

Bibliography

- [1] W. Ackermann, *Begründung einer strengen implikation*, Journal of Symbolic Logic **21** (1956), 113–128.
- [2] S. Aguzzoli and M. Bianchi, *Amalgamation property for varieties of BL-algebras generated by one chain with finitely many components*, Proceedings of RAMiCS 2021 (U. Fahrenberg, M. Gehrke, L. Santocanale, and M. Winter, eds.), Lecture Notes in Computer Science, vol. 13027, Springer, 2021, pp. 1–18.
- [3] P. Aglianò and F. Montagna, *Varieties of BL-algebras I: general properties*, Journal of Pure and Applied Algebra **181** (2003), 105–129.
- [4] P. Aglianò, F. Montagna, and I.M.A. Ferreirim, *Basic hoops: an algebraic study of continuous t-norms*, Studia Logica **87** (2007), no. 1, 73–98.
- [5] A.R. Anderson and N.D. Belnap Jr., *Entailment: the logic of relevance and necessity*, Princeton University Press, 1975.
- [6] A.R. Anderson, N.D. Belnap Jr., and J.M. Dunn, *Entailment: the logic of relevance and necessity II*, Princeton University Press, 1992.
- [7] M. Anderson, P. Conrad, and J. Martinez, *The lattice of convex ℓ -subgroups of a lattice-ordered group*, Lattice-ordered groups (A.M.W. Glass and W.C. Holland, eds.), Reidel, 1989, pp. 105–127.
- [8] M. Anderson and C.C. Edwards, *A representation theorem for distributive ℓ -monoids*, Canadian Mathematical Bulletin **27** (1984), 238–240.
- [9] M. Anderson and T. Feil, *Lattice-ordered groups: an introduction*, Reidel, 1988.
- [10] A. Avron, *A constructive analysis of RM*, Journal of Symbolic Logic **52** (1987), no. 4, 939–951.
- [11] A. Avron, *The semantics and proof theory of linear logic*, Theoretical Computer Science **57** (1988), 161–184.
- [12] A. Avron, *Hypersequents, logical consequence and intermediate logics for concurrency*, Annals of Mathematics and Artificial Intelligence **4** (1991), no. 3–4, 225–248.
- [13] S. Awodey, *Category theory*, Oxford University Press, 2006.
- [14] M. Baaz, A. Ciabattoni, and F. Montagna, *Analytic calculi for monoidal t-norm based logic*, Fundamenta Informaticae **59** (2004), no. 4, 315–332.
- [15] P.D. Bacsich, *Amalgamation properties and interpolation theorems for equational theories*, Algebra Universalis **5** (1975), 45–55.
- [16] P. Bahls, J. Cole, N. Galatos, P. Jipsen, and C. Tsinakis, *Cancellative residuated lattices*, Algebra Universalis **50** (2003), no. 1, 83–106.
- [17] P. Baldi and K. Terui, *Densification of FL chains via residuated frames*, Algebra Universalis **75** (2016), no. 2, 169–195.
- [18] B. Banaschewski, *Hüllensysteme und erweiterung von quasi-ordnungen*, Zeitschrift für Mathematische Logik und Grundlagen der Mathematik **2** (1956), 117–130.
- [19] B. Banaschewski and E. Nelson, *On residual finiteness and finite embeddability*, Algebra Universalis **2** (1972), 361–364.
- [20] E. Barrio, L. Rosenblatt, and D. Tajer, *The logics of strict-tolerant logic*, Journal of Philosophical Logic **44** (2015), 551–571.
- [21] J.C. Beall and J. Murzi, *Two flavors of Curry’s paradox*, Journal of Philosophy **110** (2013), 143–165.
- [22] F. Belardinelli, P. Jipsen, and H. Ono, *Algebraic aspects of cut elimination*, Studia Logica **77** (2004), 209–240.
- [23] N.D. Belnap Jr., *Display logic*, Journal of Philosophical Logic **11** (1982), 375–417.
- [24] C. Bergman, *Universal algebra: fundamentals and selected topics*, CRC Press, 2012.

- [25] L. Beran, *Orthomodular lattices: algebraic approach*, Reidel, 1985.
- [26] J. Berman, *Homogeneous lattices and lattice-ordered groups*, Colloquium Mathematicae **32** (1974), no. 1, 13–24.
- [27] A. Bigard, K. Keimel, and A. Wolfenstein, *Groupes et anneaux réticulés*, Springer, 1977.
- [28] K. Bimbó, *Proof theory: sequent calculi and related formalisms*, CRC Press, 2014.
