

I. GENERAL DEVELOPMENTS

A. PERSONNEL ACTIVITIES

During the spring semester of 1976, Professors MacKichan, Sherman, and Torrez were appointed to regular positions as an associate professor and assistant professors, respectively. Each of these appointments was a replacement for a faculty member who had resigned, and does not represent new positions for the department. Professors Julian and Rogers were on sabbatical leave during the spring semester of 1976, while Professors Richman, Wisner, and Zund were on sabbatical leave for the fall semester. The sabbatical leaves of Professors Richman and Wisner will continue into the spring semester of 1977. On leave without pay were Professors Cheng, Henson, Liebert, Arnold, Mandelker, Phillips, and Traxler. Each of these was replaced by a visiting assistant professor. In fact, the visitors for spring semester of 1976 and/or the fall semester of 1976 were Professors Akst, Garfinkel, Hunter, LeBorgne, McMahon, Pendergrass, Slud, Terry, Coffee, and Jacroux. At the end of the '75-'76 academic year, Professors Cheng, Henson, Liebert, and Myers all resigned to take positions elsewhere. Professor Gerald Rogers was promoted to full professor effective with the fall semester of 1976.

The department continues to be very mathematically active and maintains both strong colloquium and strong seminar programs. We were able to salvage some funds from the 1975 Annual Holiday Symposium and use this, together with money generously allocated by the university, to hold a nearly normal 1976 Holiday Symposium in applied mathematics. The topic of discussion was "Quantum Field Theory" and the speaker was Professor Arthur Wightman from Princeton University. Professor Wightman is recognized as one of the most outstanding people in the world in this particular area. It was a real honor for both the department and the university to have him in residence. Once again, the department regrets that the Holiday Symposium doesn't receive local recognition commensurate with its national and international reputations. The faculty members in the department maintain a better than normal mathematical pace by: attending mathematics meetings; presenting talks at such meetings; giving invited addresses at both meetings and other institutions; their research papers; their publication of original work; reviewing and refereeing of peers' work; and the myriad other things that contribute to the normal professional lives of working mathematicians.

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II. RESEARCH ACTIVITIES

A. RESEARCH PROPOSALS AND GRANTS

Of the eight research proposals submitted to federal agencies, two have been funded (\$33,200) and five are still pending (\$212,906).

B. PUBLICATIONS

In the period January-December 1976, 21 research papers were presented at local, national, and international meetings; 26 research papers were published in recognized journals; 4 textbooks were published; and 38 faculty members attended professional meetings (see Vol. II).

III. CRITICAL ANALYSIS AND RECOMMENDATIONS

The scarcity of positions and the surplus of mathematicians available in academia continues to be both an asset and a liability to us. On the one hand, it enables us to easily recruit new faculty members from first-rate institutions, whereas a few years ago we would have considered ourselves extremely fortunate to have recruited even one person from the collection of all such institutions. On the other hand, graduating seniors from four-year colleges are aware of the depressed job market in mathematics; as a consequence, the better students are going into fields where employment is more lucrative. This, of course, means that we have an extremely difficult time recruiting qualified students to fill our teaching assistantships and to populate our graduate courses. This, coupled with substantially increased enrollments at the freshman level, has led to a severe problem for the department; that is, how to maintain the mathematical quality of its faculty members and the offering of adequate graduate courses for those qualified graduate students in residence and still meet our obligations of teaching this increased number of lower division students that we've experienced during the past couple of years. It seems that hiring unqualified teaching assistants merely to teach classes is not an optimal solution to the problem. It follows that we'll have to seek new avenues to maintain both the research potential of our faculty and to somehow offer the education necessary to entering students.

It is the judgment of the writer that the overall quality of the faculty in the department of mathematical sciences has improved during the past few years and that, as a consequence, we are not only submitting more proposals to the various federal agencies but that a much greater portion of these proposals is being funded. The research production of the department remains high and compares favorably with previous years. The mathematical environment remains good and appears to be conducive to both the doing and the teaching of high quality mathematics.

