *Fixed Point Theorems,* Troy Hicks, University of Missouri-Rolla.
5. *Every Finite Group is the Automorphism Group of Some Finite Orthomodular Lattice,* Gerald Schrag, Central Missouri State University.
6. ***On the Nature of Applied Mathematics* (invited address), H. O. Pollak, President of MAA, Bell Laboratories**.
7. Planetarium Show and Geometry Film Show.
8. ***Instructional Materials on Applied Mathematics* (banquet), Maynard Thompson, Indiana University**
9. *Patterns of Wrong Response in Elementary Calculus,* C. A. Johnson, University of Missouri-Rolla.
10. *An Attempt to Answer the Question: Should Students Be Required to Earn C or Better in Prerequisite Mathematics Courses?,* J. W. Joiner, University of Missouri-Rolla.
11. *An Application of Pfafflans to a Physical Problem: the Dimer Problem,* Carolyn T. MacDonald, University of Missouri-Kansas City.
12. *Bernstein's Theorem in a DSC-POLA,* Edward Davenport, Central Missouri State University.
13. ***The Limits of Quantitative Methods in History* (invited address), R. W. Fogel, Professor of Economics, The University of Chicago.**

1976 (Southwest Missouri State University, Springfield)

1. *The Role of a Mathematician in Biophysical and Biomedical Research*, J. W. Northrip, Southwest Missouri State University.
2. *A Method for Computing the Radius of Convergence of a Power Series*, John Lott, K. C. High School Student.
3. *When Does a Sequence Converge to a Fixed Point of a Given Function?*, T. L. Hicks, University of Missouri-Rolla.
4. *The Golden Ratio*, Mike Larson, University of Missouri-St. Louis.
5. *On the Mann Iteration Process in a Hilbert Space*, John Kubicek, Southwest Missouri State University.
6. *Extremal Structure of Convex Sets*, J. C. Hankins, University of Missouri-Rolla.
7. *Patterns of Problem Solving as Applied to Medicine (R Mathematics)*, Sherralyn Craven, Central Missouri State University.
8. *SMSU Math Relays and SMSU Junior High Math Tournament*, J. L. Wise, Southwest Missouri State University.
9. *An Application of Mathematics to the Production of Energy*, Dale Woods, Northeast Missouri State University.
10. *Partial Boolean Rings*, Larry Cammack, Central Missouri State University.
11. **The Mathematics of Computation: A Critical History (invited address), Y. L. Luke, University of Missouri-Kansas City.**
12. **Distribution-Free Statistical Methods (banquet), R. V. Hogg, The University of Iowa.**
13. Films were shown before and after the Friday afternoon session and a Mini Computer Demonstration was held before papers were presented.
14. *History of Computers*, George Luffel, University of Missouri-Rolla.
15. *A "2" Theorem for a Class of Univalent Functions*, J. R. Hatcher, Southwest Missouri State University.
16. *Divisors and Complete Integral Closure in Rings with Zero Divisors*, R. E. Kennedy, Central Missouri State University.
17. *Representation of Integers by Special Diophantine Equations*, Shirley Kolmer, St. Louis University.
18. *Generalized Permutation Matrices*, G. H. Bernet, Jr., Evangel College.
19. **Combinatorial Problems with Surprising Solutions (invited address), D. P. Roselle, MAA Secretary, Virginia Polytechnic Institute.**

1977 (University of Missouri – St. Louis)

1. **Some Aspects of Mathematics in Computer Graphing, Dr. Barry Flachsbart, McDonnell Douglas, St. Louis.**
2. *Systems of First Order Hyperbolic Equations*, E.L. Roetman, UMC.
3. *Some Effects of Administrative Policies Concerning Grades on Student Performance*, George C. Ragland, SLCC Florissant Valley.
4. *The Face Centered Cube Lattice*, Charles Ford, SLU.
5. *Systems Dynamic Modeling and Computer Simulation*, John T. Sieben, Tarkio College.
6. *Measures With Orthogonal Values*, Victor H. Gummersheimer, SEMO.
7. *A General Solution of Whitaker's Type for the Biharmonic Equation in Three Variables*, H.H. Snyder, SIU (Ill. Acad. Of Sci., App. Math. And Mech. Section).
8. **Mathematical Models of Doom (invited address), Saunders MacLane, U. of Chicago.**

9. Film*: Mauritz Escher: Painter of Fantasies*.
10. ***Viking – The Search for Life on Mars* (banquet address), Dr. Donald DeVincenzi**
11. *How to Teach Introductory Mathematics,* Elizabeth Berman, UMKC.
12. *Fixed Point Iterations Using Infinite Matrices*, Troy Hicks, UMR.
13. *An Exact Algorithm for the Small Scale Traveling Salesman Problem*, R.C. Schock, SIU (Ill. Acad. Sci., App. Math. And Mech. Sec.).
14. *On Evaluating Partial Sums*, Mangho Ahuja, SEMO.
15. *How Rational is a Circle*, R.L. Boehning, MSS
16. *Odd Abundant Numbers*, Rik Drummond (student), CMS.
17. ***Prime Generating Functions and Congruences,* Henry Adler, UC Davis, MAA President.**

1978 (Central Missouri State University, Warrensburg)
1. ***Algorithmicly Defined Functions,* R. D. Anderson, Louisiana State University** (He also presided over a discussion of the MAA Placement Exams).
2. ***What's Happening in Mathematics Education, Implication for All of Us,* Robert E. Reys, University of Missouri-Columbia (invited).**
3. ***Time, Space, and Cosmology* (banquet), John K. Beem, University of Missouri-Columbia**.
4. *A Method for Solving x^2 = A in Matrices*, W. R. Utz, University of Missouri-Columbia.

5. *Common Problems Experiences in the Application of Regression Analysis to Economic Problems*, B. A. Brock, Central Missouri State University.
6. *Diagnosis of College Students' Mathematics Errors*, T. Goodman, Central Missouri State.
7. *Developmental Analysis,* L. Sherwood, Penn Valley Community College.
8. *Niven Numbers*, R. Kennedy, Central Missouri State University.
9. *Characterizing the G.C.D. and L.C.M.*, M. Ahuja, Southeast Missouri State University.
10. *Packing the Unit Interval with a Steinhaus Class*, K. W. Lee, Missouri Western State College.
11. *A Comment on the Method of Proof Contradiction or 'Who Killed Cock Robin'*, H. Polowy, Lincoln University.
12. *Dissection of a Square and the Fibonacci Series*, G. Ragland, Florissant Valley Community College.
13. *Latin Squares, Finite Groups, and the Four-Color Problem*, R. Friedlander, University of Missouri-St. Louis.
14. *An Ordering-Theoretic Method of Analyzing Sex-Differences on the Fraction Concept*, G. Austin-Martin, Stephens College.

1979 (University of Missouri – Kansas City)
1. ***The Dog with the Cocked Head* (invited), Leonard Gillman, Texas, Treasurer of the MAA.**
2. ***Elementary Sieve Methods and Arithmetic Problems in the Theory of Numbers* (invited), Walter Mientka, University of Nebraska**.
3. ***Insights in the Actuarial Profession* (banquet), Tom Lonigan, Fellow of the Actuary Society, Meidinger and Associates of Kansas City**.
4. *The Circle of Apollonius and Some Packaging Problems*, M. Ahuja, Southeast Missouri State University.
5. *How Children Learn Fractions; Part-group, Part-whole Models*, G. Austin-Martin, Stephens College.

6. *Physical Exercises for Signed Numbers*, E. Berman, University of Missouri Kansas City.
7. *Analytic Interpretation for Finite Geometries*, R. L. Boehning, Missouri Southern State College.
8. *Math Confidence and Performance as a Function of Individual Differences in Math Aptitude*, M. Bowling, Stephens College.
9. *An Elementary Proof of a Theorem Concerning the Order p of a Linear k-step Method*, C. Cooper, Central Missouri State University.
10. *Operators in a Partially Ordered Linear Algebra*, E. Davenport, Central Missouri State University.
11. *Young Children's Spatial Concepts*, T. Goodman, Central Missouri State University.
12. *Sex Differences in Mathematics Achievement; Implications for Careers for Women*, M. Gulliver, Stephens College.
13. *A Banach Type Fixed Point Theorem*, T. Hicks, University of Missouri-Rolla.
14. *Digital Sums, Niven Numbers and Natural Density*, R. Kennedy, Central Missouri State University.
15. *A Math Lab for Developmental Students*, F. Mangan, St. Louis Community College at Meramec.

16. *Some Observations on the Dragon Curve and Related Rations*, J. Mathis, William Jewell College.
17. *Overcoming Math Avoidance*, C. Stuth, Stephens College.
18. *On a Class of Saks Spaces*, P. K. Subramanian, Missouri Southern State College.

1980 (Westminster College, Fulton)

1. ***Mathematical Models and Existence Theorems* (invited), Dorothy L. Bernstein, MAA President, Brown University**.
2. Yudell L. Luke moderated a panel discussion on *Preparation for College Mathematics in High School and in College*. Panel members were Harry Oldweiler of Columbia Hickman High School, Elizabeth Berman of the University of Missouri at Kansas City, and NCTM President Shirley Hill of the University of Missouri at Kansas City.
3. *What is a Statistical Metric Space,* Troy Hicks, University of Missouri-Rolla.
4. *Polar Coordinates and Inversion in the Unit Circle,* Lyle Pursell, University of Missouri-Rolla.
5. *Concerning Paraseparable Dendritic Spaces*, David John, Missouri Western State College.
6. *Properties of Music Tables,* Curtis Cooper, Central Missouri State University.
7. *Fibonacci Numbers and Permanents of Circulants*, Gerald Suchan, Missouri Southern State College,
8. *Numerical Calculations of Cauchy Principal Values Arising From the Determination of Optical Properties of Cryofilms*, Kent Palmer, Westminster College,
9. *An Investigation of a Generalization of a Divisibility Test,* Robert Kennedy, Central Missouri State University.
10. *The Distance Set of a Generalized-Cantor Set in n-Space - Some Unsolved Problems*, Ken Lee, Missouri Western State College.
11. *Prerequisite Math Knowledge for Learning Statistics,* Jeanne Sebaugh, University of Missouri-Columbia.
12. *Secondary Students Solution for Algebra Word Problems,* Terry Goodman, Central Missouri

State University.

13. ***Thinkers Who Do Not Count and Counters Who Do Not Think* (banquet), Tim Wright, University of Missouri-Rolla**,

1981 (Northwest Missouri State University, Maryville)

1. *Weights on Certain Duals of the Generalized Peterson Graph*, Gerald Schrag, CMS
2. *Sequences and Series Encountered in Generalizing the ATTACK Game*, Bev H. Harris, SWB.
3. *A Star Shaped Property for Sets of Spectral Vectors for Doubly Stochastic Matrices*, Gerald E. Suchan, MSS.
4. *An Algebraic Investigation of the APL "Grade-Up Function"*, Curtis Cooper, CMS
5. ***Optimal Strategies in Sports* (invited), Leonard Gillman, Texas, MAA Treasurer.**
6. *Predictions – Interpretations Pertaining to Alewife Die-Offs in Lake Michigan*, Henry Polowy, Lincoln U.
7. ***Possible Futures: Hardware, Software, and People* (banquet), Captain Grace M. Hopper, U.S.N.R.**
8. *The Curious Tangent-Half-Angle Substitution of Calculus: Motivation, Variations, and Further Applications*, Lyle E. Pursell, UMR.
9. *Fractions in Orbit*, Charles Hatfield, UMR.
10. Panel Discussion: *Mathematics Teacher Certification at the High School Level, Present and Future*, John Dossey, Illinois State U., Panel Leader.

1982 (University of Missouri at Rolla)

1. ***Paradoxical Coverings of the Real Line* (invited), Ivan Niven, University of Oregon.**
2. ***Educational Applications of Computer Graphics* (invited), O.R. Plummer, University of Missouri at Rolla.**
3. **"Are You Ready for Calculus Calculators? (banquet), Arlan DeKock, University of Missouri at Rolla.**
4. *Taylor's Formula With Remainders*, Trent Eggleston, University of Missouri at Rolla.
5. *Replacement of Equality Constraints by Inequality Constraints*, Johnny Roberts, University of Missouri at Rolla.
6. *Exponentiation Without Associativity*, Gary Birkenmeier and Steve Plaskemeier, S.E.M.S.U.
7. *Mathematizing 'Frogs': Heuristics, Proof, and Generalization in the Context of a Recreational Problem*, Gary G. Cochell, Culver-Stockton College.
8. *Statistical Metric Spaces: Examples and Topological Classifications*, Troy Hicks, University of Missouri at Rolla.
9. *N.C.A.T.E. and Its Influence on Mathematics*, Don Hight, Pittsburg State University.

1983 (Missouri Western State College, St. Joseph)

1. ***Some Bridges To and From Mathematics, Alfred B. Willcox, Executive Director of M.A.A.***
2. ***Something Old, Something New, Something Borrowed, and Something Blue,* (banquet) Paul Humke, St. Olaf College, Northfield, Minnesota**.
3. ***MATHFILE: Introduction and Demonstration, Gabrielle Carr, Librarian, Missouri Western State College.***
4. *Simple Links in Locally Compact Connected Hausdorff Spaces are Nondegenerate*, David John, Missouri Western State College.

5. *Two Problems in Recreational Mathematics*, Curtis Cooper, Central Missouri State University.
6. *An Inverse - Limit Proof of Keller's Theorem*, Mark Michael, Southeast Missouri State University.
7. *The Risk Generalization Model and Series-Summability Approach to the Pascal Triangle Diagonal Matrix,* Bev Harris, Southwest Baptist University.
8. *Niven Numbers: Past, Present and Future,* Robert E. Kennedy, Central Missouri State University.
9. *Introducing Random Samples in Elementary Statistics Using the PDP-ll and Poise, Ben* Budde, Westminster College.
10. *Generalized Differences*, Russ Euler, Northwest Missouri State University.
11. *The Importance of Three Years of High School Mathematics: A Perspective from Students,* Charles Mitchell, Northwest Missouri State University.
12. *A Summer Math Institute for High School Students,* Larry Campbell, The School of the Ozarks.
13. *Plotting Along Using Graphics for Beginning Programming*, Janet Fite, teacher of the gifted at Bode and Spring Garden Schools, St. Joseph.
14. *The Art and Science of Computerized Combat Simulations*, Kent Pickett, Missouri Western State College.
15. Planetarium Demonstration, Chris Godfrey, Missouri Western State College.
16. *Computer Applications in Mathematics Education*, Bill Huston (Moderator), Missouri Western State College.
17. Novice's Microcomputer Workshop, George Bishop and Ken Johnson (Instructors), Missouri Western State College.
18. Microcomputer Exhibit, Missouri Western State College Mathematical Sciences Society. Bruce Kelley, Faculty Advisor.

1984 (Southeast Missouri State University, Cape Girardeau)
1. ***Some Problems I Couldn't Solve* (invited), Paul R. Halmos, Editor, *American Mathematical Monthly*.**
2. *A Report on Results of Lipman and Anderson on Wreath Products of Graphs*, Gerald Schrag, Central Missouri State University.
3. *Fixed Point Theory: A Revisitation,* Troy L. Hicks, University of Missouri, Rolla.
4. *Fixed Point Theory: Computational Aspects,* Alberta Bollenbacher and Troy L. Hicks, University of Missouri, Rolla.
5. *Regular Polygons and Lattice Points,* John R. Wolffer, Defense Mapping Agency, and Mangho Ahuja, Southeast Missouri State University.
6. *On the Natural Density of the Niven Numbers*, Robert E. Kennedy and Curtis N. Cooper, Central Missouri State University.
7. *On an Asymptotic Formula for the Niven Numbers*, Curtis N. Cooper and Robert E. Kennedy, Central Missouri State University.
8. *(Title Unknown),* Raymond Arvidson, Washington U.

