

Bibliography

§1. Books and Survey Articles

1. R. Balbes and P. Dwinger, *Distributive Lattices*, Univ. of Missouri Press, Columbia, 1974.
2. J. L. Bell and A. B. Slomson, *Models and Ultraproducts*, North-Holland, Amsterdam, 1969.
3. G. Birkhoff, *Lattice Theory*, 3rd edition. Colloq. Publ., vol. **25**, Amer. Math. Soc., Providence, 1967.
4. ———, The rise of modern algebra to 1936, in J. D. Tarwater, J. T. White, and J. D. Miller, eds., *Men and Institutions in American Mathematics*, Graduate Studies, Texas Tech Press, Lubbock, 41–63.
5. ———, The rise of modern algebra, 1936 to 1950, in J. D. Tarwater, J. T. White, and J. D. Miller, eds., *Men and Institutions in American Mathematics*, Graduate Studies, Texas Tech Press, Lubbock, 65–85.
6. R. H. Bruck, *A Survey of Binary Systems*, Ergebnisse der Mathematik und ihrer Grenzgebiete, Band **20**, Springer-Verlag, Berlin-Göttingen-Heidelberg.
7. J. Brzozowski, *Open Problems about Regular Languages*, Dept. of Computer Science, Univ. of Waterloo, 1980.
- 7a. ———, *Developments in the Theory of Regular Languages*, Dept. of Computer Science, Univ. of Waterloo, 1980.
8. C. C. Chang and H. J. Keisler, *Model Theory*, Studies in Logic and the Foundations of Mathematics, vol. **73**, North-Holland, Amsterdam-London, 1973.
9. P. M. Cohn, *Universal Algebra*, Harper and Row, New York, 1965.
10. P. Crawley and R. P. Dilworth, *Algebraic Theory of Lattices*, Prentice-Hall, Englewood Cliffs, 1973.
11. S. Eilenberg, *Automata, Languages, and Machines*, A, Pure and Applied Mathematics, vol. **59-A**, Academic Press, New York, 1974.
12. ———, *Automata, Languages, and Machines*, B, Pure and Applied Mathematics, vol. **59-B**, Academic Press, New York, 1976.
13. Ju. L. Ershov, I. A. Lavrov, A. D. Taïmanov, and M. A. Taïclin, Elementary Theories, *Russian Math. Surveys* **20** (1965), 35-105.
14. T. Evans, Word Problems, *Bull. Amer. Math. Soc.* **84** (1978), 789-802.