I. PERSONNEL ACTIVITIES

A. PROFESSIONAL SERVICE OF THE FACULTY

D. M. Arnold

Reviewer, Mathematical Reviews.

Member, Arts and Sciences Research Affairs Committee.

Member, departmental committees: Mathematics Education,
Graduate, Promotion to Associate Professor, Tenure, Applicant
Screening.

Member, Organizing Committee For Abelian Group Theory
Conference.

Participant and speaker, Algebra Seminar, University of
Washington.

R. J. Bagby

Reviewer, Mathematical Reviews.

Chairman, North Central Review Committee for the B.I.S. Program
and the Department of Aerospace Studies.

Member, Arts and Sciences Improvement of Instruction and
Student Relations Committee and Student Appeals.

New Mexico State University representative on the Board of
Governors of the Rocky Mountain Mathematics Consortium.

Member, departmental committees: Advisory; Graduate; Hard
Sciences; Ad Hoc Learning Center; Comprehensive Examinations;
Chairman, Soft Sciences.

Participant, Workshop for NMSU branch campus mathematics
instructors.

J. D. DePree

Chairman, Department of Mathematical Sciences

Chairman, departmental committees: Advisory, Applicant Search.

Member, Board of Governors of Pacific Journal of Mathematics.

E. D. Gaughan

Panelist, Fifth Annual Southwest Regional Conference of the
Improvement of Teaching.

Director, Mathematics Learning Center.

Member, Committee for Metric Education.

Workshop Chairman, El Paso Meeting of National Council of
Teachers of Mathematics.

Chairman, Greater El Paso Council of Teachers of Mathematics
Constitutional Revision Committee.

Chairman, Nominating Committee for Section Governor,
Mathematical Association of America.

Tenure Referee, University of California-Davis.

Member, North Central Review Committee for Mechanical
Engineering.

Member, departmental committees: Outside, Comprehensive
Examinations, Soft Sciences, Hard Sciences.

Member, Search Committee for Department Head, Department of Philosophy.
Advisor, Arts and Sciences Advising Center.
Member of Planning Committee and Participant, Workshop for NMSU branch campus mathematics instructors.
Consultant, Department of Mathematics Self-paced Program, Brigham Young University.

J. B. Giever

Associate Chairman, Department of Mathematics.
Member, departmental committees: Advisory; Graduate; Undergraduate Advising; Comprehensive Examinations; Scheduling; Chairman, Teaching Assistant Screening.
Advisor, Arts and Sciences New Students Program.
Member, Ad Hoc Linguistics Committee.
Director, Mathematics Learning Center.
Speaker, Pi Mu Epsilon.
Participant, Workshop for NMSU branch campus mathematics instructors.

D. G. Johnson

Greater El Paso Council of Teachers of Mathematics representative to National Council of Teachers of Mathematics.
Chairman, National Council of Teachers of Mathematics Sales Committee for the El Paso Meeting.
Presider, two sessions of the National Council of Teachers of Mathematics El Paso Meeting.
Reviewer, Mathematical Reviews and Zentralblatt für Mathematik.
Referee, Pacific Journal of Mathematics, Proceedings of the American Mathematical Society, Canadian Journal of Mathematics, Rocky Mountain Journal of Mathematics.
Member, departmental committees: Chairman, Outside; Mathematics Education; Comprehensive Examinations.
Member, President's Committee on College Teaching.
Chairman, Workshop for NMSU branch campus mathematics instructors.
Conducted one-credit short course through Continuing Education for teachers attending National Council of Teachers of Mathematics El Paso Meeting.
Organized workshop for teachers, Farmington.

D. J. Johnson

Director, Mathematics Reading Room.
Member, departmental Undergraduate Committee.
Referee, Journal of Approximation Theory.
Reviewer, Mathematical Reviews and Zentralblatt für Mathematik.

W. H. Julian

Member, Sigma Xi.
Member, Pi Mu Epsilon.
Reviewer, Mathematical Reviews.
Member, departmental committees: Hard Sciences; Chairman,
Soft Sciences.