1985 (Central Missouri State University, Warrensburg)
1. ***Mathematics - Structure and Use; Or, What Are We Learning This For?* (banquet), Raymond Freese, St. Louis University.**

2. ***Bits and Pieces from the Classroom* (invited), Leonard Gillman, University of Texas at Austin**.
3. *Problem Solving and Problem Solvers,* Sherralyn Craven, Central Missouri State University.
4. *Applying SAS to Solve Problems in Estimating Ordinary Least Squares Regression,* Baird Brock, Central Missouri State University.
5. *A Two-Person Coin Flipping Problem,* Curtis Cooper and Robert E. Kennedy, Central Missouri State University.
6. *An Investigation of the Natural Density of {x: x is a factor of f(x)},* Robert E. Kennedy and Curtis Cooper, Central Missouri State University.
7. *How to Make Mathematics Interesting in the Classroom,* Peter G. Casazza, University of Missouri at Columbia.
8. *Square Free Number Cycles,* Dale Woods, Central State University (Oklahoma)/Northeast Missouri State University.
9. *Non-commutative Lattices,* Jonathan Leech, Missouri Western State College.
10. *Random Normed Structures,* Troy Hicks, University of Missouri at Rolla.
11. *A Mathematical Model of Human Thought*, Janet C. Tremain (student), University of Missouri at Columbia.
12. *A Graphical 'Machine' for the Hyperbolic Functions,* David Rodriguez (student), Central Missouri State University.

1986 (Southwest Missouri State University, Springfield)
1. *Is the Mean Bowling Score Awful?,* Curtis Cooper and Robert Kennedy, CMS.
2. *The Number of Ways to Bowl a 100 is 50613244155051856,* Robert Kennedy and Curtis Cooper, CMS.
3. *A Fixed Point Theorem Revisited,* Troy Hicks, UMR.
4. *Fixed Point Theory – Examples and Applications*, Alberta Bollenbacher and Troy Hicks, UMR.
5. *Some Number Theoretic Properties of the Tchebycheff Polynomials,* Frank Gillespie, SMS.
6. ***Vector Fields, Curvature and the Euler Characteristic* (invited), James W. Vick, Texas.**
7. Panel Discussion*: Placement in Beginning Mathematics Courses,* Panelists: Duane Huechman, Evangel; Ken Lee, MWS; Victor Gummersheimer, SEMO; August Garver, UMR.
8. ***Rip Van Winkle Reports* (banquet), Don McInnis, SMS.**
9. *Planarity on the Generalized Peterson Graphs,* Gerald Schrag, CMS.
10. *Algebras, Coalgebras, and Hopf Algebras,* Yungchen Cheng, SMS.
11. *A Singular Nonlinear Integral Equation*, John Hatcher, SMS.
12. *A Cross Product for Four Dimensional Euclidean Space,* Lyle Pursell, UMR.
13. ***Turning Students on to Mathematics – A Role of Beginning Undergraduate Courses* (invited), Ronald M. Davis, MAA Second Vice President.**

1987 (Northeast Missouri State University, Kirksville)
1. *Maximizing Through Parameter Transformation,* M. Habibulla and S.K. Katti, UMC.
2. *A Triangle of Permutations,* Larry Lucas and Mangho Ahuja, SEMO.
3. *Interpolation of Classical Confidence Intervals & Testa,* S.K. Katti, UMC.
4. *On the Existence (or Non-Existence) of Niven Numbers in Various Sets of Integers,* Curtis Cooper and Robert Kennedy, CMS.
5. *An APL Program for Iteratively Reweighted Least Squares,* Ferrin Harrison, UMC.

6. *A Characterization of Niven Repunits*, Robert Kennedy and Curtis Cooper, CMS.
7. *Relational Database Theory and Subsets of Finite Sets*, David Naugler, SEMO.
8. *Arithmetic Algorithms: A Historical Perspective*, Larry Johnson, CMS.
9. *The Jerusalem Ticket Problem*, Janet Tremain, UMC.
10. *Diagonalization of Certain Coalgebras over Z[1/n]*, Yungchen Cheng, SMS.
11. *Fixed Point Theorems for Quasi-Metric Spaces,* Troy Hicks, UMR.
12. *Convex Counterexamples,* Charles Allen, Drury.
13. *Teaching Calculus I and II at the Mathematics and Physics Institute*, Richard Delaware, UMKC.
14. *Stability of Fixed Point Iterations*, Alberta Harder and Troy Hicks, UMR.
15. *Almost Locally Connected Space* (Part I), Shing So and Abigail Huang, CMS.
16. *Random Points on Spheres: A Graphics Conjecture Proved*, David Naugler, SEMO.
17. *Derivations on Commutative Banach Algebras*, Ramesh Garimella, NWMS.
18. *Almost Locally Connected Space* (Part II), Shing So and Abigail Huang, CMS.
19. Panel Discussion: *The Undergraduate Calculus Sequence*, Panelists: Ed Huffman, SMS; Robert McDowell, WU; Ed Davenport, CMS; Sam Lessig, NEMO; August Garver, UMR; Ken Lee, MWS.
20. **Challenge Problems (banquet), Roy Utz, UMC.**
21. *Invariant Properties of the Euler Characteristic and Alternating Sums*, Harold Weber, NEMO.
22. *Level Preserving Contractions for the Hyperspace C(X),* Anne Dilks, McNeese State (LA).
23. *The Buckley-Leverett Partial Differential Equations*, Dale Woods and D.J. Boyce, CSU (OK).
24. *Construction of a Nonstandard Model of Arithmetic*, Jacqueline Hoover (student), NEMO.
25. *Mirror Images and Definite Integrals*, Mangho Ahuja, SEMO.
26. *Feynman's Sum over histories and Its Mathematics*, Pimon Ajanapon, NEMO.
27. *Minimal Sets in Recurrent Discrete Flows,* Ronald Knight, NEMO.
28. *Solutions of Differential Equations Near an Irregular Singular Point*, Leon Hall, UMR.
29. **Strings, Substrings, and the Nearest Integer Function (invited), Herbert S. Wilf, U. Pennsylvania, Editor of *The American Mathematical Monthly*.**

1988 (Washington University, St. Louis)
1. *Generalized Cyclic Elements*, Shing So, CMS.
2. *A Computer Algebra Procedure for Differential Equations*, Leon Hall and Jeff Jeness, UMR.
3. *Complete Solution to Mrs. Miniver's Problem*, John Tansil, SEMO.
4. *A Model for Prey-Switching*, Kurtis Fink, NWMS.
5. *Fixed Point Theory and Iteration Procedures*, Alberta Harder, SEMO.
6. *Using SAS in an Introductory Statistics Class*, C. Wallgren, SEMO.
7. *Fixed Point Theorems for Multi-valued Mappings*, Troy Hicks, UMR.
8. *Polynomial Ring Integral Closures*, Albert Dixon, School of the Ozarks.
9. *On the Solutions of Substrings: Part I, Robert Kennedy, CMS.*
10. *Closed Subspaces of Finite Codimension in Some Function Algebras*, Ramesh Garimella, NWMS.
11. *On the Statistics of Substrings: Part II*, Curtis Cooper, CMS.
12. *Mathematics and Economic Models: Are We Funding Public Education Effectively*, David Naugler, SEMO.
13. *Teaching of Calclus Using Computer Intense Methods*, S.K. Katti, UMC.

14. *What is Beginning Algebra*, W. Livingston, MSS.
15. *Level-set Probabilities for a Unimodal Ordering*, Larry Lucas, SEMO.
16. *On the t-Extendability of the Generalized Peterson Graphs*, Gerald Schrag, CMS.
17. **Bad Science (banquet), Carl Bender, WU.**
18. *An Investigation of Topic Proficiency in Middle School Math Relays*, Larry Johnson, CMS.
19. *A Matrix Formula for Oblique Projections*, Lyle Pursell, UMR.
20. *Implications of Research in Educational Psychology for Teaching Practices and Philosophy*, Stan Hartzler, NWMS.
21. *On Dimitri Egorov and His Student Nikolai Luzin*, Charles Ford, SLU.
22. **An "Obvious" Induction (invited), Leonard Gillman, Texas, MAA President.**

1989 (University of Missouri, Columbia)
1. *(Title Unknown)*(**invited**), **W. A. J. Luxemburg, A. P. Sloan Lab for Math and Phys., Caltech.**
2. *Comparison Between Noetherian Ring and Artinian Ring*, Abigail Huang, Iowa.
3. *Derivation on Integral Domains*, Ramesh Garimella, NWMS.
4. *Ancient Greeks and Algebraic Solutions to Geometric Problems*, Linda Hand, MSS.
5. *Convergence Semigroups*, Shing So, CMS.
6. *Testing the Intensity of a Nonhomogeneous Poisson Process: Nondecreasing vs. All Alternatives*, James Guffey, NEMO.
7. *A Study of Preservice Teachers' Estimation Skills and Strategies*, Terry Goodman, CMS.
8. Panel Discussion (Subject unknown*)*, Organizer: John Beem, UMC.
9. *(Title Unknown)*(**banquet**), **W. A. J. Luxemburg, A. P. Sloan Lab for Math and Phys., Caltech.**
10. **Demonstration of Calculus and Mathematica (invited), J. J. Uhl, Illinois.**
11. **Stochastic Inequalities: Sequences, Nested Cycles and Isotropic (invited), Walter W. Funkenbusch, Mich. Tech.**
12. *An Introduction to Nearness Space*, Troy Hicks, UMR.
13. *Semigroups of Functions on Nearness Spaces*, Rhonda McKee, UMR.
14. *Uniform Rank Over Schmidt Operator Rings*, Dennis Malm, NWMS.
15. *A Note on H-Sets*, Mohan Tikoo, SEMO.
16. (Title Unknown), Lyle Pursell, UMR.
17. *The Value of the Determinant of Certain (0,1)-Matrices*, D.J. Boyce and Dale Woods, Central OK.
18. *Divisibility, Inverse Laplace and the Problem with Selecting the Branch*, S.K. Katti and Ferrin Harrison, UMC.
19. *Harmonic Volume, Symmetric Products, and Abel-Jacobi Map*, William Faucette, NEMO.
20. *A Puzzle in Kelley's Appendix*, William Livingston, MSS.
21. *Curriculum Standards for Grades K-4, from the NCTM Curriculum and Evaluation Standards for School Mathematics: Implications for Missouri Educators*, Arissa Smith, Lead Mathematics Supervisor, St. Louis Public Schools.
22. *Weibull Probability Distribution for Weapon Systems*, Seki Choo, US Army Troop Support Command, St. Louis.
23. *A New System for Doing Mathematics by Computer, Selden Trimble and Leon Hall, UMR.*
24. *Homotopy Extension Theorem for a Fibered-Preserving Piecewise Linear μ-Homotopy*, Tran van Thuong, MSS.

25. *On Products of Certain Weight Subspaces of Nonsymmetrizable Ksc-Moody Algebra*, Phyllis Singer, UMR.
26. *How Rational is a Circle*, Rochelle Boehning, SMS.
27. *Patterns, Automata, and Stirling Numbers of the Second Kind*, Robert Kennedy and Curtis Cooper, CMS.
28. *The Statistics of the Smallest Space on a Lottery Ticket*, Curtis Cooper and Robert Kennedy, CMS.
29. *Conditional Evaluation of Statistical Procedures*, John Summerville, UMC.

1990 (The School of the Ozarks, Point Lookout)
1. ***A Look at Partitions,* Deborah T. Haimo, UMSL, MAA President Elect.**
2. *An Elementary Number Theory Solution to an Elementary Statistics Problem*, James Bruening, SEMO.
3. *Nice Polynomials and Quartic Elliptic Curves*, Jim Buddenhagen, Southwestern Bell Telephone Co.
4. *The Statistics of the Largest Space on a Lottery Ticket*, Curtis Cooper and Robert Kennedy, CMS.
5. *On the Common Zeroes of Finite Blaschke Products*, Ramesh Garimalla, NWMS.
6. *Compound Harmonic Motion Machines – Then and Now*, Leon Hall, UMR.
7. *On Numerical Regulation of Mathematics Literacy, Stan Hartzler,* NWMS.
8. *Some Examples and Problems in Fixed Point Theory*, Troy Hicks, UMR.
9. *An Algorithm for Testing the Divisibility of the Continuous Distributions*, S.K. Katti, UMC.
10. *On the Right-Minimums of Arithmetic Functions*, Robert Kennedy and Curtis Cooper, CMS.
11. ***Humor in Mathematics: Freud Would Be Proud* (banquet), Jerry Johnson, Western Washington University.**
12. *Teaching Limits*, William Livingston, MSS.
13. *Simplicity of Differential Operator Rings*, D. R. Malm, NWMS.
14. *ITBS vs. MMAT,* Jayma Sandquist (student), NWMS.
15. *Product Spaces and Inverse Limit Spaces of Convergence Spaces*, Shing So, CMS.
16. *Karmarker's Algorithm for Small Systems*, Dale Woods and D.J. Boyce, Central State U. (OK).
17. ***National Standards: A New Dimension in Educational Leadership* (invited), Joe Crosswhite, Past President of NCTM.**

1991 (University of Missouri, Rolla)
1. Derive and Mathematica Workshops: *Derive -* Bill Houston, MWS; *Mathematica –* Henry Gee, Leon Hall, Rob Roe, Jack Scrivener, and Selden Trimble, UMR.
2. ***What Mathematica Has Taught Me About Mathematics* (invited)*,* Stan Wagon, Macalester College.**
3. *Logical Fallacies*, Scott Garten, NWMS.
4. *Derivations on Integral Domains*, Ramesh Garimella, NWMS.
5. *Triangularizing Matrices,* Abigail Huang, UMKC.
6. *Stone Cech Compactification of Convergence Spaces*, Shing So, CMS.
7. *Fixed Point Theory for Non Metric Spaces*, Troy hicks, UMR.
8. *Use of the Computer in an Introductory Statistics Course*, James Guffey, NEMO.
9. *Using Derive in Business Calculus*, Don Mahaffey, MWS.

10. *Calculators in the High School Curriculum*, Rita Freese, Rolla High School.
11. *Using the TI-81 Graphics Calculator in Trigonometry,* Lynda Hollingsworth, NWMS.
12. *Numerical Iteration with Graphing Calculators,* Samuel Lynch, SMS.
13. *Sums of Powers of Digital Sums via Generating Functions, Derivatives, and the Computer,* Curtis Cooper, CMS.
14. *Digital Sums of Powers, Large Digits, and a Conjecture,* Robert Kennedy, CMS.
15. *Distribution of Sidon Series,* Nakhle Asmar, UMC.
16. *Generalizing the Binomial Theorem,* Stephen Montgomery-Smith, UMC.
17. *A Predator-Prey Model with Prey Preference Effect,* Kurtis Fink, NWMS.
18. *The Lagrange Smooth Approximation and its Application to Optimal Control,* E. Sambasivam, MWS.
19. ***MAA Recommendations for Teacher Training* (banquet)*,* Katherine Pederson, SIU-Carbondale.**
20. *Integrating Calculus and Physics – A Report,* Samuel Lynch, SMS, and Leon Hall, UMR.
21. *The New "Core" Mathematics Courses at Northwest,* Dennis Malm, NEMO.
22. *Why Mathematics Professors Should Help Push Reform in Elementary School Mathematics,* Stan Hartzler, NWMS.
23. *Square Heron Triangles and a Family of Elliptic Curves,* Jim Buddenhagen, Southwestern Bell.
24. *Nonmonotonic Logic,* John Pais, McDonnell Douglas Research Lab.
25. *Representations of Left Distributive Posets,* Yungchen Cheng, SMS.
26. *Distance in Digraphs,* Songlin Tian, CMS.
27. *Eigenvalues and Additive Sequences,* Michael Shepard, SMS.
28. *Generalized Fibonacci Numbers,* Nancy Ballard, Flat River CC.
29. ***On Becoming Number One by the Year 2000* (invited)*,* Marcia Sward, MAA Executive Director.**

1992 (Northwest Missouri State University, Maryville)
1. *LOGO in the Elementary Classroom,* Don Beaty, Centralia Junior High School, Centralia, IL.
2. *Practical Applications of Mathematics in the Rebuilding of Our Nation's Infrastructure,* Roney L. Haden, Missouri Highway and Transportation Department.
3. *Interesting (and Weird) Mathematicians and Stories about Them,* Larry Campbell, College of the Ozarks.
4. *A Manipulative Development of the Multiplication Algorithm and Some Multiplication Activities,* Jewell Fowler, Sedalia School District #200.
5. *An Introduction to MYSTAT and Its Uses in Basic Statistics,* James Guffey, NEMO.
6. *Hands-on Activities to Implement the National Council of Teachers of Mathematics Curriculum and Evaluation Standards in Grades K-4,* Reta S. Smith, Springfield Public Schools Curriculum Supervisor – Mathematics.
7. *The Magic of Mathematics,* Leroy Sachs, Clayton High School, Retired.
8. *Algebra Tiles – A Hands-on Approach for Beginning Algebra,* Sue Reehm, Eastern Kentucky University.
9. *A Comparison of TI-81 and Casio 7700 Calculators,* Ben Budde, Westminster.
10. *Theme and Variations on the Cubic: Technology for Fixed Point Iteration,* Samuel Lynch, SMS.
11. *Integration,* Kishor Shah, SMS.