- [29] G. Birkhoff, *On the structure of abstract algebras*, Proceedings of the Cambridge Philosophical Society **31** (1935), 433–454.
- [30] G. Birkhoff, *Lattice-ordered groups*, Annals of Mathematics **43** (1942), 298–331.
- [31] G. Birkhoff, *Subdirect unions in universal algebra*, Bulletin of the American Mathematical Society **50** (1944), 764–768.
- [32] G. Birkhoff, *Lattice theory*, American Mathematical Society, 1940.
- [33] W.J. Blok and I.M.A. Ferreirim, *On the structure of hoops*, Algebra Universalis **43** (2000), 233–257.
- [34] W.J. Blok and B. Jónsson, *Equivalence of consequence operators*, Studia Logica **83** (2006), 91–110.
- [35] W.J. Blok and D. Pigozzi, *A. Tarski's work on general metamathematics*, Journal of Symbolic Logic **53** (1988), 36–50.
- [36] W.J. Blok and D. Pigozzi, *Algebraizable logics*, American Mathematical Society, 1989.
- [37] W.J. Blok and J.G. Raftery, *Assertionally equivalent quasivarieties*, International Journal of Algebra and Computation **18** (2008), no. 4, 589–681.
- [38] W.J. Blok and J.G. Raftery, *Constructing simple residuated lattices*, Algebra Universalis **50** (2003), 385–389.
- [39] W.J. Blok and J. Rebagliato, *Algebraic semantics for deductive systems*, Studia Logica **73** (2003), 1–29.
- [40] W.J. Blok and C.J. van Alten, *The finite embeddability property for residuated lattices, pocirms and BCK-algebras*, Algebra Universalis **48** (2002), 253–271.
- [41] W.J. Blok and C.J. van Alten, *On the finite embeddability property for residuated ordered groupoids*, Transactions of the American Mathematical Society **357** (2005), no. 10, 4141–4157.
- [42] C. Bloomfield and Y. Maruyama, *Fibered universal algebra for first-order logics*. Manuscript.
- [43] K. Blount, *On the structure of residuated lattices*, Ph.D. thesis, Vanderbilt University, 1999.
- [44] K. Blount and C. Tsinakis, *The structure of residuated lattices*, International Journal of Algebra and Computation **13** (2003), no. 4, 437–461.
- [45] T.S. Blyth, *Lattices and ordered algebraic structures*, Springer, 2005.
- [46] T.S. Blyth and M.F. Janowitz, *Residuation theory*, Pergamon Press, 1972.
- [47] B. Bosbach, *Concerning cone algebras*, Algebra Universalis **15** (1982), 58–66.
- [48] B. Bosbach, *Residuationsstrukturen*, Universität Kassel, 1997.
- [49] M. Botur, J. Kühr, L. Liu, and C. Tsinakis, *The Conrad program: from ℓ -groups to algebras of logic*, Journal of Algebra **450** (2016), 173–203.
- [50] M. Botur, J. Kühr, and C. Tsinakis, *Strong simplicity and states in ordered algebras: pushing the limits*. Journal of Pure and Applied Algebra, to appear.
- [51] F. Bou, F. Esteva, L. Godo, and R. Rodríguez, *On the minimum many-valued logic over a finite residuated lattice*, Journal of Logic and Computation **21** (2011), no. 5, 739–790.
- [52] J.R. Büchi, *Representation of complete lattices by sets*, Portugaliae Mathematica **11** (1952), 151–167.
- [53] S. Burris and H.P. Sankappanavar, *A course in universal algebra*, Springer, 1981.
- [54] W. Buszkowski, *Interpolation and FEP for logics of residuated algebras*, Logic Journal of the IGPL **19** (2011), no. 3, 437–454.
- [55] M. Busaniche and F. Montagna, *Hájek's logic BL and BL-algebras*, Handbook of mathematical fuzzy logic (P. Cintula, P. Hájek, and C. Noguera, eds.), College Publications, 2011, pp. 355–447.
- [56] M. Busaniche and D. Mundici, *Geometry of Robinson joint consistency in Łukasiewicz logic*, Annals of Pure and Applied Logic **147** (2007), 1–22.
- [57] X. Caicedo, G. Metcalfe, R. Rodríguez, and R. Rogger, *Decidability in order-based modal logics*, Journal of Computer System Sciences **88** (2017), 53–74.
- [58] X. Caicedo, G. Metcalfe, R. Rodríguez, and O. Tuyt, *One-variable fragments of intermediate logics over linear frames*, Information and Computation **287** (2022).