J. E. Kist

Member, Sigma Xi.
Member, Phi Beta Kappa.
Reviewer, Mathematical Reviews and Zentralblatt für Mathematik.
Referee, National Science Foundation.
Member, departmental committees: Chairman, Applicant
Screening; Advisory; Comprehensive Examinations; Chairman,
Promotion to Full Professor.

R. A. Knoebel

Member, departmental committees: Applicant Screening;
Comprehensive Examinations; Chairman, Soft Sciences.

W. M. Krueger

Member, Pi Mu Epsilon.
Reviewer, Zentralblatt für Mathematik.
Chairman, University Appeals Board.
Chairman, departmental committees: Undergraduate, Holiday
Symposium.
Member, departmental committees: Undergraduate Advising,
Mathematics Education.
Member, North Central Review Committee of Department of
Police Science.

A. H. Kruse

Alternate, departmental Advisory Committee.
Member, departmental Applicant Screening Committee.
Departmental Colloquium Chairman.

J. O. Loustau

Member, Board of Directors of the Las Cruces Boys' Club.
Chairman, Southern New Mexico Area Council of Boys' Clubs.
Member, Arts and Sciences College Planning Committee.
Member, Danforth Committee.
Member, departmental committees: Undergraduate, Undergraduate
Advising, Hard Sciences, Teaching Assistant Screening.

B. MacKichan

Reviewer, National Science Foundation.
Reviewer, Mathematical Reviews.
Colloquium speaker, University of Connecticut-Storrs,
University of Utah, New Mexico State University, Princeton
University, State University of New York-Stony Brook.

M. Mandelker

Member, departmental Hard Sciences Committee.

R. Mines

Vice Chairman, Faculty Senate.

Chairman, Faculty Senate Committee on Committees.

Faculty representative, Board of Regents.

Reviewer, Mathematical Reviews.

Faculty advisor, Pi Mu Epsilon, mathematics honorary
fraternity.

Advisor, William Lowell Putnam Mathematics Competition team.

Member, departmental committees: Graduate; Teaching Assistant
Screening; Undergraduate Advising; Graduate Advising;
Statistics; Chairman, Undergraduate.

Chaired algebra session of Far West Sectional Meeting of the
American Mathematical Association.

K. L. Phillips

Consultant, Jet Propulsion Laboratory.

Member, departmental committees: Graduate, Hard Sciences,
Promotion and Tenure; Teaching Assistant Screening.

F. Richman

Referee, Proceedings of the American Mathematical Society and
Pacific Journal of Mathematics.

Reviewer, National Science Foundation.

Faculty co-sponsor, NMSU Bridge Club.

Member, Graduate Council.

Member, departmental committees: Advisory, Graduate, Under-
graduate, Statistics, Teaching Assistant Screening.

Member, Organizing Committee for Abelian Group Theory
Conference.

G. S. Rogers

Reviewer/Referee, Cummings Publishers.

Advisor, Arts and Sciences Advising Center.

Member, departmental committees: Undergraduate Advising;
Soft Sciences; Faculty Screening; Chairman, Applicant
Screening.

Prepared statistical study of New Mexico State University
faculty salaries for Faculty Women's Committee.

Consultant, Environmental Improvement Association.

C. W. Swartz

Reviewer, Mathematical Reviews and Zentralblatt für Mathematik.

Referee, National Science Foundation.

Referee, Rocky Mountain Journal of Mathematics and Pacific
Journal of Mathematics.

Member, NMSU Golf Team.

Member, departmental committees: Hard Sciences, Applicant
Screening.

J. D. Thomas

Faculty advisor, Alpha Tau Omega fraternity.
Faculty co-sponsor, NMSU Bridge Club.
Member, Graduate School Committee on Course Duplications.
Member, Arts and Sciences College Curriculum and Educational Policies Committee.
Member, Computer Advisory Group.
Member, departmental committees: Advisory; Applicant Screening; Undergraduate Advising; Scheduling; Chairman, Graduate; Chairman, Hard Sciences.