12. *The Ten Commandments in Mathematics*, E. Sambasivam, MWS.
13. *Alternatives in Teaching a General Education Course*, Stan Hartzler, NWMS.
14. *Meeting the Challenge of Teaching in the Twenty-First Century*, Sue Sundberg, CMS.
15. *The Geometric Sketchpad*, Mel Thornton, Nebraska.
16. *General Formula to the Monkey-Coconut Problem*, Scott Contois, Lincoln U.
17. *Seating Arrangements and Fibonacci Numbers*, Curtis Cooper, CMS.
18. *On Some Digital Properties of Integers*, Robert Kennedy, CMS.
19. *An Elementary Proof of a Basic Property of the Mandelbrot Set*, Debi Brown (student), NEMO.
20. *Some Results in Taxicab and Chinese Checker Geometries*, Guanghui Chen (student), UMR/CMS.
21. *Magic Squares*, Lonnie Sauter (student), NWMS.
22. *Creating an Environment for Problem Solving and Thinking*, Richard Frankenberger, Math Consultant, Hazelwood School District.
23. *Attribute Blocks – Math and Language Activities*, Ruth Gardner, New Haven Elementary, Columbia.
24. *Missouri Higher Education and K-12 Mathematics: Developing a Collaborative Effort in Order to Improve Mathematics Education*, Richard Phillips, Missouri Dept. of Education.
25. *Morley's Theorem and the Cardioid as a Trisection Tool*, Leon Hall, UMR.
26. *Bell-Ringing and Cayley Color Graphs*, Elise Fischer, Johnson County CC.
27. *An Elementary Proof of the Heine-Borel Theorem*, Shing So, CMS.
28. *Parameter transformation to Aid Numerical Optimization*, Shankang Qu and S.K. Katti, UMC.
29. *Overdetermined Systems of Linear Equations*, Dale Woods, U. Central OK.
30. *A Mathematical Analysis of the Effect of Unsteadiness in a Mechanical Dashpot (Shock Absorber)*, George Kahwaji, CMS.
31. *Geoboards: Designing Patterns, Theorems, and Ideas*, John Swartz, Math. Coord., Consolidated District #2, Raytown.
32. ***Statistical Applications of Differential Equations in S-System Canonical Form* (invited), Phillip Rust, Medical U. of South Carolina.**
33. Panel Discussion – *Coalescing: A Panel Discussion Connecting All Levels of Mathematics Education,* Moderator - Vena Long; Panelists – Jim Leitzel, Lida Barrett, Larry Campbell, Reta Smith.
34. ***Addressing the Call for Change* (banquet), Jim Leitzel, Editor of *A Call For Change*, MAA.**
35. *Workshop on Writing Successful Mathematics Education Proposals,* Christine Stevens, SLU.
36. Growth of Groups, Atul N. Roy, Culver-Stockton.
37. *Geometric interpretations of the Reduction of the General Quartic by Galois Theory*, Mark Faucette, NEMO.
38. *Digraphs and Nonsymmetrizable Kac-Moody Algebras*, Phyllis Singer, UMR.
39. *Distance in Digraphs: Centers and Perispheres*, Songlin Tian, CMS.
40. *Fixed Point Theory for Non Self Maps*, Linda Saliga, UMR.
41. *Using recreational Mathematics to Spice up Math Classes*, Rita Barger, Hickman Mills H.S., Kansas City.
42. *Number Please – Real Life Illustrations of Life-Centered Mathematics,* Judy Clinch, Linn County R-I, Purdin.

43. ***The Nebraska Math Scholars and JUMP Projects: An Informational Session* (invited), Mel Thornton, Nebraska.**
44. *Teaching Probability with WordPerfect, the Mathematics Plotting Program, and Audience Participation*, Elizabeth Applebaum, Avila College.
45. *The Non-Traditional College Student: Changing the Face of Your Class*, Carol Howard, UMC.
46. *Exterior Topology*, John Pais, McDonnell Douglas Research Laboratory.
47. *Changepoint Detection Using Nonparametric Procedures*, Sivanandan Balakumar, Lincoln.
48. *Multicultural Mathematics*, Marybeth Swartz, District math Resource Teacher, Kansas City.
49. *Making the Connection with LOGO*, Don Beaty, Centralia Junior H.S., Centralia, IL.
50. ***Women In Mathematics and Science: Yesterday, Today, and Tomorrow* (invited), Lida Barrett, MAA Past President.**

1993 (Westminster College, Fulton)
1. ***A Decision-Theoretic Approach to Viability Analysis of Endangered Species* (invited), Robert McKelvey, University of Montana.**
2. ***Mathematical Models and Conservation Biology* (banquet), Robert McKelvey, University of Montana.**
3. ***Modeling, Mathematics and Active Learning: Perspectives of an Ecological Modeler* (invited), Tony Starfield, University of Minnesota.**
4. ***Gauss's Binomial Coefficients* (invited), Gerald Alexanderson, MAA Secretary.**
5. Panel Discussion – *Guidelines for Programs and Departments in Undergraduate Mathematical Sciences,* Panelists: John Fulton (UMR), Bernard Madison (Arkansas), Ed Davenport (CMS), Ben Budde (Westminster).
6. Panel Discussion – *Careers in Mathematics,* Panelists: Lisa Feik (actuarial statistician), Steve Perkins (graduate student in engineering), Kenneth Smith (Mo. Dept. of Natural Resources), Betsy Humphreys (Southwestern Bell), Brent Cooper (high school teacher).
7. *An Improvement of the Vitali-Hahn-Saks-Nikodym Theorem*, Paul Abraham.
8. *Are Your Relations Transitive?* John Atkinson.
9. *Nonlinear Transformations to Speed Up Numerical Minimization*, Prabha Betne.
10. *Generating Generalized Inverses by Solving Systems of Equations*, James Bruening, SEMO.
11. *How to Spread Points on a Sphere,* Jim Buddenhagen, Southwestern Bell.
12. *Common Moments of Complementary Sequences*, Hang Chen, CMS.
13. *On Diophantine Equations $x^2 - dy^2 = p^2b$*, Yungchen Cheng, SMS.
14. *On a Seating Rearrangement Problem – Part 2*, Curtis Cooper, CMS.
15. *A Relationship Between the Metropolis Algorithm and the Two-Membered Evolution Strategy*, L.V. Edmondson, CMS.
16. *$n = 7 \mod 8$ Requires Four Squares*, Scott Garten, NWMS.
17. *The Congruence on Implicative Semigroup*, Abigail Huang, CMS.
18. *Baysian Methods to Grade Students*, S.K. Katti, UMC.
19. *On a Theorem of Erdos-Pomerance and its Aplication to Factor-Digitometry*, Robert Kennedy, CMS.
20. *Complex Roots of an Exotic Equation*, Samuel Lynch, SMS.
21. *Calculus with a Graphics Calculator*, Dennis Malm, NWMS.
22. *Constructing a Surface-Filling Curve*, Stuart Noel.
23. *The Rational Root theorem Revisited*, Leonard Palmer.

24. *Stereographic Projection and Tangent Function*, Noah Rhee.
25. *Sand's Law and Other Rules to Math By*, Mark Sand, NWMS.
26. *Commutative Algebra: 1890 Onwards*, Kishor Shah, SMS.
27. *Sabbatical Leave and Eight-Tenths of CRAFTY*, Larry Sherwood, Penn Valley CC.
28. *Mathematics and Air Pollution Control*, Kenneth Smith, Mo. Dept. of Natural Resources.
29. *Convergence on the Power Sets of Convergency Spaces*, Shing So, CMS.
30. *Generalized Complementarity Problem*, Bohdan Szunc.
31. *Interior and Annulus of Connected Graphs*, Songlin Tian, CMS.
32. *Properties Bi-Invariant Under ϕ-Covering Maps*, Mohan Tikoo, SEMO.
33. *A Homotopy Extension Theorem*, Tran Van Thuong, MSS.
34. *Iterations on a Convex Quadrilateral*, Tamela Underwood, SIU-Carbondale.
35. *Approximations of Definite Integrals*, Dale Woods, Central State U. (OK).

1994 (Missouri Southern State College, Joplin)
1. *Using the History of Mathematics in the Classroom*, Linda Hand Noel, MSS.
2. *MATLAB in the Classroom and Beyond*, Dennis Harmon, MSS.
3. **The Mathematics of Modems (invited)*, John Ewing, Editor of *Monthly*.**
4. *Hands On Problem Solving Involving Communication and Reasoning*, Linda Coutts, Columbia Public Schools.
5. *Papy's Mini-Computer: Basic Skills*, Tamela Underwood, SIU-Carbondale.
6. *Do-Wheel Decimal System – Activities for "Decimal Sense,"* Joann Barnett, Ozark Jr. HS.
7. *Developing Number Sense in the Middle Grades*, Barbara Reys, UMC.
8. *Involving the History of Math in the Classroom*, Gary McGrath, Pitt. St. (KS).
9. *Problem Solving: Let the Calculator Do the Work*, Forrest Coltharp, Pitt. St. (KS).
10. *Middle Computation and Estimation Assessment*, Don Hight, Pitt. St. (KS).
11. *A Report on Visits to Eight Calculus Reform Projects – Update*, Larry Sherwood, Penn Valley CC.
12. *The Ellipse and the Rectangle*, Leon Hall, UMR.
13. *On the Vitale-Hahn-Saks-Nikodym-Saeki Theorem*, Paul Abraham, College of the Ozarks.
14. *Maximal and Minimal Ideals of Convergence Semigroups*, Shing So, CMS.
15. *Using the TI-82 in College Algebra*, Rhonda McKee, CMS.
16. *Calculus on a Lecture Diet*, Mark Sand, NWMS.
17. *Deleted Residuals in Regression Analysis*, Terry King, NWMS.
18. *Continuity of Limit Random Variables in the Branching Random Walk*, Jinhua Tao, CMS.
19. *Super Niven Numbers*, Curtis Cooper, CMS.
20. *Some Unsolved Problems Concerning Digital Sums*, Robert Kennedy, CMS.
21. *Fermat's Little Theorem for Exponent n+1*, Gary Mulkey, MSS.
22. *Fractal Images of Some Polynomial Functions*, Victor Gummersheimer, SEMO.
23. *On a Certain Class of Extensions*, Mohan Tikoo, SEMO.
24. *Calculus Reform – Adoption, Adaption, and Modification*, Barbara Dearborn, Plymouth State College (NH).
25. *Genetic Algorithms with 3-Parent Traditional Crossover*, L. Vincent Edmondson, CMS.
26. *Non-European Roots of Algebra*, Linda Hand Noel, MSS.
27. *A Seating Rearrangement Problem*, Keith Rogers, CMS.
28. *A General Solution to the Cubic Equation*, Paul Plummer, CMS.
29. *Archimedes' Quadrature of the Parabola*, Stuart Quackenbush, College of the Ozarks.

30. *A Simulation Model of Herbicide Resistance*, Deanne Reber, NEMO.
31. *On Digital Sums in Bases Other than 10*, Cheryl Winter, CMS.
32. *Galileo: Proportions, Parabolas and Projectiles*, Thomas Wofford, MSS.
33. *Place Value and Computation Activities for Developing Number Awareness*, Helene J. Sherman, UMSL.
34. *Meaningful Math to Teach the Standards*, Sue Groves, Fremont Elementary, Springfield.
35. *Circles, Symmetry, & Fashion: Hands-on Activities for Geometry and Technical Preparation*, Reta Smith, Springfield Public Schools.
36. *What Do They Really Know?: Assessing Middle Schoolers in Math*, Vena Long, UMKC.
37. *Difference Equations and Chaos*, Gary McGrath and Bobby Winters, Pitt. State (KS).
38. *Middle School Certification*, John Miller, DESE.
39. Panel Discussion – *Undergraduate Mathematical Sciences*.
40. Panel Discussion – *Careers in Mathematics*, Panelists: Mary Elick (MSS), Robyn Caruthers (MPSI, Inc.), Robert Dampier (Acct. Executive, ATT), Sara Sieglinger (Pharmacist), Robert Stokes (Synergistic Systems), Mike Tharp (Contract Freightliners, Inc.), Analee Witt, (GTA, SMU).
41. ***Use of Geographic Information Systems (GIS) as a Tool for Investigating the Relationship Between Electrical Power Lines and Cancer* (banquet), J. Wanzer Drane, University of South Carolina.**
42. *An Inverse Problem for the Wave Equation*, Chip Curtis, MSS.
43. *Cyclic Vectors in BMOA and VMOA*, Jawad Sadek, NWMS.
44. *An Extension of a Monthly Sum Involving Arctangents*, Paul Deiermann, Louisiana State U.
45. *A Tournament Without an Obvious Loser*, Songlin Tian, CMS.
46. *On Hamiltonian Graphs*, Kishor Shah, SMS.
47. *On Canonical Coloring for Permutation Graphs*, E. Sambasivam, MWS.
48. *Distance Learning Technology and Mathematics Inservice*, Terry Goodman, CMS.
49. *Software and Courseware Development – Some Parallels*, John Koelzer, Rockhurst.
50. *Mathematics Education in Russia*, Galina Piatnitskaia, Central Methodist and Northwest Polytechnic Institute, St. Petersburg, Russia.
51. *Functions on Matrices*, Tim Plood, MSS.
52. *Teaching ε-δ Limits in Calculus 3*, Tran Van Thoung, MSS.
53. *Implementing the Standards: Manipulatives and Games for Parents*, Symbra Boone, Billings Elementary, Billings R-IV.
54. *Visualize Algebra Using Hands-On Equations: Using Manips. In Pre-Algebra*, Suzanne Mitchell, Arkansas State University.
55. *TI-85's in the High School Classroom*, Al Dixon, College of the Ozarks.
56. *Spring Seasonings: Mathematics Activities with a Little Spice*, Cindy Bryant, Howell Valley School.
57. *Integrating the Mathematics Curriculum*, Kerry Cantrell, Marshfield H.S.
58. ***Biostatistics and Public Health (invited)*, Ron Harrist, School of Public Health, U. of Texas at Houston.**
59. *Ideas for Putting Problem Solving and Assessment Together*, Chip Sharp, Jefferson Junior H.S., Columbia.
60. *Geometry and Computer Graphics*, Elwyn Davis, Pitt. State (KS).
61. ***Correcting for Selection Bias in a Small Sample Survey (invited)*, J. Wanzer Drane, University of South Carolina.**

62. *Teaching Fractions with Meaning*, Juan L. Vasquez, MSS.
63. *Wax Paper Conics*, Lisa Roberts, Raytown Middle School.
64. *An Integrated Lesson: Coordinate Geometry, Ratio & Proportion*, Bob Carman, UMSL.
65. *Teaching 3-D Geometry*, Brian Sperry, Pitt. State (KS).