- [59] A. Cantini, *I fondamenti della matematica*, Loescher, 1979.

- [60] R. Cardona and N. Galatos, *The finite embeddability property for noncommutative knotted extensions of RL*, International Journal of Algebra and Computation **25** (2017), no. 3, 349–379.
- [61] E. Casari, *Comparative logics and Abelian ℓ -groups*, Logic Colloquium '88 (R. Ferro, C. Bonotto, S. Valentini, and A. Zanardo, eds.), North Holland, 1989, pp. 161–190.
- [62] E. Casari, *Bolzano's logical system*, Oxford Science Publications, 2016.
- [63] J. Certaine, *Lattice-ordered groupoids and some related problems*, Ph.D. thesis, Harvard University, 1945.
- [64] I. Chajda and H. Länger, *Orthomodular lattices can be converted into left-residuated ℓ -groupoids*, Miskolc Mathematical Notes **18** (2017), no. 2, 685–689.
- [65] P.M. Cohn, *Universal algebra*, 2nd ed., Reidel, 1981.
- [66] C.C. Chang, *Algebraic analysis of many-valued logics*, Transactions of the American Mathematical Society **88** (1958), 467–490.
- [67] C.C. Chang, *A new proof of the completeness of the Łukasiewicz axioms*, Transactions of the American Mathematical Society **93** (1959), 74–90.
- [68] W. Chen and Y. Chen, *Variety generated by conical residuated lattice-ordered idempotent monoids*, Semigroup Forum **98** (2019), 431–455.
- [69] K. Chvalovský and R. Horčík, *Full Lambek calculus with contraction is undecidable*, Journal of Symbolic Logic **81** (2016), no. 2, 524–540.
- [70] A. Ciabattoni, N. Galatos, and K. Terui, *Algebraic proof theory for substructural logics: cut-elimination and completions*, Annals of Pure and Applied Logic **163** (2012), no. 3, 266–290.
- [71] A. Ciabattoni, N. Galatos, and K. Terui, *Algebraic proof theory: hypersequents and hypercompletions*, Annals of Pure and Applied Logic **168** (2017), no. 3, 693–737.
- [72] A. Ciabattoni and G. Metcalfe, *Density elimination*, Theoretical Computer Science **403** (2008), no. 1–2, 328–346.
- [73] R. Cignoli, I.M.L. D’Ottaviano, and D. Mundici, *Algebraic foundations of many-valued reasoning*, Kluwer, 2000.
- [74] R. Cignoli, F. Esteva, L. Godo, and A. Torrens, *Basic fuzzy logic is the logic of continuous t-norms and their residua*, Soft Computing **4** (2000), 106–112.
- [75] P. Cintula and P. Hájek, *On theories and models in fuzzy predicate logics*, Journal of Symbolic Logic **71** (2006), no. 3, 863–880.
- [76] P. Cintula, R. Horčík, and C. Noguera, *Non-associative substructural logics and their semi-linear extensions: axiomatization and completeness property*, Review of Symbolic Logic **6** (2013), no. 3, 394–423.
- [77] P. Cintula, G. Metcalfe, and N. Tokuda, *Algebraic semantics for one-variable lattice-valued logics*, Proceedings of AiML 2022 (D. Fernandez-Duque, A. Palmigiano, and S. Pinchinat, eds.), Advances in Modal Logic, vol. 14, College Publications, 2022, pp. 237–257.
- [78] P. Cintula and C. Noguera, *A general framework for mathematical fuzzy logic*, Handbook of mathematical fuzzy logic (P. Cintula, P. Hájek, and C. Noguera, eds.), College Publications, 2011, pp. 103–207.
- [79] P. Cintula and C. Noguera, *Logic and implication*, Springer, 2021.
- [80] A. Citkin and A. Muravitsky, *Consequence relations: an introduction to the Lindenbaum-Tarski method*, Oxford Science Publications, 2022.
- [81] A.H. Clifford and G.H. Preston, *The algebraic theory of semigroups*, American Mathematical Society, 1961.
- [82] A. Colacito, N. Galatos, G. Metcalfe, and S. Santschi, *From distributive ℓ -monoids to ℓ -groups, and back again*, Journal of Algebra **601** (2022), 129–148.
- [83] A. Colacito and C. Tsinakis, *Nilpotency and the Hamiltonian property for cancellative residuated lattices*, International Journal of Algebra and Computation **32** (2022), no. 4, 629–652.