W. C. Torrez

Statistical consultant, Albuquerque Public Schools.
Member, departmental Statistics Committee.

R. H. Traxler

Elected Fellow, Royal Statistical Society.
Member, North Central Review Committee for Department of Engineering Technology.
Member, departmental committees: Applicant Screening, Statistics.

I. E. Vance

Member, National Council of Teachers of Mathematics Commission on the Education of Teachers of Mathematics.
Participant, Conference of Recommendations for Research and Development with Respect to Calculators in School Mathematics.
Participant, Workshop on Metric Education for Leaders in Mathematics Education, sponsored by the New Mexico Department of Education.
Consultant, Educational Testing Service (ETS).
Consultant, National Institute of Education (NIE).
Consultant, Gallup McKinley County Schools (conducted workshop for teachers and teacher aides.)
Consultant, Steptoe and Johnson, Attorneys at Law, Washington, D.C.
Worked with mathematics teachers at Sandia High School, Albuquerque, Eastwood High School and Ysleta High School.
Member, departmental committees: Arithmetic; Chairman, Mathematics Education.
Member, Arts and Sciences Metric Committee.

C. L. Walker

Appointment: Acting Assistant Dean of the Graduate School.
Reviewer, Illinois Journal of Mathematics and Rocky Mountain Journal of Mathematics.
Member, Arts and Sciences Research Affairs Committee.
Member, North Central Review Committee for Continuing Education.
Member, Arts and Sciences College Council.

Member, Phi Kappa Phi Executive Council and Fellowship
Committee.
Advisor, Mortar Board.
Advisor, Pi Mu Epsilon, mathematics honorary fraternity.
Member, departmental committees: Graduate; Undergraduate;
Applicant Screening; Chairman, Undergraduate Advising.

E. A. Walker

Member, Committee on Undergraduate Programs in Mathematics
Consultant Bureau, Mathematical Association of America.
Reviewer, Mathematical Reviews and Zentralblatt für Mathematik.
Referee, various journals.
Referee, National Science Foundation.
Departmental Colloquium Chairman.
Member, departmental committees: Statistics, Soft Sciences,
Advisory, Comprehensive Examinations.
Member, Graduate Council.
Chairman, Organizing Committee for Abelian Group Theory
Conference.
Colloquium speaker, Texas Tech University, Lubbock.

F. D. Williams

Member, Pi Mu Epsilon.
Member, Phi Beta Kappa.
Chairman, Arts and Sciences Faculty Affairs Committee.
Member, Arts and Sciences College Council.
Advisor, Arts and Sciences Advising Center.
Faculty sponsor, Sigma Alpha Epsilon.
Faculty sponsor, Little Sisters of Minerva.
Member, departmental committees: Advisory, Hard Sciences.
Clerk-of-Course, all home NMSU swimming and diving meets.
Chief Scorer, Men's and Women's championship and regional
swimming meets.

R. J. Wisner

Consultant, Project on mathematics for educationally handi-
capped, Ysleta Independent School District, funded by
State of Texas. Conducted six workshops.
Program Chairman, El Paso Meeting of the National Council of
Teachers of Mathematics.
Conducted Workshop for Teachers in Farmington, July 19-30.
Conducted Workshop for El Paso Teachers, August 17-19.
Invited address, Madison (Wisconsin) Meeting of National
Council of Teachers of Mathematics.
Speaker, In-Service Institute, Boise, Idaho, Public Schools.
Speaker, Yakima (Washington) Meeting of National Council of
Teachers of Mathematics.
Speaker, Meeting of Pasadena (California) Council of Teachers.
Speaker, Atlanta (Georgia) Meeting of National Council of
Teachers of Mathematics.

Speaker, San Diego (California) Council of Teachers.
Speaker, Dallas (Texas) Council of Teachers.
Speaker, El Paso Meeting of (Texas) State Textbook Committee.
Speaker, Greater Houston (Texas) Mathematics Teachers
Association.
Speaker, Committee on the Advancement of Mathematics Teaching,
Austin.
Speaker, Southeast Texas Council of Teachers, McAllen, Tex.
Member, University Committee on Teaching.
Member, departmental committees: Outside; Mathematics
Education; Chairman, Holiday Symposium.