1995 (Central Missouri State University, Warrensburg)

1. Short Course I - *Bayesian Methods to Utilize Local Subjective Decisions in Decision Making with Applications to Grading*, S.K. Katti, UMC.

2. Short Course II – T_EX and LAT_EX: *A Gentle Introduction*, Hang Chen, and Curtis Cooper, CMS.

3. Short Course III – *Interacting with Internet*, Majid Saadatmanesh and L. Vincent Edmondson, CMS.

4. *The 3k+1 Problem:* Some Observations, Scott Garten, NWMS.

5. *S & L Sums*, Curtis Cooper and Robert Kennedy, CMS.

6. *On Digital Sums and Large Digits of Certain Powers*, Robert Kennedy and Curtis Cooper, CMS.

7. *Casting Out Nines and Elevens Generalized*, Leonard Palmer, SEMO.

8. *A Student Project in Elementary Statistics*, Susan Callahan, Cottey College.

9. *Introducing Mathematica in Numerical Analysis*, Kurtis Fink, NWMS.

10. *Some Class Presentations for Advanced Calculus Students*, Paul Abraham, College of the Ozarks.

11. *Making Mathematics Contagious*, Beth Henkle and Steve Chiappari, Avila College.

12. *The "Cori the Camel" Problem, Apples and Other Food for Thought*, Scott Hill (student), College of the Ozarks.

13. *How Archimedes Derived the Formula A=πr^2*, Aaron Bush (student), College of the Ozarks.

14. *Selections of Mathematics Textbooks in Public Schools*, Kari Sellberg (student), NWMS.

15. *Uses and Misuses of Interpolating Polynomials*, Stephen Spalding (student), College of the Ozarks.

16. *An Integrated Classroom: Collaboration, Writing, Technology, Alternative Assessment*, *and Problem Solving*, Martha Haehl, Maple Woods CC.

17. **Unexpected Applications of Linear Algebra in Graph Theory (invited), Allen J. Schwenk, Western Michigan.**

18. *The Man Behind Green's Theorem*, Mark Sand, NWMS.

19. *A Free Boundary Problem for the p-Laplacian*, Ruth Meyer, NWMS.

20. *Mixed Risk Models in Insurance Companies*, Jinhua Tao, CMS.

21. *Parallel Taxicab Bisectors*, Shing So, CMS.

22. *Parabolas in Taxicab Geometry*, Phoebe Ho, CMS.

23. *Fixed Point Theory for Non-Self Maps*, Troy Hicks, UMR.

24. *The Nature of Primes in Some Unique and Non-Unique Factorization Domains*, Linda Tansil (student), SEMO.

25. Krull's Hauptideal Satz (Principal Ideal Theorem), Wei He (student), UMC.

26. *Generalized Aristotelian Syllogisms*, Charles Kurtz (student), CMS.

27. Workshop – *TI-85 Graphing Applications in Calculus*, Keith Wilson and Mike Turegun, Oklahoma City CC.

28. Panel Discussion – *Course Development for Middle School Certification: A Progress Report*, Geometry – Linda Lembke, Central Methodist; Calculus – David Ewing, CMS; Probability

and Statistics – John Hewett, UMC.
29. Exxon-Supported Student Career Panel – Moderator: Carrie Arndt, CMS.
30. Interactive TV Demonstration, Rhonda McKee and William Grimes, CMS.

31. ***A Plethora of Perplexingly Persistent Simpson's Paradoxes* (banquet), Allen J. Schwenk, Western Michigan.**
32. *Harvard Calculus at Oklahoma City Community College*, Keith Wilson and Mike Turegun, Oklahoma City CC.
33. *The Defect Relations in Value Distribution Theory*, George Ashline, NEMO.
34. *Compartment Models: An Introduction*, Dollena S. Hawkins, NEMO.
35. *Control Theory and Optimal Harvesting*, Steve Smith, NEMO.
36. *The Mathematics of the NFL and the NCAA Quarterback Passing Efficiency Schemes*, Ken Lee, MWS.
37. *Coefficients of a Polynomial*, Kishor Shah, SMS.
38. *An Historical Contradiction*, David Clements (student), CMS.
39. *The Weierstrass Theorem on the Uniform Approximation of Continuous Functions by Polynomials,* Maxim Sinitsyn (student), Central Methodist.
40. *Convergence Semigroups in Convergence Spaces Defined by Filters,* Paul Plummer (student), CMS.
41. *Multi-Circle Hypotrochoids,* William Wojczyk (student), UMR.
42. *Another Look at Random Shuffles*, Grant Lathrom (student), SMS.
43. Panel Discussion – *Alternative Courses to College Algebra*, Moderator: Larry Martin, MSS.
44. ***The Mathematics of Card Shuffling* (invited), Ken Ross, MAA.**

1996 (Southeast Missouri State University, Cape Girardeau)
1. *Manipulatives Times Two: They Both Teach and Assess*, Helene Sherman, UMSL.
2. *Assessing Mathematical Thinking*, Gerlena Clark.
3. *Problem Solving Activities with Communication and Reasoning*, Linda Coutts.
4. *A Make-It-Take-It Workshop*, Sue Zoughaib.
5. *Conceptual Understanding of Fractions and Their Operations*, Lloyd Richardson.
6. *Connections: Shifts in Content, Teaching, and Assessment*, Kathy Stamer.
7. *Stumbling Along the Assessment Trail: Useful Ideas,* Chip Sharp.
8. *A Make-It-Take-It Workshop*, Sue Palmer.
9. *Activities and Projects for an Integrated Approach*, Kerry Cantrell.
10. *Algebra with Examples*, John Swartz.
11. *The Graphing Calculator in the Math Classroom*, Joseph Orf, Jr.
12. *Fractals Connect Mathematics*, Chip Day.
13. *The Shape of the Sea*, Timothy Ray, SEMO.
14. *Essential and K-minimal Ideals in a Compact Projective Limit*, Phoebe Ho, CMS.
15. *Ideals in a Noetherian Ring,* Kishor Shah, SMS.
16. *An Application of Esscher's Transform in Ruin Theory*, Jean Tao, CMS.
17. *An Effective Algorithm for Solving the Hamiltonian Circuit Problem*, Maxim Sinitsyn, Central Methodist.
18. *Initial p-Powers*, David Clements, CMS.
19. *Algorithms for Amenable Numbers*, Dean Hoff, SEMO.
20. *An Individual Based Computer Simulation Model of an Herbicide-Resistant Weed Population*

Model, Thomas Kent, NEMO.

21. *Workshop - Introduction to Derive,* Ken Eichman, Metropolitan CC.
22. *A Math Educational Whack on the Side of the Head,* Larry Campbell.
23. *Detective Stories with Secret Numbers for K-5,* Joyce Eaton.
24. *Making Math Connections Using Literature,* Anetta Crawford.
25. *This is Too Much Fun! Games to Enhance Learning Basic Facts,* Linda Coutts.
26. *Bits and Pieces – Fraction and Decimal,* Becky Roth.
27. *Assessment … the "Open" Way,* Tamela Randolph.
28. *Surfing PBS with MSMP,* Marybeth Swartz.
29. *Tangible Geometry … Touch It and Learn It!* Mary LeGrand.
30. *Connections in Probability, Geometry, and Measurement,* John Young.
31. *Evaluating Alternative Assessment,* Vena Long.
32. *Leadership in Urban Mathematics Reform Project (LUMR Project),* Donald Thompson.
33. *Integrating Mathematics into Reality,* Larry Cleair.
34. *Mathematics and the New Madrid Fault,* Nancy English.
35. **Formulas for Primes (invited), Woody Dudley, DePauw University**.
36. *Fixed Point Theory for Non-Self Maps,* Troy Hicks, UMR.
37. *Strict Extensions in the Upper Stone-Cech Compactification,* Vrunda Prabhu, William Woods.
38. *A Comparison of Convergent Spaces,* Shing So, CMS.
39. *Spherical Harmonic Functions and the Earth,* Mark Sand, NWMS.
40. *Progress on an 1898 Unsolved Monthly Problem,* Leon Hall, UMR.
41. *Selected Geometry Problems from the AHSME,* Alvin Tinsley, CMS.
42. *Observations on the 3k+1 Problem,* Scott Garten, NWMS.
43. *Square Classes in Lucas Sequences,* Wayne McDaniel, UMSL.
44. *On Conway's RATS,* Curtis Cooper and Robert Kennedy, CMS.
45. *Mathematica in the Classroom,* Ron Goetz, St. Louis CC.
46. *Kentucky's Reform Effect on Middle School Classrooms,* Bill Kunnecke.
47. *The Outstanding Schools Act: Where Do We Stand?* Jeanne Livers.
48. *Juggling and Mathematics,* Bill Thayer, St. Louis CC.
49. *Infinite Possibilities to Make Finite Dollars,* Jody Hestand, SEMO.
50. **Angle Trisectors (banquet), Woody Dudley, DePauw University.**
51. *Small Group Projects in Calculus,* Susan Callahan, Cottey College.
52. *Teaching Traditional Calculus Using DERIVE and a Traditional Text,* Samuel Lynch, SMS.
53. *Robotics: A Collaborative Undergraduate Research Experience for Mathematics Majors,* John Koelzer, Gabe Moore (student), and Michael Twyman (student), Rockhurst.
54. *2-Perfect Maximum Packings of K_{2n} with Hexagons,* Janie Kennedy, SEMO.
55. *The m-Interior and m-Annulus of a Strong Digraph,* Songlin Tian, CMS.
56. *Polynomial Functions Derived from Binomial Coefficient Expansions,* Jim Bruening, SEMO.
57. *Pythagorean Triple Preserving Matrices,* Leonard L. Palmer, SEMO.
58. *On Digital Sums and Large Digits – Part II,* Robert Kennedy and Curtis Cooper, CMS.
59. *Effects of Wind on Seed Distributions,* Travis Austin (student), NEMO.
60. *Write Right Now – Painless Ways to Get Your Students Writing,* Julane Crabtree, Johnson County CC.
61. *Capturing the Vision,* Richard Lodholz.
62. *The Many Uses of Pattern Blocks,* Wendell Wyatt.

63. *What Button Did You Say to Push? The Calculator as a Manipulative*, Linda Coutts.
64. *Quantitative Literacy*, Cheryl Wallgren.
65. *Guess!* JoAnn Hahs.
66. *Geometry – Any Way You Slice It*, Martha Short.
67. *Assessment as an Everyday Tool*, Darlene Schroeder.
68. *Favorite Problems for Middle School*, Larry Campbell.
69. *Activities for Your Middle School Math Classes*, Carole DelVecchio.
70. *Equal Representation?* Diane Relleke.
71. *Algebra for Everyone: Learn from German and Japanese Textbooks,* Paul Schroeder.
72. *Mirror Reflections: Put a Sparkle in Your Geometry and Calculus Classes*, Mangho Ahuja.
73. *An Introduction to the Hewlett-Packard HP38G Graphing Calculator*, Cheryl McAllister.
74. **Some Experimental Models for Introducing Calculus Concepts (invited), James Donaldson, MAA.**

1997 (Missouri Western State College, St. Joseph)
1. **ODE: Science over Methods (invited), Dieter Armbruster, Arizona State.**
2. *Controlling Your Shape: The Bezier Curve*, Steve Klassen, MWS.
3. *Immunization of Bond Portfolios Using Linear Programming*, Jean Tao, CMS.
4. *Mathematical Model of Wears Creek*, Angela Grant, Lincoln U.
5. *More on Conway's RATS,* Curtis Cooper, CMS.
6. *The 3k+1 Problem: The Hydra's Head*, Scott Garten, NWMS.
7. *On an Upper Bound for the Number of Small Digits in a Power*, Robert Kennedy, CMS.
8. *Symmetric Pythagorean Triple Preserving Matrices*, Tracy R. Lohmeier, SEMO.
9. *The Space Z_2 as a Fenchel-Orlicz Space*, Dan Cazacu, UMC.
10. *Exploring and Implementing the Learning Styles of Students from Diverse Cultures into the Mathematics Classroom*, Mary Talbot, NWMS.
11. *Mathematica in Calculus and Student Responses: Interesting/Unexpected*, Wanda Long, St. Charles County CC.
12. *The Use of the Internet in the Mathematics Classroom*, Tim Chappell, Penn Valley CC.
13. *Units and Subgroups in a Semilattice of Semigroups*, Phoebe Ho, CMS.
14. *My Favorite Semigroups*, Carol Collins, Drury.
15. *Writing Assignments for Calculus*, Susan Callahan, Cottey College.
16. *Statistics Activities to Explore Algebraic Relationships*, Lynda M. Plymate, SMS.
17. *Perfect Squares in the Sequence 3, 5, 7, 11, …,* Wayne McDaniel, UMSL.
18. *Selected non-Geometry Problems from the American High School Mathematics Examination*, Al Tinsley, CMS.
19. *The Impact of Using Supplemental Instruction (SI) in College Algebra*, Kathleen Conway, SEMO.
20. *The Louisville Shutterbug: A Mathematical Pilgrimage into History*, Charlie Smith, Park College.
21. *Cancer and the Exponential Function*, Elizabeth Berman Applebaum.
22. *Student Lab Projects in ODE (Chaos in Euler's Method)*, the ODE Class from MWSC.
23. *Student Lab Projects in ODE (Modeling the Motion of a Three Spring Two Mass System)*, the ODE Class from MWSC.
24. **Everything's Chance (banquet), Martha Siegel, Towson State University (MD) MAA Secretary.**

25. *Mathematics Reform Initiative: The AMATYC Standards*, Martha Heahl, Maple Woods CC.
26. *Using HP38G Graphing Calculators to Create Lessons*, Al Dow, Cameron HS.
27. *A Brief Tour of the TI-92*, Tim Miller, MWS.
28. *The Criss-Cross Method of Factoring Trinomials*, Denise Weiss, NWMS.
29. *Turning Ideas into Performance Task*, Charlotte Stiens, Savannah Middle School.
30. *The Birth of Non-Euclidean Geometry*, Michael Motto, NWMS.
31. *Mathematics Instruction in Missouri's Colleges and Universities*, Rick Armstrong, St. Louis CC - Florissant Valley.
32. *Conceptual and Procedural Knowledge*, Dennis Sentilles, UMC.
33. *The s-Interior and s-Annulus of a Strong Digraph*, Songlin Tian, CMS.
34. *An Alternate Paradigm for the Concept of Limit Value*, Dennis Sentilles, UMC.
35. *Fixed Point Theory for Non-Metric Spaces*, Troy Hicks, UMR.
36. *Introduction to Matroids*, Keith Brandt, MWS.
37. *Some Counter-Examples in the Power Sets of Convergence Spaces*, Shing S. So, CMS.
38. *A Groebner Basis for the Simplest Discrete Isoperimetric Problem*, Betty Jean Harmsen, NWMS.
39. *Some Future Directions in Computing and Mathematics at Truman State University*, Todd Hammond, Truman.
40. *Remarks on Mathematics and Public Affairs*, Kishor Shah, SMS.
41. ***Industrial Mathematics for Fun and Profit* (invited), Martha Siegel, Towson State University (MD), MAA Secretary.**

1998 (Southwest Missouri State University, Springfield)
1. ***Waring's Problem* (invited), Les Reid, SMS and NSWC-Dahlgren.**
2. Missouri Undergraduate Faculty Enhancement Reporting Session, Rhonda McKee and Terry Goodman, CMS.
3. *Triangular and Oblong Numbers*, Shing So, CMS.
4. *Some Consequences of Rolle's Theorem*, Troy L. Hicks, UMR.
5. *Considering Future Directions for Introductory Statistics*, James Guffey, Truman.
6. *Digital Sums and Niven Numbers in Unusual Base Numeration Systems*, Robert Kennedy and Curtis Cooper, CMS.
7. *A Calculus III Portfolio*, Susan Callahan, Cottey College.
8. *Distribution Plots*, Laurel Berner (student), Truman.
9. *Arbitrary Long Base 10 RATS Cycles*, Curtis Cooper and Robert Kennedy, CMS.
10. *Infinitesimals in Calculus*, John C. Tripp, SEMO.
11. *Mathematics and Inquiry: A General Education Course at Drury College*, Al Letarte, Drury.
12. *Hydra Heads: More on the 3k+1 Problem, Polynomials, and Primes*, Scott Garten, NWMS.
13. *A Rare Book Room Visit*, Mark Sand, NWMS.
14. *A Problem in Number Theory*, Lisa Crosby (student), SMS.
15. *Testing Divisibility of P(x) by $\Sigma\, x^{i}$*, Mangho Ahuja, SEMO.
16. *Bringing the Liberal Arts into the Mathematics Classroom*, Todd Hammond, Truman.
17. *On Rubik's Cube*, George Bodurov (student), SMS.
18. *Divisibility Test for Certain Polynomials & Primes*, James Bruening, SEMO.
19. Technology Session: *Mediated Learning in Mathematics Courses*.
20. *Characterization of the Irreducible and Prime Elements in Certain Rings*, Chris Mueller (student), SMS.