- [84] P. Conrad, *The structure of a lattice-ordered group with a finite number of disjoint elements*, Michigan Mathematical Journal **7** (1960), 171–180.
- [85] P. Conrad, *Some structure theorems for lattice-ordered groups*, Transactions of the American Mathematical Society **99** (1961), 212–240.
- [86] P. Conrad, *The lattice of all convex ℓ -subgroups of a lattice-ordered group*, Czechoslovak Mathematical Journal **15** (1965), 101–123.
- [87] P. Conrad, *Lex-subgroups of lattice-ordered groups*, Czechoslovak Mathematical Journal **18** (1968), 86–103.
- [88] P. Conrad, *Free lattice-ordered groups*, Journal of Algebra **16** (1970), 191–203.

- [89] P. Conrad, *Lattice ordered groups, an introduction*, Tulane University Lecture Notes, 1970.
- [90] C. Constantinescu, *Some properties of spaces of measures*, Atti del Seminario Matematico e Fisico dell'Università di Modena **35** (1989), 1–286.
- [91] T. Cortonesi, E. Marchioni, and F. Montagna, *Quantifier elimination and other model theoretic properties of BL-algebras*, Notre Dame Journal of Formal Logic **52** (2011), no. 4, 339–380.
- [92] H.B. Curry, *The inconsistency of certain formal logics*, Journal of Symbolic Logic **7** (1942), 115–117.
- [93] H.B. Curry, *The inferential approach to logical calculus*, Logique et Analyse **3** (1960), 119–136.
- [94] J. Czelakowski, *Algebraic aspects of deduction theorems*, Studia Logica **44** (1985), 369–387.
- [95] J. Czelakowski, *Protoalgebraic logics*, Kluwer, 2001.
- [96] J. Czelakowski and W. Dziobiak, *Congruence distributive quasivarieties whose finitely subdirectly irreducible members form a universal class*, Algebra Universalis **27** (1990), 128–149.
- [97] J. Czelakowski and J. Malinowski, *Key notions of Tarski's methodology of deductive systems*, Studia Logica **44** (1985), 321–351.
- [98] J. Czelakowski and D. Pigozzi, *Amalgamation and interpolation in abstract algebraic logic*, Models, algebras, and proofs (Bogota 1995) (X. Caicedo and C.H. Montenegro, ed.), Marcel Dekker, 1999, pp. 187–265.
- [99] M.R. Darnel, *Theory of lattice-ordered groups*, Marcel Dekker, 1995.
- [100] D. Diaconescu, G. Metcalfe, and L. Schnüriger, *A real-valued modal logic*, Logical Methods in Computer Science **14** (2018), no. 1.
- [101] R.P. Dilworth, *Abstract residuation over lattices*, Bulletin of the American Mathematical Society **44** (1937), 262–268.
- [102] R.P. Dilworth, *The structure and arithmetical theory of non-commutative residuated lattices*, Ph.D. thesis, California Institute of Technology, 1939.
- [103] R.P. Dilworth, *Non-commutative residuated lattices*, Transactions of the American Mathematical Society **46** (1939), 426–444.
- [104] A. Di Nola, G. Georgescu, and A. Iorgulescu, *Pseudo-BL algebras I and II*, Journal of Multiple-Valued Logic and Soft Computing **8** (2002), no. 5–6, 673–714, 715–750.
- [105] K. Došen and P. Schroeder-Heister, *Substructural logics*, Oxford University Press, 1993.
- [106] P. Dubreil, *Sur les problèmes d'immersion et la théorie des modules*, Comptes Rendus des Séances de l'Académie des Sciences **216** (1943), 625–627.
- [107] M. Dummett, *A propositional calculus with denumerable matrix*, Journal of Symbolic Logic **24** (1959), 97–106.
- [108] M. Dummett, *Elements of intuitionism*, Clarendon Press, 1977.
- [109] J.M. Dunn, *The algebra of intensional logics*, College Publications, 2019 (appeared as a Ph.D. thesis in 1966, University of Pittsburgh).
- [110] J.M. Dunn, *A 'Gentzen' system for positive relevant implication*, Journal of Symbolic Logic **38** (1974), 356–357. (Abstract).
- [111] J.M. Dunn, *Gaggle theory: an abstraction of Galois connections and residuation, with applications to negation, implication, and various logical operators*, Logics in AI: European workshop JELIA '90, (J. van Eijck, ed.), Springer, 1991, pp. 31–51.