15. G. Grätzer, *General Lattice Theory*, Pure and Applied Mathematics, vol. 75, Academic Press, New York, 1978; Mathematische Reihe, Band 52, Birkhäuser Verlag, Basel; Akademie Verlag, Berlin, 1978.
16. ———, *Universal Algebra*, 2nd edition, Springer-Verlag, New York, 1979.
17. P. R. Halmos, *Algebraic Logic*, Chelsea, New York, 1962.
18. ———, *Lectures on Boolean Algebra*, van Nostrand, Princeton, 1963.
19. L. Henkin, J. D. Monk, and A. Tarski, *Cylindric Algebras*, Part 1, North-Holland, Amsterdam, 1971.
20. B. Jónsson, *Topics in Universal Algebra*, Lecture Notes in Mathematics, vol. 250, Springer-Verlag, Berlin-New York, 1972.
21. ———, Congruence varieties, *Algebra Universalis* 10 (1980), 355–394.
22. A. G. Kurosh, *Lectures on General Algebra*, Chelsea, New York, 1963.
23. H. Lausch and W. Nöbauer, *Algebra of Polynomials*, Mathematics Studies, vol. 5, North-Holland, Amsterdam, 1973.
24. A. I. Mal'cev, *The Metamathematics of Algebraic Systems*, Collected papers 1936–1967, translated and edited by B. F. Wells III, North-Holland, Amsterdam, 1971.
25. ———, *Algebraic Systems*, Grundlehren der mathematischen Wissenschaften, vol. 192, Springer-Verlag, New York, 1973.
26. A. A. Markov, *Theory of Algorithms*, Academy of Science USSR, Works of the Mathematical Institute Steklov. (Transl. by NSF).
27. B. H. Neumann, *Universal Algebra*, Lecture notes, Courant Institute of Math. Sci., New York University, New York, 1962.
28. R. S. Pierce, *Introduction to the Theory of Abstract Algebra*, Holt, Rinehart and Winston, New York, 1968.
29. H. Rasiowa, *An Algebraic Approach to Non-Classical Logics*, North-Holland, Amsterdam, 1974.
30. H. Rasiowa and R. Sikorski, *The Mathematics of Metamathematics*, Panstwowe Wydawnictwo Naukowe, Warszawa, 1963.
31. H. P. Sankappanavar, Decision Problems: History and Methods, in A. I. Arruda, N. C. A. da Costa, and R. Chuaqui, eds., *Mathematical Logic: Proceedings of the First Brazilian Conference*, Marcel Dekker, New York, 1978, 241–291.
32. R. Sikorski, *Boolean Algebras*, Ergebnisse der Mathematik und ihrer Grenzgebiete, Band 25, Springer-Verlag, Berlin, 1964.
33. A. Tarski, with A. Mostowski and R. Robinson, *Undecidable Theories*, North-Holland, Amsterdam, 1953.
34. ———, Equational logic and equational theories of algebras, in K. Schütte, ed., *Contributions to Mathematical Logic*, North-Holland, Amsterdam, 1968, pp. 275–288.
35. W. Taylor, *Equational Logic*, Survey 1979, Houston J. of Math., 1979.
36. B. A. Trakhtenbrot, *Algorithms and Automatic Computing Machines*, Heath, Boston, 1963.
37. J. von Neumann, *The Computer and the Brain*, Yale University Press, New Haven, 1958.
38. R. Wille, *Kongruenzklassengeometrien*, Lecture Notes in Mathematics, vol. 113, Springer-Verlag, Berlin, 1970.

§2. Research Papers and Monographs

R. F. Arens and I. Kaplansky

[1948] Topological representation of algebras, *Trans. Amer. Math. Soc.* 63, 457–481.

K. A. Baker

[1977] Finite equational bases for finite algebras in a congruence-distributive equa-

- tional class, *Adv. in Math.* **24**, 207–243. [a] Definable normal closures in locally finite varieties of groups, (manuscript).
- K. A. Baker and A. F. Pixley
[1975] Polynomial interpolation and the Chinese remainder theorem for algebraic systems, *Math. Z.* **143**, 165–174.
- J. T. Baldwin and J. Berman
[1975] The number of subdirectly irreducible algebras in a variety, *Algebra Universalis* **5**, 379–389.
[1977] A model-theoretic approach to Mal'cev conditions, *J. Symbolic Logic* **42**, 277–288.
- B. Banaschewski and E. Nelson
[1980] Boolean powers as algebras of continuous functions, *Dissertationes Mathematicae*, **179**, Warsaw.
- G. M. Bergman
[1972] Boolean rings of projection maps, *J. London Math. Soc.* **4**, 593–598.
- J. Berman
(See J. Baldwin and J. Berman)
- G. Birkhoff
[1933] On the combination of subalgebras, *Proc. Camb. Philos. Soc.* **29**, 441–464.
[1935] On the structure of abstract algebras, *Proc. Camb. Philos. Soc.* **31**, 433–454.
[1944] Subdirect unions in universal algebra, *Bull. Amer. Math. Soc.* **50**, 764–768.
- G. Birkhoff and O. Frink
[1948] Representations of lattices by sets, *Trans. Amer. Math. Soc.* **64**, 299–316.
- G. Birkhoff and J. D. Lipson
[1970] Heterogeneous algebras, *J. Combin. Theory* **8**, 115–133.
[1974] Universal algebra and automata, pp. 41–51 in Proc. Tarski Symposium (1971), Vol. 25 of Symposia in Pure Math., Amer. Math. Soc., Providence, R.I.
- W. W. Boone and G. Higman
[1974] An algebraic characterization of groups with soluble word problem, *J. Austral. Math. Soc.* **81**, 41–53.
- R. H. Bruck
[1963] What is a loop? *Studies in Modern Algebra*, MAA Studies in Mathematics, vol. 2, Math. Assoc. of America, 59–99.
- S. Bulman-Fleming and H. Werner
[1977] Equational compactness in quasi-primal varieties, *Algebra Universalis* **7**, 33–46.
- S. Burris
[1975a] Separating sets in modular lattices with applications to congruence lattices, *Algebra Universalis* **5**, 213–223.
[1975b] Boolean powers, *Algebra Universalis* **5**, 341–360.
[1979] On Baker's finite basis theorem for congruence distributive varieties, *Proc. Amer. Math. Soc.* **73**, 141–148.
[a] A note on directly indecomposable algebras, (to appear in *Algebra Universalis*)
[b] Remarks on reducts of varieties, (to appear in *Proceedings of the Conference on Universal Algebra*, Esztergom)
- S. Burris and J. Lawrence
[1979] Definable principal congruences in varieties of groups and rings, *Algebra Universalis* **9**, 152–164.
[a] A correction to "Definable principal congruence in varieties of groups and rings", (to appear in *Algebra Universalis*).
[b] Two undecidability results using modified Boolean powers, (manuscript, 1980).
- S. Burris and R. McKenzie
[1981] Decidability and Boolean Representations, *Mem. Amer. Math. Soc.* no. 246.