21. *Gorenstein Rings and Numerical Semigroups,* Richard Beishoff, SMS.
22. *More Twisted Sums,* Dan Cazaca, UMC.
23. *Experiments in Physics and Mathematics,* Jack Hopkins, Janita Leggett, Jennifer Moehlmann, Nichole Penn, Anoushiravan Sarraf, Jagannatha Sensei, Marty Witt, and Jaime Wolfe (the History of Mathematics Class), SMS.
24. *The Transitional Hull of a Semigroup,* Carol Collins, Drury.
25. *An Example of a Complex Projective System*, Phoebe Ho, CMS.
26. **Twas Brillig and the Slithy Toves … (banquet), Les Reid, SMS.**
27. *Terao's Conjecture for Free Hyperplane Arrangements,* Keith Brandt, MWS.
28. *Defining the Generalized Riemann Integral with Perron Majorants,* Eric Howard, Truman.
29. *Analytic Solutions of Fuchsian Differential Equations,* Brian Haile, NWMS.
30. *Fat-Free Bitmap Images*, Steve Klassen, MWS.
31. *Functions Which Are Nearly Constant on Intervals,* Deborah Brannen, NWMS.
32. *A Chiti-Type Theorem for the Dirichlet Schrödinger Equation*, Craig Haile, College of the Ozarks.
33. *A Vector Jump Hueristic for Karmarkar's Linear Programming Algorithm*, L. Vincent Edmondson, CMS.
34. *Lambda-Distance*, Songlin Tian, CMS.
35. *The Jackknife and the Bootstrap Estimates of the Standard Error of the Median*, Jean Tao, CMS.
36. **Learning and Teaching College Mathematics: An MAA Activity of Increasing Importance (invited), Ed Dubinsky, Georgia State University.**

1999 (Rockhurst College, Kansas City)
1. **The Year 1000: What Mathematics Was Being Done at the Last Turn of the Millenium? (invited), Richard Delaware, UMKC.**
2. *Using Computer Exercises to Teach Graphing,* Susan Callahan, Cottey College.
3. *Statistical Independence on the Fractional Age Dependence Assumption,* Jean Tao, CMS.
4. *Theorems and Experiments in Calculus, Part A,* Kishor Shah and SMSU Calculus I Class.
5. *Goals for Calculus I at a Liberal Arts College,* Carol Collins and Charles Allen, Drury.
6. *On the Geometry of Locally Nonconical Convex Sets,* Glenn C. Shell, Lincoln U.
7. *Theorems and Experiments in Calculus, Part B,* Kishor Shah and SMSU Calculus I Class.
8. *Using Power Point for Elementary Statistics*, Ben Budde, Westminster.
9. *Odd Abundant Numbers (Preliminary Report),* Lateef Adelani and John Behle, Harris-Stowe.
10. *Theorems and Experiments in Calculus, Part C*, Kishor Shah and SMSU Calculus I Class.
11. *Projectory of a Bullitt: On Target with Math History,* Charlie Smith, Park College.
12. *Modeling Recall Operations at Whiteman Air Force Base*, Steven Burton and L. Vincent Edmondson, CMS.
13. *Recursive Generation of Infinite Sequences and Continued Fractions,* Jagahnatha P. Sensei, SMS.
14. *Teaching Powers: Graphs and Models,* Elizabeth Berman Applebaum, Blue Valley School District.
15. *The Great Internet Mersenne Prime Search,* Curtis Cooper, CMS.
16. *Factorial Gaps Between Prime Numbers*, Eric Hartmann, SMS.
17. *Amusing Coincidences and Amazing Comparisons,* Scott Garten, NWMS.
18. *The Ring of Functions on Z_n,* Phoebe Ho, CMS.

19. *An Introduction to Elliptic Curves*, Bryan Chapman, SMS.
20. *Some Old and Elegant Techniques of Analytic Geometry,* Mangho Ahuja, SEMO.
21. *Construction of Maximal Right Subgroups of Compact Topological and Convergence Semigroups*, Shing S. So, CMS.
22. *On Proofs of Sylow's Theorem*, Lucille Marshall, SMS.
23. **A Mathematical Olio (banquet), Robert Kennedy, CMS.**
24. *My Experience in Project NExT*, Ilene Morgan, UMR.
25. *Exact Errors in Numerical Integration*, Mark Sand, NWMS.
26. *Flatland Quaternions, and Plato's Allegory of the Caves,* Jim Sly (student, SMS), Hillcrest HS, Springfield.
27. *Learning Pell's Equation by Doing*, James Bruening, SEMO.
28. *On Chowla's Conjecture in Number Theory*, Liang-Cheung Zhang, SMS.
29. *The Transcendence of e*, George Bodurov, SMS.
30. *The Intersection Lattice of a Discriminantal Arrangement,* Keith Brandt, MWS.
31. *On the Motion of Heavenly Bodies*, Chris Mueller, SMS.
32. **Interactive Geometry and Linear Algebra Using the Internet: A Contemporary Approach (invited), Thomas Banchoff, Brown University.**

2000 (Central Missouri State University, Warrensburg)
1. *On a Generalization of a Theorem of Shiazel*, Robert Kennedy, CMS.
2. *Florence Nightingale, Statistician,* Susan Callahan, Cottey College.
3. *Monuments and Mathematics,* Kishor Shah and SMSU Calculus I Class, SMS.
4. *Fun with the Sigma Function*, Andrew Feist (student), CMS.
5. *On the Meanness of the Mean Value in the Mean Value Theorem*, Rick Mabry, LSU, and Paul Deiermann, Lindenwood.
6. *Conics, Curves, and Nature,* Kishor Shah and SMSU Calculus I Class, SMS.
7. *Mersenne Primes and GIMPS, Part I,* Curtis Cooper and L. Vincent Edmondson, CMS.
8. *Multicultural Mathematics*, Linda Hand, MSS.
9. *History of Calculus*, Kishor Shah and SMSU Calculus I Class, SMS.
10. *Mersenne Primes and GIMPS, Part II*, L. Vincent Edmondson and Curtis Cooper, CMS.
11. *Proof of the Fundamental Theorem of Algebra Using Sylow's Theorem*, Lucille Marshall (student), SMS.
12. *Why Study the History of Mathematics?* LaShall Crane (student), MSS.
13. *Some Relationships between Triangular, Oblong, and Square Numbers*, Shing So, CMS.
14. *Introduction to Difference Operations and Differential Equations*, Vu Ong (student), SMS.
15. *Art Galleries: Klee's Question, Chvátal's Answer, and Flak's Proof*, Keith Brandt, MWS.
16. **Turn Those Lights Out Now! (invited), Allen Schwenk, Western Michigan University.**
17. *Generalized Dedekind η Functions and Additive Number Theory*, Donald L. Vestal, MWS.
18. *Cool Calculus Problems II*, Mark Maxwell, Maryville U.
19. *What Is Linear Algebra?* Kishor Shah and Linear Algebra Class, SMS.
20. *Maple Animation in Precalculus*, Michael Z. Williams, Westminster.
21. *Ternary Operations on Quaternions and the Complex Plane,* Kristi Smith (student) and Carol Collins, Drury.
22. *Applications of Linear Algebra,* Kishor Shah and Linear Algebra Class, SMS.
23. *Nonlinear Regression Using Excel*, Ben Budde, Westminster.
24. *History of Mathematics,* Kishor Shah and Linear Algebra Class, SMS.

25. ***Proof Without Words – Old Fashioned and New Fangled* (banquet), Rhonda McKee, CMS.**
26. *A Study of Coincidences*, Andrea Farrell (student), Truman.
27. *One-Way ANOVA to Compare the Means Using the TI-83*, S. Balakumar, Lincoln U.
28. *Population Dynamics: Modeling with First Order Differential Equations*, Brian Haile, NWMS.
29. *A Study of Probability Models Involving Seed Position that Are Used in Predicting the Winner of the NCAA Tournament*, Lisa Muldoon (student), Truman.
30. *Three, Seven, Nine, and One*, Scott Garten, NWMS.
31. *Models and Game Theory in the Social Sciences: A GE Course*, Craig Haile, College of the Ozarks.
32. *A Goals 2000 MATHEMATICS Project*, James Guffey, Truman.
33. *High Finance and Higher Mathematics*, Mark Sand, NWMS.
34. ***The Joy of Problems* (invited), Donald Albers, MAA Associate Executive Director.**

2001 (University of Missouri – Rolla)

1. *Sylow's Proof of Sylow's Theorem*, Lucille Marshall (student), UMR.
2. *Divergent RATS Sequences*, Curtis Cooper, CMS.
3. *The Probability of Randomly Generating a Finite Group*, Kimberly Patti (student), SLU.
4. *A Trick of the Trade for Simplex Standard Minimization*, Scott Garten NWMS.
5. *Integers of the Form $p^2 - q^2$ with p, q Primes*, Norman Elliott (student), CMS.
6. *How Nikolai and János Came to the Ozarks*, Leon Hall, UMR.
7. *Asymptotic Symmetry of Polynomials*, Paul Deiermann, SEMO.
8. *Map Equations for Trochoids*, Sibel Pasali (student), UMR.
9. *Zeros of Social Security Number Polynomials*, Tim Ray, SEMO.
10. *Hyperbolic Billiard Paths*, Chad White (student), UMR.
11. ***Breaking Drivers' License Codes* (MAA Polya Lecture), Joe Gallian, University of Minnesota Duluth.**
12. *A Design for an Undergraduate Capstone Seminar in the History of Mathematics*, Charlie Smith, Park College.
13. *The Binomial Asset Pricing Model*, Anthony Anston (student), College of the Ozarks.
14. *How Do Students Best Learn Calculus?* Carol Browning, Drury.
15. *Parameter Estimation in Linear Models with Variances Subject to Order Restriction*, Carol Hoferkamp, Truman.
16. *A Profile of Today's Students from the Students' Point of View*, Susan Callahan, Cottey College.
17. *Colored Brackets and 2-Manifolds*, David Richter, SEMO.
18. $(MAT)^2$ Panel: *Incorporating the "Principles and Standards for School Mathematics" in Teacher Training Courses*, Linda Plymate, SMS, Panel Chair.
19. ***Adventures in Pharmacokinetics* (banquet), Ed Spitznagel, Washington University.**
20. *Iterative Procedures: Stability Versus Convergence with Errors*, Troy Hicks, UMR.
21. *A Generalization of the Birthday Problem*, James Guffey, Truman.
22. *"Illustrate the Point:" Activities in Algebra Using TI-89 Calculators*, Linda Plymate, SMS.
23. *Application of Temporal Logic*, Murat Atmaca (student), UMR.
24. *Problems Involving Election Recounting*, Laura Trump (student), Truman.

25. *A Note on the Cantor Set,* Ken Lee, MWS.
26. *Recent Topics in Mathematical Biology,* Pam Reich, Truman.
27. **Lotteries – Bad Odds, Good Problems (invited), David Stone, Georgia State University, Chair of MAA Committee on Sections.**

2002 (Truman State University, Kirksville)

1. *Discriminants Beyond Quadratics,* Leon Hall, UMR.
2. *Correlating Bat Species with Echolocation Call Using Wavelet Analysis,* Greg Knese (student), Truman.
3. *On a Conjecture Concerning the Digital Sum of a Power of Two,* Robert Kennedy, CMS.
4. *Cusps, Envelopes, and the Discriminant,* Sibel Pasali (student), UMR.
5. *How Fair is the Delaware Quarter?* Megan Danek (student), NWMS.
6. *An Ideal Calculus Book for Students,* Shing So, CMS.
7. *All but Eleven Fibonacci Numbers Have a 4r+1 Prime Factor,* Wayne McDaniel, UMSL.
8. *A Model of HIV Infection of CD4+ T Cells Using a System of Nonlinear Functional Differential Equations,* Robert Robertson, Drury.
9. *The Ahlfors Map,* Tom Tegtmeyer, Truman.
10. *Structures in the Space of Real Symmetric Matrices,* Jason Miller, Truman.
11. *Alternative Metaphors for Standard Mathematical Concepts,* Randall Weiss.
12. *On Primes in Lucas Sequences,* Curtis Cooper, CMS.
13. *A Brief History of the Missouri Section,* Susan Callahan, Cottey College.
14. *Curious Consequences of a Misfactored Quadratic,* Jeff Poet, Ottawa University (KS).
15. *Geodesics on Surfaces of Revolution,* Steve Smith, Truman.
16. **Unexpected Encounters of the Best Kind (invited), Gerald Bergum, South Dakota State (ret.).**
17. *Partitions and Congruences,* Donald Vestal, MWS.
18. *Hecke Eigenfunctions on Vector Bundles over P^1,* Scott Thatcher, Truman.
19. A Topology for any Group as a Quotient of a Tree Group, Christine Bussman (student), SLU.
20. *The Logic of Lewis Carroll,* Sharon Vestal, MWS.
21. *Designing Lower Division Math Courses to Increase Student Success,* Mary Shepherd, NWMS.
22. *Geometric Image Structures,* Michelle Hannon (student), Truman.
23. *Comparing Proof System in Mathematical Logic and Temporal Logic,* Murat Atmaca (student), UMR.
24. *Geometry of the Universe: An Interdisciplinary Course,* Dana Vazzana, Truman.
25. *Embedding a Disconnected Topological Group into a Connected Group,* Ryo Ohashi (student), SLU.
26. **Dining, Wining and Polymaths (banquet), Louis Grimm, UMR.**
27. *A Simple Game: Adventures in Modular Arithmetic,* Liam Davis-Mead (student), MWS.
28. *Ordering Pizza: Comparing Factor Analysis and Transferable Voting,* K. Scott Alberts, Truman.
29. *Analysis of Games,* Stacy Dare (student), Drury.
30. *The Methods of Cavalieri,* Lauren Rider (student), Truman.
31. *Check Digit Schemes,* Jerzy Wojdylo, SEMO.
32. *Model Selection in Weibull Regression,* Hyun-Joo Kim, Truman.
33. *Calculating Blackjack Probabilities through Pattern Recognition,* Jonathan McCrary

(student), Drury.