J. D. Zund

Referee, Annali di Matematica Pura ed Applicata, Journal of
the Australian Mathematical Society, Journal of Mathematical
Physics, Rocky Mountain Journal of Mathematics.
Reviewer, Mathematical Reviews and Zentralblatt für Mathematik.
Member, departmental committees: Advisory; Hard Sciences;
Chairman, Library.
Speaker, Mayfield High School, Sophomore and Senior classes.

B. PROFESSIONAL MEETINGS ATTENDED BY THE FACULTY

G. Akst

*American Mathematical Society Annual Meeting, San Antonio.

D. M. Arnold

†American Mathematical Society Annual Meeting, San Antonio.
†Bicentennial Abelian Group Theory Conference, Las Cruces.

R. J. Bagby

*American Mathematical Society Annual Meeting, San Antonio.
*Conference Board of Mathematical Sciences, Lincoln, Nebr.
†Fourteenth Annual Holiday Symposium, Las Cruces.

T. Coffee

*American Mathematical Society Regional Meeting, Albuquerque.

J. D. DePree

*American Mathematical Society Annual Meeting, San Antonio.
*Pacific Journal of Mathematics Board of Governors Meeting,
Los Angeles.

G. S. Garfinkel

*American Mathematical Society Annual Meeting, San Antonio.
*Ring Theory Conference, Norman, Okla.
†Fourteenth Annual Holiday Symposium, Las Cruces.

E. D. Gaughan

*National Council of Teachers of Mathematics, El Paso.

*Rocky Mountain Mathematics Consortium Conference on Innovative Teaching Methods in Introductory College Mathematics, Tucson, Ariz.

†California Mathematics Council Annual Meeting, Anaheim, Calif.

†Greater El Paso Council of Teachers of Mathematics Fall Meeting, El Paso.

J. B. Giever

†Fourteenth Annual Holiday Symposium, Las Cruces.

P. L. Hosford

*Elementary/Secondary Math-Science Conference and National Council of Teachers of Mathematics Meeting, Albuquerque.

M. A. Jacroux

*American Mathematical Society Annual Meeting, San Antonio.

D. G. Johnson

†National Council of Teachers of Mathematics, El Paso.

*American Mathematical Society and Mathematical Association of America Annual Meetings, San Antonio.

D. J. Johnson

*Symposium on Approximation Theory, Austin.

*National Science Foundation-Conference Board of Mathematical Sciences Regional Conference on Complex Manifold Techniques in Relativity, Pittsburg, Pa.

†Bicentennial Abelian Group Theory Conference, Las Cruces.

†Fourteenth Annual Holiday Symposium, Las Cruces.

W. H. Julian

†Fourteenth Annual Holiday Symposium, Las Cruces.

J. E. Kist

*American Mathematical Society Summer Meeting, Toronto, Canada.

R. A. Knoebel

*American Mathematical Society Summer Meeting, Toronto, Canada.

*Short Course on Mathematical Economics, Montreal, Canada.

†National Council of Teachers of Mathematics, El Paso.

†New Mexico Academy of Science, Las Cruces.

†Fourteenth Annual Holiday Symposium, Las Cruces.

W. M. Krueger

†National Council of Teachers of Mathematics, El Paso.

†Fourteenth Annual Holiday Symposium, Las Cruces.

A. H. Kruse

†Fourteenth Annual Holiday Symposium, Las Cruces.

J. O. Loustaunau

- *American Mathematical Society Annual Meeting, San Antonio.
- †Fourteenth Annual Holiday Symposium, Las Cruces.

B. MacKichan

- †American Mathematical Society Annual Meeting, San Antonio.
- †Fourteenth Annual Holiday Symposium, Las Cruces.

D. C. McMahon

- *American Mathematical Society Annual Meeting, San Antonio.