- S. Burris and H. P. Sankappanavar
 [1975] Lattice-theoretic decision problems in universal algebra, *Algebra Universalis* **5**, 163–177.
- S. Burris and H. Werner
 [1979] Sheaf constructions and their elementary properties, *Trans. Amer. Math. Soc.* **248**, 269–309.
 [1980] Remarks on Boolean products, *Algebra Universalis* **10**, 333–344.
- A. Church
 [1936] A note on the Entscheidungs problem, *J. Symbolic Logic* **1**, 40–41, 101–102.
- D. M. Clark
 (see P. H. Krauss and D. M. Clark)
- S. D. Comer
 [1971] Representations by algebras of sections over Boolean spaces, *Pacific J. Math.* **38**, 29–38.
 [1974] Elementary properties of structures of sections, *Bol. Soc. Mat. Mexicana* **19**, 78–85.
 [1975] Monadic algebras with finite degree, *Algebra Universalis* **5**, 315–327.
 [1976] Complete and model-complete theories of monadic algebras, *Colloq. Math.* **34**, 183–190.
- J. Dauns and K. H. Hofmann
 [1966] The representation of biregular rings by sheaves, *Math. Z.* **91**, 103–123.
- A. Day
 [1969] A characterization of modularity for congruence lattices of algebras, *Canad. Math. Bull.* **12**, 167–173.
 [1971] A note on the congruence extension property, *Algebra Universalis* **1**, 234–235.
- P. Erdős
 [1942] Some set-theoretical properties of graphs. *Revista, Ser. A., Matematicas y Fisica Teorica, Universidad Nacional de Tucuman* **3**, 363–367.
- Ju. L. Ershov
 [1972] Elementary group theories, *Soviet Math. Dokl.* **13**, 528–532.
- T. Evans
 [1951] The word problem for abstract algebras, *J. London Math. Soc.* **26**, 64–71.
 [1953] Embeddability and the word problem, *J. London Math. Soc.* **28**, 76–80.
 [1978] An algebra has a solvable word problem if and only if it is embeddable in a finitely generated simple algebra, *Algebra Universalis* **8**, 197–204.
 [1979] Universal algebra and Euler's officer problem, *Amer. Math. Monthly* **86**, 466–473.
- I. Fleischer
 [1955] A note on subdirect products, *Acta Math. Acad. Sci. Hungar.* **6**, 463–465.
- A. L. Foster
 [1953a] Generalized "Boolean" theory of universal algebras. Part I: Subdirect sums and normal representation theorem, *Math. Z.* **58**, 306–336.
 [1953b] Generalized "Boolean" theory of universal algebras. Part II: Identities and subdirect sums in functionally complete algebras, *Math. Z.* **59**, 191–199.
 [1969] Automorphisms and functional completeness in universal algebras, *Math. Ann.* **180**, 138–169.
 [1971] Functional completeness and automorphisms I, *Monatsh. Math.* **75**, 303–315.
 [1972] Functional completeness and automorphisms II, *Monatsh. Math.* **76**, 226–238.
- A. L. Foster and A. F. Pixley
 [1964a] Semi-categorical algebras I, *Math. Z.* **83**, 147–169.
 [1964b] Semi-categorical algebras II, *Math. Z.* **85**, 169–184.
- R. Freese
 [1979] Free modular lattices (abstract), *Notices Amer. Math. Soc.* **26**, A-2.