34. *The Role of Mathematics in Evolutionary Biology*, Jason Rosenhouse, Kansas State.
35. *Getting Started with Postscript,* Martin Erickson, Truman.
36. *Teaching Abstract Algebra with GAP (even if you aren't a geek),* T. Christine Stevens, SLU.
37. *Longitudinal Assessment of the Effectiveness of the Discovery Method of Teaching Calculus,* Carol Browning, Drury.
38. *The Fano Plane and Matroids: A Pictorial Introduction*, David Neel, Truman.
39. **Forbidden Symmetry: Relaxing the Crystallographic Restriction (invited), Frank Farris, Editor, *Mathematics Magazine*.**

2003 (Washington University, St. Louis)

1. *Searching for Large Proth Primes*, Curtis Cooper and L. Vincent Edmondson, CMS.
2. *Visualizing Partial Differential Equations Using Mathematica*, Timothy Miller, MWS.
3. *What Can Happen When First Year Students Learn to Read Their Math Textbooks,* Mary Shepherd, NWMS.
4. *Searching for a New Largest Known Prime,* Jeff Poet, MWS.
5. *Characterizing Bat Species Via Their Echolocation Call's Wavelet Transform,* Christopher Bay, Truman.
6. *Problems with Pre-Calculus Textbooks*, Shing So, CMS.
7. *History of Engel Groups,* Christine Bussman, SLU.
8. *Delay Differential Equations and Applications,* Hicham Fathi el Idrissi, Drury.
9. *A Problem Based Calculus Sequence,* Carol Browning and Charles Allen, Drury.
10. *Threading Our Way through a 3-D Torus*, Therese Hand, MWS.
11. **Searching for the Shortest Network (invited), Ronald L. Graham, MAA President.**
12. *Cinemath: Mathematics on the Silver Screen,* Charlie Smith, Park U.
13. **Just Count, Color, and Number the Squares (banquet), Robert Sheets, SEMO.**
14. *An Inversion Formula for Putnam Data,* Keith Brandt, Rockhurst, and Don Vestal, MWS.
15. *Fourier and the Inverse Heat Problem,* Craig Johnson, Drury.
16. *Are They Fair? A Closer Look at the State Quarters,* Rebecca Prochaska, NWMS.
17. *Midpoints of Cantor Sets*, Ken Lee, MWS.
18. *Coxeter-Petrie Complexes of Regular Maps,* Kevin Anderson, MWS.
19. *Using Student-Generated Data in Elementary Statistics*, Susan Callahan, Cottey College.
20. *Volumes of Revolution: A Calc II Mistake,* Amanda Boyd, MWS.
21. *On the Climbing Stairs Problem: A Generalization,* Mohammad Azarian, U. of Evansville (IN).
22. *The No-7 Series: The Harmonic Series with All Terms Containing the Digit 7 Removed,* Ryan Moore, MWS.
23. *How to Compute an Orbifold Fundamental Group,* Ryo Ohashi, SLU.
24. **How to Always Win at Limbo (invited), Edward B. Burger, Williams College (MA) and Stanislaw M. Ulam Visiting Professor University of Colorado Boulder.**

2004 (Southeast Missouri State University, Cape Girardeau)

1. **Modeling and Inquiry in Mathematics: Lots of Examples and Ideas (invited), Chris Arney, The College of Saint Rose (NY).**
2. *A Generalization of the Penny Passing Problem,* Reginald Brigham, UMR.
3. *Lines from Different Perspectives,* Craig Roberts, SEMO.

4. *Using Random Numbers to Introduce the Central Limit Theorem*, James Guffey, Truman.

5. *Using the TI-89 Calculator in a Calculus-Based Statistics Course*, Timothy Miller, MWS.

6. *Is $x^{p-1} + 2x^{p-2} + 3x^{p-3} + \ldots + (p-1)x + p$, p prime, Irreducible in Z[x]?* Leslie Johnson, SEMO.

7. *Rigidity of Elliptic Genera on Homogeneous Spaces*, Scott Simmons, Drury.

8. *Bootstrapping Our Way to the Product Rule*, John Koelzer, Rockhurst.

9. *Irrational? Yes! Transcendental? Well, …,* Richard Francis, SEMO.

10. Student Workshop - *Discrete Calculus and Modeling*, Chris Arney, The College of Saint Rose.

11. Panel Discussion – *Grant Writing:* Jason Miller (Truman), Carol Browning (Drury), Sharon Vestal (MWS).

12. Panel Discussion – *Academic Honesty:* Craig Roberts (Faculty), Adam Schaefer (Student Govt.), Lyman "Trae" Mitten (Coord. Of Judicial Affairs), Myia Wood (Student Advocate), Irene Ferguson (Dean of Students), all from SEMO.

13. Slide Show – *My Sojourn in the Jabal Shammar: Teaching Mathematics in Saudi Arabia,* Sam Lynch, SMS.

14. *A One by Any Other Name Is Still a One*, Fred Cline, MWS.

15. *Searching for Large Proth Primes – Part II*, Curtis Cooper, CMS.

16. *Difficulties Students Have Reading Mathematics*, Mary Shepherd, NWMS.

17. *Unbounded Solution of Differential Equations*, W.Y. Chan, SEMO.

18. *In Pursuit*, Curtis Shaffer, NWMS.

19. *Some Properties of Pythagorean Triples*, Donald Vestal, MWS.

20. *Palm Pipes and the Math of Music*, Linda Tansil, SEMO.

21. *An Alternative Valuation of the MOSERS System*, Jean Tao, CMS.

22. *The Order of GL(d, Z/mZ) and Its Involutory Subset*, Jeffrey Overbey, SEMO.

23. *A Connection between Factoring Quadratics and Pythagorean Triples*, Jeff Poet, MWS.

24. *A Discovery Approach Calculus Project*, Shing So, CMS.

25. *Resultant, Groebner Basis, and Syzygies*, Haohao Wang, SEMO.

26. *Hyperbolic Constructions for Fun and Profit*, Liam Davis-Mead, MWS.

27. *The Density of Invertible Matrices over Z_m*, Jerzy Wojdylo, SEMO.

28. *Surface Area as the Derivative of Volume*, Leon Hall, UMR.

29. *Fair Allocation of a Pizza*, Paul Deiermann, SEMO.

30. *Plan Ahe$_{ad}$* (banquet), Tom Ingram, UMR.

30. *Modeling the Spirograph*, James Blevins, MWS.

31. *Mathematics, College Students, and Opera*, Christine Stevens, SLU.

32. *Use of Berkeley-Madonna Software in Math Biology Courses*, Pam Ryan, Truman.

33. *4, 16, 64, ___ (not 256)*, Therese hand, MWS.

34. *Recent Trends in Pythagorean Triples – A Survey,* Mohan Tikoo, SEMO.

35. *Approximate Controllability for Nonlinear Control Systems with Delays*, Lianwen Wang, CMS.

36. *Habitat Suit. Models of the Bladder-Pod/Statistical Modeling*, Hyun-Joo Kim, Truman.

37. *The Golden Mean*, Melissa Spinzig, SEMO.

38. *A Generalization of Taxicab Distance and Chinese Checker Distance*, Songlin Tian, CMS.

39. *Mathematics of Typography*, Scott thatcher, Truman.

40. *Hotelling's T^2 Approximation for Bivariate Dichotomous Data,* Imad Khamis, SEMO.

41. *Synchronization in Chaotic Systems*, Nicholas Barnhart, Drury.
42. *Cycles of Divisibility Test Residues*, Jim Bruening, SEMO.
43. *Fun with the Graphing Calculator!* Kevin Anderson, MWS.
44. *Changing the World through Data: Analyzing the Stats of Public Policy*, K. Scott Alberts, Truman.
45. **MAA Gems: People, Programs, and Problems (invited), Tina Straley, MAA Executive Director.**

2005 (Missouri Western State College, St. Joseph)
1. **Applications of the Smith Normal Form (invited), Bryan Shader, University of Wyoming.**
2. *2-Star is Better than One*, Fred Cline, MWS.
3. *Mathematics Placement at Truman State University*, Dean De Cock, Truman.
4. *Symmetry Patterns in Cross-Stitch*, Mary Shepherd, NWMS.
5. *Pollen Flight Dynamics: An Interdisciplinary Project in Math and Biology*, Scott Thatcher, Truman.
6. *A Web-Based Developmental Mathematics Program Using ALEKS*, Ken Lee, MWS.
7. *Applications Using Trigonometry and Similar Triangles*, Linda Tansil, SEMO.
8. Faculty Discussion – *Fun Math Especially for Students: Permutation Ladders*, Bryan Shader, University of Wyoming.
9. *A Slice of Pi*, Alisha Raby, Truman.
10. *Large Proth Primes When K=21 and K=25*, Curtis Cooper, CMS.
11. *A Probability Model for College Football Overtime*, Brian Haile, NWMS, and Craig Haile, College of the Ozarks.
12. *Teaching Interval Estimation with <u>Confidence</u>*, James Guffey, Truman.
13. *Assessment for a Modified Moore Method Calculus Class*, Shing So, CMS.
14. *Finding the Viewing Window*, Keith Brandt, Rockhurst.
15. *Public Key Encryption*, Brandon Crosser, MWS.
16. *Regularity*, Haohao Wang, SEMO.
17. *A Boy and His Mother Encounter Fibonacci and Diophantus*, Keith Brandt and John Koelzer, Rockhurst.
18. **On Martin Gardner (banquet), Les Reid, SMS.**
19. *Knowledge and Use of Birth Control in Six Asian Countries*, Patrick Muehlmann, Drury.
20. *Another Nostalgia Trip*, Susan Callahan, Cottey College.
21. *Elliptic Curve Cryptography*, Kevin Anderson, MWS.
22. *0 = 1: A Collection of Proofs (or How My PhD Became Useless Overnight)*, Don Vestal, MWS.
23. *Global Existence of Solutions for Degenerate Semilinear Parabolic Equations*, W.Y. Chan, SEMO.
24. *Respiration Module for a Math-Biology Course*, Phil Ryan, Truman.
25. *M^3: Mentoring Mathematics Majors*, Sharon Vestal, MWS.
26. *Null Numbers: Physics Motivating Mathematics*, Paul Deiermann, SEMO.
27. **Connections Between Mathematics and Biology (invited), Carl Cowan, Purdue University.**

2006 (University of Missouri, Columbia)

1. ***A Bird's Eye View of the P vs. NP Problem* (MAA Polya Lecture), Steven Rudich, Carnegie Mellon University.**
2. *The Lattice of Subvarieties of HSP(S+),* Matt Sealy, Truman.
3. *The Discovery of the 43rd Mersenne Prime,* Curtis Cooper, CMS.
4. *Generalizations of the Pythagorean Theorem in Euclidean Geometry,* Shing So and Al Tinsley, CMS.
5. *Civic Engagement in a Finite Math Course,* Brian Birgen, Wartburg College (IA).
6. *Where Does the Ladder Hit?* Tim Ray, SEMO.
7. *Anagram Primes: A Work in Progress,* John Koelzer, Rockhurst.
8. *Primality Leads to Perfection in Alexandria and Warrensburg,* Charlie Smith, Park University.
9. *Self-Generating Sets, Missing Blocks, and Substitutions,* David Failing (student), Truman.
10. *Have You Read the Textbook You Teach From? Mary Shepherd, NWMS.*
11. *The Missouri Mathonline Test and Evaluation Website,* Elias Saab, UMC.
12. *The Early Years of the Missouri Section,* Leon Hall, UMR.
13. *Learning to Use Moore/Inquiry Method Through Mentoring,* Robert Roe, UMR.
14. *Modified Moore Method in a College Trigonometry Class,* Shing So and Mahmoud Yousef, CMS.
15. *Learn to Teach with Modified Moore Method,* Haohao Wang, SEMO.
16. *Exploring Schur Numbers,* Keith Brandt, Rockhurst.
17. *Oh, What a Change of Basis Can Do!* Ben Braun (student), WU.
18. *Construction of Some Tournaments,* Hang Chen, CMS.
19. *Global Existence of Solutions for Degenerate Semilinear Parabolic Equations with a Sink at the Boundary,* W.Y. Chan, SEMO.
20. *Completeness of Spherically Symmetric Correlated Gaussians,* Ioana Sirbu, Western Illinois.
21. *Distortion Minimal Morphing: The Theory for Stretching,* Oksana Bihun (student) and Carmen Chicone, UMC.
22. *Non-Discrete Topologies for Abelian Groups,* Marina Dombrovskaya (student), SLU.
23. *Visual Representations of p-adic Numbers,* Mark Pedigo (student), SLU.
24. *A Calculus Student's Dream: A Generalized Power Rule,* Ashley Reynolds (student), SLU.
25. ***Why Canadian Fur Trappers Should Stay in Bed When They Have the Flu* (banquet), Lisa Sattenspiel, Anthropology, UMC.**
26. *Public Key Cryptography with TI Voyage 200,* Jerzy Wojdylo, SEMO.
27. *Shank's Algorithm and Elliptic Curve Cryptography I,* Dale Bachman, CMS.
28. *Shank's Algorithm and Elliptic Curve Cryptography II,* Dale Bachman, CMS.
29. *A Proof of Green's Theorem: Reasoning by Contradiction,* Amanda Lewis (student), UMC.
30. *An Improper Application of Green's Theorem,* Bob Robertson, Drury.
31. *Solution to Monthly Problem 11159 via Residue Theory,* Paul Deiermann, SEMO.
32. *An Application of Syzygies,* Haohao Wang, SEMO.
33. *Optimal Control of Nonautonomous Algebraic Differential Inclusions,* Lianwen Wang, CMS.
34. *Strategies and Recommendations for Using Math Textbooks,* Laura Smith (student), NWMS.
35. *USCOTS and Involving My Students in Their Introductory Statistics Class,* James Guffey, Truman.
36. *Computational Modeling of Flight Characteristics for Extant and Fossil Saccate Pollen Grains,* George Wang (student), Truman.

37. *Making Sequences of Real Numbers Converge to Zero*, T. Christine Stevens, SLU, and John W. Short, Sam Houston State (TX).
38. **The Mathematics of Testing and Vice Versa (invited), John Kenelly, MAA Treasurer.**

2007 (College of the Ozarks, Point Lookout)
1. **Biostatistics in Medical Research (invited), Matthew S. Mayo, University of Kansas Medical Center.**
2. *Even More Statistics in Baseball?* Wesley Masoner (student), NWMS.
3. *Finite Groups with Planar Subgroup Lattices*, Les Reid, Missouri State.
4. *Flippin' Pancakes: An Undergraduate Synthetic Biology Research Project*, Jeff Poet, MWS.
5. *Using the TI-89 to Approximate Solutions of Differential Equations Near a Regular Singular Point*, Timothy Miller (student), MWS.
6. *Plain Cross Sections of Platonic Solids*, Roger Morrison (student), MWS.
7. *Axioms and Undefined Terms in Foundations of Geometry*, Shing So, CMS.
8. *The Genus of a Zero Divisor Graph*, Cameron Wickham, Missouri State.
9. *Connecting Related Rates and Differential Equations*, Keith Brandt, Rockhurst.
10. *Cross Stitch Algorithms for Shortest Paths*, Christine Blunk (student), NWMS.
11. *Euler Converses Euclid*, Charlie Smith, Park.
12. *Prime Divisors of Integers, Ideals, and Modules*, Glenn Rice, MWS.
13. *Some Applications of Calculus to Number Theory*, Joseph Dence.
14. *Classroom Response Systems*, Kevin Hopkins, SBU.
15. *Card Tricks*, Hang Chen and Curtis Cooper, UCM (two talks).
16. *Groups, Symmetry, and Other Explorations with Cross Stitch*, Mary Shepherd, NWMS.
17. *Archimedean Orders on Certain Rings of Invariants*, Haohao Wang, SEMO.
18. *T.I.E.P.-ing for Developmental Students*, Ken Lee, MWS.
19. *That's No Way to Draw a Hyperbola!* Keith Coates, Drury.
20. *Approximated Solutions of Heat Conduction Problems*, W.Y. Chan, SEMO.
21. *Just Do It: Teaching an Introductory Statistics Course with Student-Generated Data*, Suzanne Tourville, Columbia College.
22. *A Blast from the Past! The Rubik's Cube*, Kevin Anderson, MWS.
23. *Factorization Theory and Direct Sum Decomposition*, Nicholas Baeth, UCM.
24. *A Proof of the Pizza Conjecture. Using Lattice Points to Deliver Pizza*, Paul Deiermann, SEMO, and Rick Mabry, LSU-S.
25. **Truth and Fairness (banquet), Tim Ray, SEMO.**
26. *Hendrix, Hamming, and Fourier*, Adam Scott (student), Drury.
27. *An Update of Alpha Distances*, Songlin Tian, UCM.
28. *Studying Colonization with Agent-Based Modeling*, Philip Ryan, Truman.
29. *PHI: "Divine Section" or Just Very Fortunate?* Gavin Waters, MWS.
30. *Approximate Controllability of Stochastic Control Systems*, Lianwen Wang, UCM.
31. *Some Calculus 2 Students Seem to Prefer Procedural Approaches to Exercises over Conceptual Ones*, Mary Shepherd, NWMS.
32. *Computational Modeling of Pollen Flight Characteristics*, Scott Thatcher, Truman.
33. *On the Limit of Two-Variable Separable Functions*, Daniel Tutterow and William Hall (students), UCM.
34. *Latin Squares, Cubes, and Hypercubes*, Jerzy Wojdylo, SEMO.
35. *An Introduction to Surreal Numbers*, Nikki Kennedy (student), Drury.