R. Mines

- *American Mathematical Society Annual Meeting, San Antonio.
- *American Mathematical Society Regional Meeting, Albuquerque.

L. E. Myers

- *151st Meeting of the Institute of Mathematical Statistics, Santa Barbara.

J. W. Pendergrass

- *American Mathematical Society Annual Meeting, San Antonio.

K. L. Phillips

- *American Society of Mechanical Engineers, New York.

F. Richman

- †American Mathematical Society Annual Meeting, San Antonio.
- †Bicentennial Abelian Group Theory Conference, Las Cruces.

G. S. Rogers

- †Institute of Mathematical Statistics, Davis, Calif.
- †Fourteenth Annual Holiday Symposium, Las Cruces.

E. V. Slud

- *American Mathematical Society Annual Meeting, San Antonio.
- *Institute of Mathematical Statistics Regional Meeting, Purdue, Ind.

C. W. Swartz

- *American Mathematical Society Annual Meeting, San Antonio.
- †Fourteenth Annual Holiday Symposium, Las Cruces.

W. E. Terry

- *American Mathematical Society Annual Meeting, San Antonio.

J. D. Thomas

- *Mathematical Association of America Spring Meeting, Portales, N. Mex.
- *Society for Industrial and Applied Mathematics Summer Meeting, Chicago; Symposium on Matrix Methods in Optimization, Argonne, Ill.

†Fourteenth Annual Holiday Symposium, Las Cruces.

W. C. Torrez

†American Mathematical Society Annual Meeting, San Antonio.

*American Mathematical Society Regional Meeting, Albuquerque.

R. H. Traxler

*151st Meeting of the Institute of Mathematical Statistics,
Santa Barbara.

†Symposium on Statistical Decision Theory and Related Topics,
Purdue, Ind.

†9th International Biometric Conference, Boston.

I. E. Vance

†Math-Go-Round, Flint, Mich.

*Metric Workshop, Albuquerque.

*American Mathematical Society Annual Meeting, San Antonio.

†National Council of Teachers of Mathematics, El Paso.

*National Council of Teachers of Mathematics, Atlanta.

†Greater El Paso Council of Teachers of Mathematics Fall
Meeting, El Paso.

C. L. Walker

*American Mathematical Society Annual Meeting, San Antonio.

†Bicentennial Abelian Group Theory Conference, Las Cruces.

†Fourteenth Annual Holiday Symposium, Las Cruces.

E. A. Walker

†American Mathematical Society and Mathematical Association of
America Annual Meetings, San Antonio.

†Bicentennial Abelian Group Theory Conference, Las Cruces.

F. D. Williams

*American Mathematical Society Summer Research Institute,
Palo Alto, Calif.

†Fourteenth Annual Holiday Symposium, Las Cruces.

R. J. Wisner

*San Diego Council of Teachers, San Diego, Calif.

*American Mathematical Society Annual Meeting, San Antonio.

†Fourteenth Annual Holiday Symposium, Las Cruces.

†National Council of Teachers of Mathematics, El Paso.

J. D. Zund

†National Council of Teachers of Mathematics, El Paso.

†Fourteenth Annual Holiday Symposium, Las Cruces.

*Partial support from state funds.

†No support from state funds.

II. SCHOLARSHIPS AND FELLOWSHIPS

A. UNDERGRADUATE SCHOLARSHIPS

Physical Science Laboratory Scholarships for
incoming freshmen 3

B. GRADUATE FELLOWSHIPS

Physical Science Laboratory Graduate Fellowship 1
awarded to Richard Norton.