- R. Freese and R. McKenzie
 [a] Residually small varieties with modular congruence lattices, (to appear in *Trans. Amer. Math. Soc.*).
 [b] The modular commutator, an overview, (manuscript, 1981).
- O. Frink
 (See G. Birkhoff and O. Frink)
- B. Ganter and H. Werner
 [1975] Equational classes of Steiner systems, *Algebra Universalis* **5**, 125–140.
- I. Gelfand
 [1941] Normierte Ringe, *Rec. Math. (Math. Sbornik) N.S.* **9**, 1–23.
- K. Gödel
 [1931] Über formal unentscheidbare Sätze der Principia Mathematica und verwandter Systeme I. *Monatshefte für Mathematik und Physik*, **38**, 173–198.
- G. Grätzer
 [1967] On the spectra of classes of algebras, *Proc. Amer. Math. Soc.* **18**, 729–735.
- G. Grätzer and E. T. Schmidt
 [1963] Characterizations of congruence lattices of abstract algebras, *Acta. Sci. Math. (Szeged)* **24**, 34–59.
- A. Grzegorzcyk
 [1951] Undecidability of some topological theories, *Fund. Math.* **38**, 137–152.
- H. P. Gumm
 [1979] Algebras in permutable varieties: Geometrical properties of affine algebras, *Algebra Universalis* **9**, 8–34.
 [a] An easy way to the commutator in modular varieties, (to appear in *Arch. Math. (Basel)*).
 [b] Congruence modularity is permutability composed with distributivity, (manuscript 1980).
- J. Hagemann and C. Herrmann
 [1979] A concrete ideal multiplication for algebraic systems and its relation to congruence distributivity, *Arch. Math. (Basel)* **32**, 234–245.
- C. Herrmann
 [1979] Affine algebras in congruence modular varieties, *Acta. Sci. Math. (Szeged)* **41**, 119–125.
 (See J. Hagemann and C. Herrmann)
- G. Higman
 (See W. W. Boone and G. Higman)
- K. H. Hofmann
 (See J. Dauns and K. H. Hofmann)
- G. Hutchinson
 [1973] Recursively unsolvable word problems of modular lattices and diagram-chasing, *J. Algebra* **26**, 385–399.
- B. Jónsson
 [1953] On the representation of lattices, *Math. Scand.* **1**, 193–206.
 [1967] Algebras whose congruence lattices are distributive, *Math. Scand.* **21**, 110–121.
- I. Kaplansky
 (See R. F. Arens and I. Kaplansky)
- K. Keimel and H. Werner
 [1974] Stone duality for varieties generated by quasi primal algebras, *Mem. Amer. Math. Soc.*, no. 148, 59–85.
- S. C. Kleene
 [1956] Representation of events in nerve nets and finite automata, in C. E. Shannon and J. McCarthy, eds., *Automata Studies*, Annals of Math. Studies **34**, Princeton Univ. Press, Princeton, pp. 3–41.