36. *USCOTS and Involving Students in their Statistics Class*, James Guffey, Truman.
37. **Bright Lights on the Horizon (invited), Deanna Haunsperger, Carleton College, MAA Second Vice-President.**

2008 (Missouri State University, Springfield)

1. *On the Hartogs Phenomenon*, Malgorzata Marciniak, Westminster.
2. *Teaching Math history without Prerequisites*, Charlie Smith, Park.
3. *On Infinitely Nested Fractions*, Jarod Stockton (student), UCM.
4. *Using Geometer's Sketchpad and Poincare Models to Illustrate the Parallel Postulate*, Julie Allen (student), MWS.
5. *How to Build a Pyramid*, Keith Brandt, Rockhurst.
6. *A College Algebra Course for Honors Students*, Dale Bachman and Nicholas Baeth, UCM.
7. *Mathematical Models for Inventory*, Amanda Baty, Drury.
8. *Using Geomview to Illustrate 3-Dimensional Animation*, Aaron Lewis (student), MWS.
9. *A Mathematical Model for the Battle of Trafalgar*, Phil Ryan, Truman.
10. *Triumphs and Challenges in Teaching a Student to Read Mathematics*, Mary Shepherd, NWMS.
11. *Bourbaki Ideals: A Worked Example*, Carrie Whittle (student), MSU.
12. *21 + 3 Blackjack Casino Game*, William Hall (student), UCM.
13. *Some Properties of Semi-Closure Spaces*, Shing So, UCM.
14. *Using TI-89 to Find Both Series Solutions to a Second Order Differential Equation at a Regular Singular Point*, Timothy Miller, Truman.
15. *On the Radio Antipodal Chromatic Number of C_{4k}*, Aaron Yeager (student), MSU.
16. *Beads on a Necklace: An Exploration of Cyclic Sum Sets*, Laura Smith (student), NWMS.
17. *How Hard is Sudoku, Part I*, Hang Chen and Curtis Cooper, UCM.
18. *A Student Investigation of the Kolmogorov-Smirnov Test Statistic*, Steve Klassen, MWS.
19. *Axial Moving Planes and Singularities of Rational Space Curves*, Haohao Wang, SEMO.
20. *On the Isomorphism Classes of Zero Divisor Graphs*, Nathan Bloomfield (student), MSU.
21. *Math to Win!* Aric Hewlett (student), NWMS.
22. *How Hard is Sudoku, Part II*, Hang Chen and Curtis Cooper, UCM.
23. *Bacterial Computing: Solving a Hamiltonian Path Problem In Vivo*, Jeffrey Poet, MWS.
24. *The Mathematical Process of Classification*, Brandon Turner (student), MSU.
25. *Groups and Subgroups Through Patterns*, Renee Scott (student), NWMS.
26. *Life-Stress Relationship Testing for a Homogeneous Poisson Process in Reparable Systems*, Stephen Schroeppel II and Pradeep Singh, SEMO.
27. *An Introduction to the Randomized Response Technique (or How to Ask about Sex and Get Honest Answers)*, James Guffey, Truman.
28. *Boundedness of Solutions of Nonlinear Second Order Differential Equations*, Lianwen Wang and Rhonda McKee, UCM.
29. *Hamiltonicity of Subgroup Graphs*, Immanuel McLaughlin (student), MSU.
30. *Encryption of Messages Using Chaotic Sets of Differential Equations*, Chad Klein (student), MWS.
31. **A Few of My Favorite Things (banquet), Ken Lee, MWS.**
32. *Some Finite Groups with Eulerian Subgroup Graphs*, Joseph Bohanon, WU, and Les Reid, MSU.
33. *Strictly Increasing Functions with Derivative Zero a.e.*, Jason Shaw, Truman.

34. *Dr. Love's Mathematical Dating Advice*, Gavin Waters, MWS.
35. *12 Squares = 1 Stellated Octahedron*, Wendell Wyatt, Northeastern State University (OK).
36. *J.W.L. Glaisher and Euler's Constant*, Joseph Dence, UMSL.
37. *MDHE's Curriculum Alignment Initiative: Entry and Exit Competencies of Collegiate Math Courses*, Yungchen Cheng, MSU, and Mary Shepherd, NWMS.
38. *Numeration System and Fractal Bases*, David Garth, Truman.
39. *Hubcap Geometry*, David Ewing, UCM.
40. *Proofs that Really Count: Some of My Favorites*, Jeffrey Poet, MWS.
41. *The Generalized Euler Constant r_1*, Joseph Dence, UMSL.
42. *Why I Hate Tic-Tac-Toe*, Kevin Anderson, MWS.
43. *Designer Primes: You Can Have Your Own Personal Prime Number!* John Koelzer, Rockhurst.
44. *What's the Chance to Win a Game – a Statistical Model of Scoring Some Sporting Events*, Lianwen Wang, UCM.
45. **Using Groups and Graphs to Create Symmetry Patterns (invited), Joe Gallian, MAA President.**

2009 (Truman State University, Kirksville)
1. **Pancake Sorting, Prefix Reversals, and DNA Rearrangements (invited), Ivars Peterson.**
2. *Uniform Boundedness of Functional Differential Equations*, Tingxiu Wang, MWS.
3. *Using Projects in a Math and Art Course*, Anneke Bart, SLU.
4. *Math-Biology Undergraduate Research at Truman: An Extension of Tajima's D*, Pam Ryan, Truman.
5. *Pythagorean Triples: 4000 Years and Counting*, Nicholas Baeth, UCM.
6. *A Nonhomogeneous Compound Poisson Risk Model*, Jinfeng Wei, Maryville U.
7. *Math and the Art of M.C. Escher: An Interdisciplinary Course for Freshmen*, Bryan Clair, SLU.
8. *Cryptography and E. Coli: Synthetic Biology and Hash Functions*, John Igo (student), MWS.
9. *A Gem from the History of Mathematics: Wallis and Pi*, Phil Ryan, Truman.
10. *Approximate Controllability for a Class of Stochastic Differential Equations*, Lianwen Wang, UCM.
11. *The Beginnings of an Inquiry Workgroup*, Maireed Greene, Christine VonRenesse, and Volker Ecke, Rockhurst.
12. *Mathematical Analysis of a Bacterial XOR Gate: Modeling the Production of Synthase in a Cell Using Differential Equations*, Julie Allen, MWS.
13. *Duplication, Trisection, and Quadrature by Cheating*, Charlie Smith, Park U.
14. *Axial Moving Planes and Set-Theoretic Generators of Rational Space Curves*, Haohao Wang, SEMO.
15. *Making a Case for Complex Polynomials in Undergraduate Mathematics*, John Coburn, St. Louis CC.
16. *Limits of 1^{∞} Indeterminate Forms*, Richard Petch, UCM.
17. *Resolving Knot Universes*, Neil Nicholson, William Jewell.
18. *An Exploration of the Cantor Set*, Christopher Shaver, Rockhurst.
19. *Fractional Integrals that Emerge from Statistical Time Series Having Infinite Variance*, Joshua Levy, Truman.

20. *Atoms of the Relative Block Monoid*, Justin Hoffmeier, UCM.
21. *Various Systems of Betting on a Roulette Wheel*, Andrew Haws, Truman.
22. *On the Chromatic Number of Subgroup Graphs*, Les Reid, MSU.
23. *Chess, Algebra, and You*, Glenn Rice, MWS.
24. *Roundtable – Learning Assessment in Missouri Postsecondary Education (LAMP)*, Yungchen Cheng, MSU, and Mary Shepherd, NWMS.
25. *From Space Filling Curves to Quantum Mechanics*, Grant Lathrom, MSS.
26. *Angle Trisection and Morley's Theorem*, Nancy Mueller, SEMO.
27. *A Glimpse into Algebraic Geometry*, Joshua Powers, SEMO.
28. *Idiot's Delight, Part I*, Hang Chen and Curtis Cooper, UCM.
29. *Mathematics and Elected Officials: Making Your Voice Heard*, Leon Hall, Missouri S&T.
30. *Using Negative Binomial Regression to Find the Relationship between Home Range Size of the White-Footed Mouse (Peromyscus Leucopus) and Tick Load (Dermacentor Variabilis)*, Georgia Mueller, Truman.
31. *Battle on the Playground: An Analytical Approach to Aggression between Bullies*, Adelaide Quaney, MWS.
32. *Idiot's Delight, Part II*, Hang Chen and Curtis Cooper, UCM.
33. **A Mathematician and Teacher (banquet), Shing So, UCM.**
34. *Statistical Analysis of Metapopulation Data*, Jennifer Pajda, MSU.
35. *A Proof from the Book? The Number of Integer Triangles*, Marty Erickson, Truman.
36. *An Informal Introduction to Non-Euclidean Geometry*, Anneke Bart, SLU.
37. *e … More than Just a Vowel*, Gavin Waters, MWS.
38. *Arsenic Fluctuations in a Public Reservoir*, Rachel Howe, MWS.
39. *Enumerating Rook and Queen Paths*, Khang Tran, U. of Illinois at Urbana-Champaign.
40. *Visualizing Groups and Subgroups in Counted Cross Stitch*, Mary Shepherd, NWMS.
41. *Second Best Rational Approximations for the Square Root of 2*, Aaron Lewis, MWS.
42. *On the Hartogs-Bochner Phenomenon*, Malgorzata Aneta Marciniak, Missouri S&T.
43. *Fun with Dice and Drinks*, Brent Shepherd, MWS.
44. *Paradox Lost*, James Guffey, Truman.
45. *The Gambler's Ruin: Modeling Games of Chance*, Kayce Eagen, UCM.
46. **The Jungles of Randomness (invited), Ivars Peterson.**

2010 (University of Central Missouri, Warrensburg)
1. **A Logician Does Analysis (invited), Dan Velleman, Amherst College, Editor of the Monthly.**
2. ALEKS (Assessment and Learning in Knowledge Spaces), McGraw-Hill.
3. WebAssign Demo, Cengage.
4. *Reading and Writing Mathematics with Developmental Students*, Neil Hatfield, NWMS.
5. *The Linda Hall Library: Kansas City's Best Kept Secret*, Charlie Smith, Park U.
6. *Niven Numbers – A Review*, Robert Kennedy, UCM.
7. *Inequalities of Solutions of a Scalar Nonlinear Integro-Differential Equation*, Elena Castanada, Rylan Sampson, Siya Sun, and Tingxiu Wang, MWS.
8. *Good Fishing vs. Green Energy: White River Minimum Flows at Ozark Beach Dam*, Craig Haile, College of the Ozarks.
9. *A Modified Moore Method Workshop for Middle and High School Teachers*, Mahmoud Yousef and Shing So, UCM.

10. *The Many Faces of Geometry: Platonic Solids in Euclidean Space,* Adelaide Quaney, MWS.
11. *Sign Language Converter,* Nicholas Kuhlenbeck and Curtis Burns, UCM.
12. *Classifying the Intersection of Quadrices in the Projective Space Using Linear Algebra,* Christopher Broyles, SEMO.
13. *Recursive Patterns and the Resistance of an Infinite Circuit,* Michael Phinney, UCM.
14. *Rees Algebra Associated to Rational Surfaces,* Haohao Wang, SEMO.
15. *Teaching Math Reading Strategies to 1ˢᵗ Year College Students & the Effect on Reading Comprehension,* Mary Shepherd, NWMS.
16. *Knot Theory and a Generalization of Reidemeister Moves,* Pablo Diez Burillo, Culver-Stockton.
17. *Differential and Integral Inequalities by Lyapunov's Second Method,* Tinxiu Wang, MWS.
18. *Generating Sudoku Puzzles – Part I,* Hang Chen and Curtis Cooper, UCM.
19. *Pollution Control in Missouri Lakes,* Samantha Eaton and Ashley Schnoor, MWS.
20. *Zero-Divisor Graphs: Results from Three Summers of Work,* Cameron Wickham, MSU.
21. *Generating Sudoku Puzzles – Part II,* Curtis Cooper and Hang Chen, UCM.
22. *Chaotic Waves and Their Embedded Song Lyrics,* Jeremy Riley and Megan Sager, MWS.
23. *Detection of Software Similarity,* Matthew McDole, Daniel Klatt and Phat Hoang, UCM.
24. *Sufficient Conditions for Approximate Controllability of Boundary Controlled Nonlinear Systems,* Lianwen Wang, UCM.
25. **Keep Your Eye on the Ball (banquet), James Guffey, Truman.**
26. *Local Extrema of Multivariable Functions,* Timothy Wong, UCM.
27. *How to Recognize a Parabola, Geogebra Style,* Kevin Hopkins, SBU.
28. *Classifying SAT Problems for Bacterial Computation,* Ashley Schnoor and Siya Sun, MWS.
29. *Using Geogebra in Calculus and Precalculus,* Rhonda McKee, UCM.
30. *Bacterial Computation of MAX SAT,* Jeff Poet, MWS.
31. *Early Vector Calculus: A Path Through Third-Semester Calculus,* Bob Robertson, Drury.
32. **An introduction to Constructive Mathematics (invited), Dan Velleman, Amherst College, Editor of the *Monthly*.**

2011 (Columbia College, Columbia)
1. **Transition to College Mathematics (invited, MOMATYC), David Bressoud, Macalester College.**
2. *Clickers for College Algebra,* Lillian Seese, St. Louis CC-Meramec.
3. *Rotational Analysis of Phase Plane Curves: A Useful and Insightful Theorem for Teaching Differential Equations,* Russell Murray, St. Louis CC-Meramec.
4. *Fast Track Mathematics at SCCC – The Program Continues and Expands,* Joe Howe, St. Charles CC.
5. *iLearn: Increase Passing Rates with Dynamically Optimized Courses for Developmental Math,* Robert Collins, iLearn, Inc.
6. *My Students Have Trouble with Logarithms (and Other Things),* John Coburn, St. Louis CC-Flo. Valley.
7. *Wow! That's Cool! It Really Works!* Lola Swint, North Central Missouri College.
8. *What Makes MyMathLab Special,* Tim Wilson and Steve Day, Pearson.
9. *Redesigning Developmental Mathematics: A Reverse Engineering Approach,* Pat Suess and Rita Pernik, St. Louis CC-Flo. Valley.
10. **Algorithms Meet Art, Puzzles, and Magic (MAA Polya Lecture), Erik Demaine, MIT.**