III. GRANTS AND PROPOSALS

| | Grants Funded | | Grants Pending | |
|---|---------------|----------|------------------|----------|
| | Agency | Value | Agency | Value |
| Bagby, R. | | | NSF | \$ 8,052 |
| MacKichan, B. | | | NSF | 8,214 |
| Sherman, C. | | | NSF | 5,660 |
| Torrez, W. | | | NIH ^a | |
| Walker, E. (with Arnold, D., Richman, F.) | | | NSF | 180,458 |
| Walker, E. (with Arnold, D., Richman, F.) | NSF | \$28,800 | | |
| Walker, E. | NSF | 4,400 | | |
| Wisner, R. | | | NSF-CBMS | 10,522 |

^a with MBS Program

IV. PUBLICATIONS

- Arnold, D. M., "Strongly homogeneous torsion free abelian groups of finite rank," Proc. Amer. Math. Soc. 56(1976), p. 67-72.
- Arnold, D. M., Vinsonhaler, C. and Wickless, W., "Quasi-pure projective and injective torsion free abelian groups of rank 2," Rocky Mountain J. Math. 6(1976), p. 61-70.
- Bagby, R., cf. Swartz.
- Cheng, H., cf. Richman.
- Gaughan, E. D., Algebra I, an applications oriented algebra book for secondary schools, Scott-Foresman and Co., Inc. Co-author.
- Gaughan, E. D. Algebra II, A companion to Algebra I, Scott-Foresman and Co., Inc. Co-author.
- Gaughan, E. D., Teachers Manual for College Algebra.
- Johnson, D. J., "One-sided approximation with side conditions," J. Approximation Theory 16(1976), p. 366-371.
- Johnson, D. J., "SAIN approximation in $([a,b])$," J. Approximation Theory 17(1976), p. 14-34.

- Johnson, D. J., "RRAS approximation of differentiable functions," Theory of Approximation with Applications, Academic Press, 1976, p. 171-179.
- Johnson, D. J., "Nonuniqueness of simultaneous approximation by trigonometric polynomials," Approximation Theory II, G. G. Lorientz, editor, Academic Press, 1976, p. 411-415.
- Julian, W. H., cf. Richman.
- Knoebel, R. A., Abstract: "Representation theorems for varieties generated by single precomplete algebras," Notices Amer. Math. Soc. 23:5(1976), p. A-514.
- Krueger, W. M., "Peterson-Stein Formulas in the Adams Spectral Sequence," Trans. Amer. Math. Soc. 56(1976).
- MacKichan, B., Andreotti, A., Hill, C. D. and Lojasiewics, S., "Mayer-Vietoris sequences for complexes of differential operators," Bull. Amer. Math. Soc. 82(1976), p. 487-490.
- Mandelker, M., "Connectivity of an interval," Proc. Amer. Math. Soc. 54(1976).
- Mines, R., cf. Richman.
- Richman, F. and Walker, E., "Homological dimension of abelian groups over their endomorphism rings," Proc. Amer. Math. Soc. 54(1976).
- Richman, F., "The constructive theory of KT-modules," Pac. J. Math. 61(1975), p. 263-274.
- Richman, F., Berg, G., Julian, W. and Mines, R., "The constructive equivalence of covering and inductive dimensions," General Topology and its Applications, 6(1976).
- Richman, F., "Detachable p-groups and quasi-injectivity," Acta Math. Acad. Sci. Hung. 27(1976).
- Richman, F., Berg, G., Cheng, H. and Mines, R., "Constructive dimension theory," Compositio Math. 33(1976), p. 1-17.
- Richman, F., "A constructive modification of vietoris homology," Fund. Math. XCI(1976), p. 241-250.
- Swartz, C. W., "The Nikodym and Vitali-Hahn-Saks Theorem for Algebras," Amer. Math. Monthly 82(1975), 833-834.
- Swartz, C. W., "Linear Operators on $C_X(\Omega)$ for Ω dispersed," Czech. Math. J. 19(1975), p. 511-513.
- Swartz, C. W., "Tensor product of ℓ^2 -valued measures," J. Austral. Math. Soc. 21(1976), p. 241-246.
- Swartz, C. W. and Bagby, R., "Projective tensor products of ℓ^P -valued measures," Mat. Casop. 25(1975), p. 265-269.
- Traxler, R. H., "A snag in the history of factorial experiments," On the History of Statistics and Probability, edited by D. B. Owen, Marcel Dekker, 1976. p. 283-295.
- Walker, C. L. and Warfield, Jr., R. B., "Unique decomposition and isomorphic refinement theorems in additive categories," J. Pure and Applied Alg. 7(1976), p. 347-359.
- Walker, E. A., cf. Richman.
- Wisner, R. J., Algebra One, Scott-Foresman and Co., Inc., p. x-582. Co-author.