- S. R. Kogalovskii
 [1965] On Birkhoff's theorem (Russian), *Uspehi Mat. Nauk.* **20**, 206–207.
- P. H. Krauss and D. M. Clark
 [1979] Global subdirect products, *Mem. Amer. Math. Soc.* no. 210.
- R. L. Kruse
 [1973] Identities satisfied by a finite ring, *J. Algebra* **26**, 298–318.
- J. Lawrence
 [a] A note on Boolean powers of groups, (to appear in *Proc. Amer. Math. Soc.*).
 (See also S. Burris and J. Lawrence)
- S. Linial and E. L. Post
 [1949] Recursive unsolvability of the deducibility, Tarski's completeness and independence of axioms problems of propositional calculus (Abstract), *Bull. Amer. Math. Soc.* **55**, p. 50.
- L. Lipschitz
 [1974] The undecidability of the word problem for projective geometries and modular lattices, *Trans. Amer. Math. Soc.* **193**, 171–180.
- J. D. Lipson
 (See G. Birkhoff and J. D. Lipson)
- J. Łoś
 [1955] Quelques remarques théorèmes et problèmes sur les classes définissables d'algèbres, in T. Skolem et al., eds., *Mathematical Interpretation of Formal Systems*, Studies in Logic and the Foundations of Mathematics, North-Holland, Amsterdam, 98–113.
- I. V. Lvov
 [1973] Varieties of associative rings I, II, *Algebra and Logic* **12**, 150–167, 381–393.
- R. Lyndon
 [1951] Identities in two-valued calculi, *Trans. Amer. Math. Soc.* **71**, 457–465.
 [1954] Identities in finite algebras, *Proc. Amer. Math. Soc.* **5**, 8–9.
- A. Macintyre
 [1973/74] Model-completeness for sheaves of structures, *Fund. Math.* **81**, 73–89.
- R. Magari
 [1969] Una dimostrazione del fatto che ogni varietà ammette algebre semplici, *Ann. Univ. Ferrara Sez. VII (N.S.)* **14**, 1–4.
- A. I. Mal'cev
 [1954] On the general theory of algebraic systems, *Mat. Sb. (N.S.)* **35**, 3–20.
- A. Markov
 [1947] On the impossibility of certain algorithms in the theory of associative systems, *Dokl. Akad. Nauk SSSR (N.S.)* **55**, 583–586.
 [1954] *Theory of Algorithms*, Academy of Science USSR, Works of the Mathematical Institute Steklov. (Translated by the NSF, Washington, D.C.)
- R. McKenzie
 [1970] Equational bases for lattice theories, *Math. Scand.* **27**, 24–38.
 [1975] On spectra, and the negative solution of the decision problem for identities having a finite non-trivial model, *J. Symbolic Logic* **40**, 186–196.
 [1978] Para-primal varieties: A study of finite axiomatizability and definable principal congruences in locally finite varieties, *Algebra Universalis* **8**, 336–348.
 [a] On minimal locally finite varieties with permuting congruences, (manuscript).
 [b] Residually small varieties of K-algebras, (to appear in *Algebra Universalis*).
 [c] Narrowness implies uniformity, (to appear in *Algebra Universalis*).
 [d] Subdirect powers of non-abelian groups, (manuscript, 1980).
 (See also S. Burris and R. McKenzie, R. Freese and R. McKenzie)
- R. McKenzie and S. Shelah
 [1974] The cardinals of simple models for universal theories, in E. Adams et al.,

eds, *Tarski Symposium* (1971), Proc. Symposia in Pure Math., vol. 25, Amer. Math. Soc., Providence, 53–74.

G. F. McNulty

[1976] The decision problem for equational bases of algebras, *Annals Math. Logic* 11, 193–259.

[1976] Undecidable properties of finite sets of equations, *J. Symbolic Logic* 41, 589–604.

[1977] Fragments of first-order logic I: universal Horn logic, *J. Symbolic Logic* 42, 221–237.