11. *Hands-On Introduction to WeBWorK*, Jason Aubrey, UMC.
12. *Different Strategies in Teaching Calculus and College Algebra,* Jinfeng Wei, Maryville University.
13. *Bacterial Computers: Attempts to Fine Tune a System,* Jeff Poet, MWS.
14. *Rees Algebra of Certain Projective Surfaces,* Haohao Wang, SEMO.
15. *Motivate Your Students with Mastery Learning,* Tess DiFillipo, Hawkes Learning Systems.
16. *Ten or More Ideas to Improve Your Course Retention Rates,* Kim Tsai Granger, St. Louis CC-Wildwood.
17. *A Tribute to Martin Gardner (1914-2010) & 24 Years of Mathematical Games,* Rick Armstrong, St. Louis CC-Flo. Valley.
18. *A Roundtable Discussion of Common Issues for Math Faculty,* Wanda Long, St. Charles CC, and Yungchen Cheng, MSU.
19. *Mathematics Placement at Truman State University,* Dean De Cock, Truman.
20. *The (a, b, 0) Class of Distributions,* Jason Shaw, Truman.
21. *1.61803399…,* David Caudill, MWS.
22. *Retention Rates in General Education Classes at Missouri Western State University: Results of a Study,* Gavin Waters, MWS.
23. *The Kappa Statistic: Measuring Inter-Rater Reliability,* James Guffey, Truman.
24. *Polyomino Puzzles and Applications to Phase Array Radars,* Stephen Montgomery-Smith, UMC.
25. *Reading Online Mathematics Textbooks,* Mary Shepherd, NWMS.
26. *History of the Missouri Section in the Last Half of the 20th Century,* Leon Hall, Missouri S&T.
27. *Sinking Mustangs,* Kurtis Morrison, MWS.
28. *Modified Moore Method in K-12 Mathematics,* Mahmoud Yousef and Shing So, UCM.
29. *Fibonacci, Liber Abaci, and Medieval Mathematics,* Charlie Smith, Park U.
30. Cengage Focus Groups, Rita Lombard, Cengage.
31. **Under the Influence: A Reflection on Teachers of My Past, Stories of the Present, and Dreams of the Future (banquet), Jeff Poet, MWS.**
32. *Engaging Students through the Use of the Online Homework System WeBWorK,* Anneke Bart, SLU.
33. *Using Geogebra to Visualize Polyhedron Unfoldings,* Kyle Sykes, SIU-Edwardsville.
34. *Proof that Taking Consecutive Differences of Polynomial Sequences Leads to Factorials,* Jesse Todd, Culver-Stockton.
35. *A Geometric Investigation of an Arithmetic Expression,* Jeff Stevens, MWS.
36. *Course Redesign for College Algebra and Applied Calculus: What Worked and What Didn't,* Tamela Henebrink, Linda Tansil, Laurie Wern Overman, and Daniel Daly, SEMO.
37. *Implementing Mastery Learning,* Wayne Mackey and James Brunner, University of Arkansas.
38. *Word Problems? They Can't Even Identify the Verb!* Becky Schantz, East Central.
39. *Digital Assessments and Solutions from Cengage,* Ron Given, Cengage.
40. *Course Redesign in College Algebra: What NOT to Do,* Jennifer Hegeman, MWS.
41. *The Compact-Open Topology,* Darren Garbuz, SLU.
42. *Explicit Formulas for Sums of Powers and for Bernoulli Numbers,* Nicole Ogden and Wojciech Golik, Lindenwood.
43. *The Age of the Universe,* Scott Garten, NWMS.
44. *A Report on the SMaCS Program at Truman State University,* Jason Shaw, Truman.
45. *Excluded Point Topology: An Exploration,* Katherine Taylor, SLU.

46. *Orthogonality Throughout Mathematics*, Theodore Lindsey and Andrew Parker, Principia College.
47. *The Resistance of Infinite Circuit Networks*, Michael Phinney, UCM.
48. **Stories from the Development of Real Analysis (invited, MAA), David Bressoud, Macalester College.**
49. *50 Ways to Teach Them Algebra*, Debbie Char, St. Louis CC-Forest Park.
50. *Pre-Algebra Redesign*, Aletta Speegle and Connie Stocker, St. Louis CC-Meramec.
51. *An Alternative Approach to Dual Credit*, Steven Wilson and Mary Deas, Johnson Co. CC.
52. *Student Success in an Emporium-Style Classroom*, R.E. Moore, MWS (McGraw-Hill).

2012 (University of Missouri – St. Louis)
1. **Mathematics and Music (invited), David Wright, WU.**
2. *The Power of Power Series*, Janelle Ferguson and Jeffrey Stevens, MWS.
3. *Some Results on Quadratically Parameterized Surfaces*, William Hoffman and Haohao Wang, SEMO.
4. *Embracing Open Source Materials in the Undergraduate Curriculum*, Jonathan Corbett and Ann Podleski, Harris-Stowe.
5. *Poncelet's Triangle and Groebner Bases*, Brent Wessel, SEMO.
6. *Ivan the "Pi" Man*, Charlie Smith, Park U.
7. *How to Change the Topology of the Reals but Keep Continuous Homomorphisms*, T. Christine Stevens, SLU.
8. *Integrating Excel into Business Calculus*, Mike May, SLU.
9. *Inter-Vehicular Communication – A Collision Simulation*, Lindsay Steighorst, UMSL.
10. *Combinatorial Proofs: A Selection*, Jeff Poet, MWS.
11. *Topics for Original Undergraduate Research: Estimate Solutions of Functional Differential Equations*, Tingxiu Wang, MWS.
12. *A First Look at How Mathematicians Read Mathematics for Understanding*, Mary Shepherd, NWMS.
13. *An Exploration of Non-Euclidean Geometry*, Emily Sander, Principia College.
14. Math and Logic Puzzles, Ryan Mullen, Westminster.
15. The Countably Infinite Union of Alternating Groups, Sean Corrigan, SLU.
16. *Inquiry + Technology = Math Success*, Mahmoud Yousef, Ann McCoy and David Ewing, UCM.
17. *Use Resultant to Solve Poncelet's Triangle*, Natalya Weir and Brent Wessel, SEMO.
18. *Two Simple Functions Emerge from the Fabric of Space*, Jason Shaw, Truman.
19. *Approximate Schauder Frames in R^n*, Brody D. Johnson and Stephanie M. Thomas, SLU.
20. *Errors of Algebra Students on Final Examinations*, Scott Garten, NWMS.
21. *Interesting Consequences of Attempting the Impossible*, Joshua Chester, MWS.
22. **My Occasionally Intentional, but Repeatedly Distracted Path to a Mathematical Life (banquet), Richard Delaware, UMKC.**
23. *Swap Meet*, Ann McCoy.
24. *An Overview of the Progressions Documents*, Jenni Wall.
25. *An Overview of the Illustrative Mathematics Project*, Cheryl Malm and Christine Benson.
26. *When "Integers" Don't Factor Uniquely*, Nicholas Baeth, UCM.
27. *The Influence of Host Variables and Environmental Variables on D. Variabilis Burden of P. Lecopus*, Justin Baraboo, Elisabeth York, Alex Kaizer, Hyun-Joo Kim and Stephanie Fore,

Truman.

28. *Counting Unordered Partitions of n*, Mike Young, UMSL.
29. *Fractals in a Freshman Seminar*, Anneke Bart, SLU.
30. *How to Open a Polyhedral Present*, Kyle Sykes, SLU.
31. *Running Back's Fantasy Performance*, Caleb Gilmore, NWMS.
32. *Surviving the Qualifying Exam*, Mike Young, UMSL.
33. *A Brief Tour of Geogebra*, Russell Blyth, SLU.
34. *Over the Hill or Hitting Their Stride*, Deron Adkins, NWMS.
35. *A Student's Critique of the Quantitative Reasoning Technique Used in Math 110*, Tamara Thomas and Jill Bakken, Principia College.
36. *Stories About Missouri MAA People*, Leon M. Hall, Missouri S&T.
37. **Teaching Research: Encouraging Discoveries (invited), Francis Su, Harvey Mudd College.**

2013 (Northwest Missouri State University, Maryville – Joint Meeting with Kansas, Iowa, and Nebraska/SE South Dakota Sections)
1. **How to Find (and Keep) Neighbors (invited), Rick Gillman, Valparaiso U.**
2. Different Proofs of Lebesgue Number Lemma, Mohammad Riazi-Kermani, Fort Hays State (KS).
3. Tic-Tac-Toe, Bryan Clair, SLU.
4. Separating Aitken's Method and Steffensen's Method, Mark Sand, College of St. Mary (NE).
5. Semigroups Arising from Asynchronous Automata, David McCune, William Jewell.
6. How I Lost on Jeopardy!, Ilene Morgan, Missouri S&T.
7. LOGs and GIGs – The Next Sudoku? Probably Not, Alexander Moore, Virginia Perkins, Linnea Edlin, Brad Isom, Josh Chester, Jonah Galeota-Sprung, Laurie Heyer, and Jeffrey Poet, MWS.
8. Statistical Consulting as Undergraduate Research, Scott Alberts, Hyun-Joo Kim, and Scott Thrasher, Truman.
9. Undergraduate Research in Mathematical Biology at Truman State University, Pam Ryan, Truman.
10. Sage Beginner's Workshop, Theron Hitchman, Northern Iowa.
11. Aliquot Cycles for Elliptic Curves with Complex Multiplication, Thomas Morrell, WU.
12. A Look at Simpson's Paradox, James Guffey, Truman.
13. Simple Interesting Probability, Kevin Anderson, MWS.
14. Using Chaos: A Discrete Approach to a Better .zip File, Joshua Chester, MWS.
15. Resequencing Calculus: An Early Multivariate Approach, Mike Axtell, et al., University of St. Thomas (MN).
16. Solutions of the Problems in Rainville's Special Functions, Leon Hall, Missouri S&T.
17. Diophantine Approximation, Sturmian Words, and Quasicrystals, David Garth, Truman.
18. A Sample of Elegant Proofs, Jeff Poet, MWS.
19. Using Polygon Triangulation to Generate Catalan Numbers, Morgan Russell, MWS.
20. Assessment of Independence and Self Evaluation in the Mathematics Program, Martha Ellen Waggoner, Simpson College (IA).
21. **The Challenges of Coding Theory: Past and Future (banquet), Judy Walker, University of Nebraska.**
22. Understanding Complexity, Rick Spellerberg, Simpson College (IA).

23. Geometry of Weighted Least Squares Solutions Revisited, Majid Bani-Yaghoub, Richard Delaware, and Noah Rhee, UMKC.
24. Everything's Golden, Charlie Smith, Park U.
25. An Inequality of Acute Triangles, Lara Ismert, Pitt. State (KS).
26. Intermediate Algebra Redesign at UCM, Phoebe McLaughlin, UCM.
27. Folding Curves, Ryan Mullen, Westminster.
28. An Application of Hierarchical Model Based Inference in Spatio-Temporal Criminal Data, Han Yu, NWMS.
29. An Interesting Solution to a Probability Problem, Timothy Miller, MWS.
30. Statistical Analysis of a Batting Average Ranking Algorithm, Shunya Miatake, University of Nebraska Kearney.
31. Retention Analysis, Jing Chang, College of St. Mary (NE).
32. **Non-Euclidean Geometry in Art, Architecture and Science (invited), Anneke bart, SLU.**
33. **The Fractal Geometry of the Mandelbrot Set (invited), Bob Devaney, Boston U. and MAA President.**
34. On the Spectra of Simplicial Rook Graphs, Jeremy Martin and Jennifer Wagner, Washburn U. (KS).
35. A Comparison of Two Paths in College Level Calculus, Erin Terwilleger Mullen and Amit Savkar, Westminster.
36. Process Oriented Guided Inquiry Learning (POGIL) in Calculus I, Zdenka Guadarrama, Rockhurst.
37. Disease Transfer in a Fixed Population, and Possibly Zombies, Joshua Chester, MWS.
38. Freshman Calculus via Numerical Modeling, Brian Birgen, Wartburg College (IA).
39. WeBWork: An Introduction, Gavin Waters, MWS, and Mary Shepherd, NWMS.
40. Lie Groups and Algebras, Joshua Andrew Carini, Wayne State (NE).
41. An Upper-Level Probability Course Based on Reading Assignments, Keith Brandt, Rockhurst.
42. Birth and Death Chains with Blessings, Irvin Roy Hentzel, Iowa State.
43. Triphos: An Alternate Coordinate System, Keely Grossnickle, Emporia State (KS).
44. Cell Phone Apps in a Business Math Class, Steven J. Wilson, Johnson County CC (KS).
45. A Special Linear System and Catalan Numbers, Hongbiao Zeng, Fort Hays State (KS).
46. Flipping a Math Content Course for Pre-Service Elementary Teachers, Pari Ford, University of Nebraska Kearney.
47. Mathematics in Bologna, Cynthia Woodburn, Pitt. State (KS).
48. Modeling Hyperbilic Geometry through Crochet, Ashley Reavis, Pitt. State (KS).
49. Linking Science and Statistics Courses at Wayne State College, Jennifer Langdon, Wayne State (NE).

2014 (St. Louis University, St. Louis)

1. ***Scoring Points vs. Winning Games: A Fundamental Problem in the Mathematics of Sports (invited), Ari Stern, WU.***
2. *Statistical Estimation on Simple Correlation Coefficient Based on Monotone Missing Data,* Quanquan Li (student), SEMO.
3. *Regularity of Radical Ideals,* Haohao Wang, SEMO.
4. *A Selection of Proofs Without Words,* Jeff Poet, MWS.
5. *A Randomized Trial of Mathachievement vs. Standard Online Math Homework,* Kevin

Anderson, MWS.

6. *The Thick Coin Problem*, Timothy Miller, MWS.
7. *A New Proof of the Three-Distance Theorem*, Evan Datz, Truman.
8. *March Madness Math*, David Letscher, SLU.
9. *WeBWorK: Mentoring and Assessment*, Anneke Bart, SLU.
10. *Nash Equilibriums between the Pure Strategies of Teachers and Students*, Alex Mertzlufft, MWS.
11. *Positive Semidefinite Maximum Nullity and Zero Forcing Number of Dual Graphs*, Lina Schiel-Madsen (student), Culver-Stockton.
12. *100 Prisoners*, Bryan Clair, SLU.
13. *Current Trends in the Delivery of Developmental Mathematics*, Cheryl McAllister, SEMO.
14. *An Introduction to Benford's Law*, James Guffey, Truman.
15. *Defining an "Optimal" Cross-Stitching Method*, Mary Shepherd, NWMS.
16. *Dance and Iornament for Teaching Planar Symmetries in a Freshman Geometry Seminar*, Kim Druschel, SLU.
17. *Math Summit Follow-Up*, Tamela Randolph, SEMO.
18. *Unsupervised Categorization from Co-Occurrence Data*, Michael Lamar, SLU.
19. *Solution of a Calculus Based Problem*, Sujita Shah (student), SEMO.
20. *The Second Ptolemy: Persia's Fifteenth Century Mathematical Genius Jamshid Kashani*, Mohammad Azarian, University of Evansville (IN).
21. *Computational Mathematics with Python: A New Course Development*, Glenn Rice, MWS.
22. *WeBWorK Workshop*, Anneke Bart and Mike May, SLU.
23. ***Mathematics to DIE for: The Battle Between Counting and Matching* (banquet), Jennifer Quinn, University of Washington at Tacoma.**
24. *Spun Normal and Spun Almost Normal Surfaces*, Katherine Paullin (student), SLU.
25. *Teaching Business Calculus with Laptops and the Internet*, Mike May, SLU.
26. *Hyperbolic Geometry: When the Rebels Ignore the Fifth Axiom*, Joshua Chester (student), MWS.
27. *Business Calculus: Finding Meaningful Examples to Motivate Calculus*, Anneke Bart, SLU.
28. *Multiplicative Groups in the Zero Divisors ZD(Z/{1000})*, Torre Mills (student), Albany State U. (NY).
29. Virtual Panel Discussion: *Online Education in Mathematics*, Andy Parrish, SLU (moderator).
30. *Projecting Platonics: Creating and Animating 2-Dimansional Graphs of the Platonic Solids*, Joel Henningsen and Grace Chester (students), MWS.
31. *Being a Gold Medalist in YOUR Job Hunting*, Ryo Ohashi, King's College (PA).
32. *Factorizations of Upper Triangular Matrices*, Nicholas Baeth, UCM.
33. *An Algebraic Approach to Tile Invariants*, Amanda Bright (student), Westminster.
34. *History of the Missouri Section – The Last Thirty Years*, Leon Hall, Missouri S&T.
35. *Numerical Simulations of Reaction-Diffusion Models with Density Dependent Birth Function and Maturation Time Delay*, Majid Bani-Yaghoub, UMKC.
36. ***NetMath: A 25 Year Experiment in Online Math Education at UIUC* (invited), Randy McCarthy, University of Illinois.**