- Wisner, R. J., Algebra Two, Scott-Foresman and Co., Inc., p. x-650.
Co-author.
- Zund, J. D. and Harris, R. A., "A general family of Bel-Petrov Type III exact solutions of the Einstein equations," *Tensor N.S.* 30(1976), p. 210-212.
- Zund, J. D., "A memoir on the projective geometry of spinors," *Annali di Matematica Pura ed Applicata, Ser. IV*(1976).
- Zund, J. D. and Harris, R. A., "Two variable Kasner type solutions of Einstein's field equations," *Tensor N.S.* 30(1976).

V. RESEARCH PAPERS PRESENTED AT PROFESSIONAL MEETINGS

- Arnold, D. M., O'Brien, B. and Reid, J., "Quasi-pure injective and projective abelian groups," American Mathematical Society Annual Meeting, San Antonio.
- Arnold, D. M., "Near isomorphism and direct sum decompositions," Bicentennial Abelian Group Theory Conference, Las Cruces.
- Bagby, R. J., "Mixed-norm Sobolev inequalities for homogeneous Lipschitz spaces," Conference Board of Mathematical Sciences Regional Conference on Harmonic Analysis, Lincoln, Nebr.
- Gaughan, E. D., invited paper, "Student paced modular systems," Conference on Innovative Teaching Methods sponsored by the Rocky Mountain Mathematics Consortium, Tucson, Ariz.
- Gaughan, E. D., invited paper, "Flexagons," California Mathematics Council Annual Meeting, Anaheim, Calif.
- Gaughan, E. D., invited paper, "Geometry and Paper Folding," Greater El Paso Council of Teachers of Mathematics Fall Meeting, El Paso.
- Johnson, D. J., invited paper, "Nonuniqueness of simultaneous approximation by trigonometric polynomials," American Mathematical Society Annual Meeting, San Antonio.
- Knoebel, R. A., invited paper, "Representation theorems for varieties generated by single precomplete algebras," Centre de Recherches Mathématiques of the Université de Montréal; also presented at American Mathematical Society Summer Meeting, Toronto, Canada.
- Krueger, W. M., invited paper, "The Affine Geoboard," National Council of Teachers of Mathematics, El Paso.
- McMahon, D. C., "On the role of an abelian phase group in related problems in topological dynamics," American Mathematical Society Annual Meeting, San Antonio.
- Phillips, K. L., keynote speaker, American Society of Mechanical Engineers, New York.
- Richman, F., "Valuated Groups," Bicentennial Abelian Group Theory Conference, Las Cruces.
- Rogers, G. S., "Estimability for covariances," Institute of Mathematical Statistics, Davis, Calif.
- Torrez, W. C., "Biostochastic models in random environments," Southwest Symposium of the Minority Biomedical Science Program, Socorro, N. Mex.

- Torrez, W. C., "Birth and death chains in random environments,"
American Mathematical Society Regional Meeting, Albuquerque.
- Traxler, R. H., "Asymptotic behavior of binomial mixtures,"
Institute of Mathematical Statistics, Santa Barbara.
- Vance, I. E., "Math Graffiti," National Council of Teachers of
Mathematics, El Paso, and National Council of Teachers of
Mathematics, Atlanta.
- Vance, I. E., "Geometry activities for elementary and junior high
school teachers," Greater El Paso Council of Teachers of
Mathematics Fall Meeting, El Paso.
- Vance, I. E., "Applications of mathematics in the real world,"
keynote address, Math-Go-Round, Flint, Mich.
- Walker, E. A., "Local Warfield Modules," Bicentennial Abelian Group
Theory Conference, Las Cruces.
- Zund, J. D., invited paper, "Greek Mathematics," three lectures,
National Council of Teachers of Mathematics, El Paso.