G. F. McNulty and W. Taylor

[1975] Combinatory interpolation theorems, *Discrete Math.* 12, 193–200.

A. Mostowski and A. Tarski

[1939] Boolesche Ringe mit geordneter Basis, *Fund. Math.* 32, 69–86.

V. L. Murskii

[1965] The existence in the three-valued logic of a closed class with a finite basis, not having a finite complete system of identities, *Soviet Math. Dokl.* 6, 1020–1024.

[1968] Some examples of varieties of semigroups (Russian), *Mat. Zametki* 3, 663–670.

[1971] Non-discernible properties of finite systems of identity relations, *Soviet Math. Dokl.* 12, 183–186.

[1975] The existence of a finite basis, and some other properties, for “almost all” finite algebras (Russian), *Problemy Kibernet.* 50, 43–56.

J. Myhill

[1957] Finite automata and representation of events, WADC Tech. Rept. 57-624.

E. Nelson

[1967] Finiteness of semigroups of operators in universal algebra, *Canad. J. Math.* 19, 764–768. (See also B. Banaschewski and E. Nelson)

W. D. Neumann

[1974] On Mal'cev conditions, *J. Austral. Math. Soc.* 17, 376–384.

P. S. Novikov

[1955] On the algorithmic unsolvability of the word problem in group theory, *Trudy Mat. Inst. Steklov* 44; English translation, *Proc. Steklov Inst. Math.* (2) 9 (1958), 1–122.

S. Oates and M. B. Powell

[1965] Identical relations in finite groups, *J. Algebra* 1, 11–39.

O. Ore

[1935] On the foundation of abstract algebra, I, *Ann. of Math.* 36, 406–437.

[1936] On the foundation of abstract algebra, II, *Ann. of Math.* 37, 265–292.

P. Perkins

[1966] Decision problems for equational theories of semigroups, Ph.D Thesis, Univ. of California, Berkeley.

[1969] Bases for equational theories of semigroups, *J. Algebra* 11, 298–314.

R. S. Pierce

[1967] Modules over commutative regular rings, *Mem. Amer. Math. Soc.*, no. 70.

D. Pigozzi

[1972] On some operations on classes of algebras, *Algebra Universalis* 2, 346–353.

A. F. Pixley

[1963] Distributivity and permutability of congruence relations in equational classes of algebras, *Proc. Amer. Math. Soc.* 14, 105–109.

[1971] The ternary discriminator function in universal algebra, *Math. Ann.* 191, 167–180.

(See also K. A. Baker and A. F. Pixley, A. L. Foster and A. F. Pixley)

S. V. Polin

[1976] Identities of finite algebras, *Siberian Math. J.* 17, 992–999.

- E. L. Post
 [1947] Recursive unsolvability of a problem of Thue, *J. Symbolic Logic* **12**, 1–11.
 (See S. Linial and E. L. Post)
- M. B. Powell
 (See S. Oates and M. B. Powell)
- P. Pudlák
 [1976] A new proof of the congruence lattice representation theorem, *Algebra Universalis* **6**, 269–275.
- R. W. Quackenbush
 [1971] Equational classes generated by finite algebras, *Algebra Universalis* **1**, 265–266.
 [1974a] Semi-simple equational classes with distributive congruence lattices, *Ann. Eötvös Lorand Univ.* **17**, 15–19.
 [1974b] Near Boolean algebras I: Combinatorial aspects, *Discrete Math.* **10**, 301–308.
 [1975] Near-vector spaces over $GF(q)$ and $(v, q + 1, 1)$ -BIBDS, *Linear Algebra Appl.* **10**, 259–266.
 [1976] Varieties of Steiner loops and Steiner quasigroups. *Canad. J. Math.* **28**, 1187–1198.
- M. O. Rabin
 [1958] Recursive unsolvability of group theoretic problems, *Ann. Math.* **67**, 172–194.
 [1965] A simple method for undecidability proofs and some applications, in Y. Bar-Hillel, ed., *Logic, Methodology, Philosophy of Science*, Studies in Logic and the Foundations of Mathematics, North-Holland, Amsterdam, 58–68.
 [1969] Decidability of second-order theories and automata on infinite trees, *Trans. Amer. Math. Soc.* **141**, 1–35.
- J. Robinson
 [1949] Definability and decision problems in arithmetic, *J. Symbolic Logic* **14**, 98–114.
- H. Rogers
 [1956] Certain logical reduction and decision problems, *Ann. of Math.* **64**, 264–284.
- P. C. Rosenbloom
 [1942] Post algebras I. Postulates and general theory, *Amer. J. Math.* **64**, 167–188.
- B. Rosser
 [1936] Extensions of some theorems of Gödel and Church, *J. Symbolic Logic* **1**, 87–91.
- M. Rubin
 [1976] The theory of Boolean algebras with a distinguished subalgebra is undecidable, *Ann. Sci. Univ. Clermont* No. 13, 129–134.
- H. P. Sankappanavar
 (See S. Burris and H. P. Sankappanavar)
- E. T. Schmidt
 (See G. Grätzer and E. T. Schmidt)
- J. Schmidt
 [1952] Über die Rolle der transfiniten Schlussweisen in einer allgemeinen Idealtheorie, *Math. Nachr.* **7**, 165–182.
- M. P. Schützenberger
 [1965] On finite monoids having only trivial subgroups, *Inform. and Control* **8**, 190–194.
- S. Shelah
 (See R. McKenzie and S. Shelah)
- J. D. H. Smith
 [1976] *Mal'cev Varieties*. Lecture Notes in Mathematics, vol. **554**, Springer-Verlag, Berlin-New York.

M. H. Stone

[1936] The theory of representation for Boolean algebras, *Trans. Amer. Math. Soc.* **40**, 37–111.

[1937] Applications of the theory of Boolean rings to general topology, *Trans. Amer. Math. Soc.* **41**, 375–481.

W. Szmielew

[1954] Elementary properties of Abelian groups, *Fund. Math.* **41**, 203–271.

A. Tarski

[1930] Fundamentale Begriffe der Methodologie der deduktiven Wissenschaften. I. *Monatsh. Math. Phys.* **37**, 360–404.

[1946] A remark on functionally free algebras, *Ann. of Math.* **47**, 163–165.

[1953] (Abstracts), *J. Symbolic Logic* **18**, 188–189.

[1975] An interpolation theorem for irredundant bases of closure structures, *Discrete Math.* **12**, 185–192.

W. Taylor

[1972] Residually small varieties, *Algebra Universalis* **2**, 33–53.

[1973] Characterizing Mal'cev conditions, *Algebra Universalis* **3**, 351–397.

[a] Some applications of the term condition (manuscript).

(See G. McNulty and W. Taylor)

A. M. Turing

[1937] On computable numbers, with an application to the Entscheidungsproblem, *Proc. London Math. Soc.* **42**, 230–265 (Correction **43** (1937), 544–546).

H. Werner

[1974] Congruences on products of algebras and functionally complete algebras, *Algebra Universalis* **4**, 99–105.

[1978] *Discriminator Algebras*, Studien zur Algebra und ihre Anwendungen, Band 6, Akademie-Verlag, Berlin.

(See also S. Burris and H. Werner, S. Bulman-Fleming and H. Werner, B. Davey and H. Werner, B. Ganter and H. Werner, K. Keimel and H. Werner)

A. P. Zamjatin

[1973] A prevariety of semigroups whose elementary theory is solvable, *Algebra and Logic* **12**, 233–241.

[1976] Varieties of associative rings whose elementary theory is decidable, *Soviet Math. Dokl.* **17**, 996–999.

[1978a] A non-Abelian variety of groups has an undecidable elementary theory, *Algebra and Logic* **17**, 13–17.

[1978b] Prevarieties of associative rings whose elementary theory is decidable, *Siberian Math. J.* **19**, 890–901.

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