- [112] J.M. Dunn, *Partial gaggles applied to logics with restricted structural rules*, Substructural logics (P. Schroeder-Heister and K. Došen, ed.), Oxford University Press, 1993, pp. 63–108.
- [113] J.M. Dunn, *Gaggle theory applied to intuitionistic, modal and relevance logics*, Logik und mathematik. Frege-Kolloquium Jena 1993, (I. Max and W. Stelzner, ed.), W. De Gruyter, 1995, pp. 335–368.
- [114] A. Dvurečenskij, *States on pseudo MV-algebras*, Studia Logica **68** (2001), 301–327.
- [115] A. Dvurečenskij, *Pseudo MV-algebras are intervals in ℓ -groups*, Journal of the Australian Mathematical Society **72** (2002), no. 3, 427–445.
- [116] A. Dvurečenskij, *Aglianò-Montagna type decomposition of pseudo hoops and its applications*, Journal of the Australian Mathematical Society **211** (2007), 851–861.
- [117] A. Dvurečenskij, *Every linear pseudo BL-algebra admits a state*, Soft Computing **11** (2007), 495–501.
- [118] A. Dvurečenskij, R. Giuntini, and T. Kowalski, *On the structure of pseudo BL-algebras and pseudo hoops in quantum logics*, Foundations of Physics **40** (2010), 1519–1542.

- [119] H.M. Edwards, *The genesis of ideal theory*, Archive for History of Exact Sciences **23** (1980), 321–378.
- [120] M. Erné, *Adjunctions and Galois connections: origins, history and development*, Galois connections and applications (K. Denecke, M. Erné, and S.L. Wismath, eds.), Kluwer, 2004, pp. 1–138.
- [121] F. Esteva and L. Godo, *Monoidal t-norm based logic: towards a logic for left-continuous t-norms*, Fuzzy Sets and Systems **124** (2001), no. 3, 271–288.
- [122] F. Esteva, J. Gispert, L. Godo, and F. Montagna, *On the standard and rational completeness of some axiomatic extensions of the monoidal t-norm logic*, Studia Logica **71** (2002), no. 2, 199–226.
- [123] T. Evans, *The word problem for abstract algebras*, Journal of the London Mathematical Society **26** (1951), 64–71.
- [124] T. Evans, *Embeddability and the word problem*, Journal of the London Mathematical Society **28** (1953), 76–80.
- [125] T. Evans, *Some connections between residual finiteness, finite embeddability and the word problem*, Journal of the London Mathematical Society **2** (1969), no. 1, 399–403.
- [126] M. Farulewski, *Finite embeddability property for residuated groupoids*, Reports on Mathematical Logic **43** (2008), 25–42.
- [127] K. Fine, *Models for entailment*, Journal of Philosophical Logic **3** (1974), 347–372.
- [128] A. Fjellstad and J.F. Olsen, *IKT^ω and Łukasiewicz models*, Notre Dame Journal of Formal Logic **62** (2021), no. 2, 247–256.
- [129] J.M. Font, *On the contributions of Helena Rasiowa to mathematical logic*, Multiple-Valued Logic **4** (1999), 159–179.
- [130] J.M. Font, *Beyond Rasiowa’s algebraic approach to non-classical logics*, Studia Logica **82** (2006), 1–31.
- [131] J.M. Font, *Abstract algebraic logic: an introductory textbook*, College Publications, 2016.
- [132] J.M. Font and R. Jansana, *A general algebraic semantics for sentential logics*, Springer, 1996.
- [133] J.M. Font and T. Moraschini, *M-sets and the representation problem*, Studia Logica **103** (2015), no. 1, 21–51.
- [134] R. Fraïssé, *Sur l’extension aux relations de quelques propriétés des ordres*, Annales Scientifiques de l’École Normale Supérieure **71** (1954), 363–388.
- [135] O. Frink, *Pseudo-complements in semi-lattices*, Duke Mathematical Journal **29** (1962), 505–514.
- [136] L. Fuchs, *Partially ordered algebraic systems*, Pergamon Press, 1963.
- [137] W. Fussner and G. Metcalfe, *Transfer theorems for finitely subdirectly irreducible algebras*, 2022. Submitted.
- [138] N. Galatos, *The undecidability of the word problem for distributive residuated lattices*, Ordered algebraic structures (J. Martinez, ed.), Kluwer, 2002, pp. 231–243.
- [139] N. Galatos, *Minimal varieties of residuated lattices*, Algebra Universalis **52** (2005), no. 2, 215–239.
- [140] N. Galatos and J. Gil-Férez, *Modules over quantaloids: applications to the isomorphism problems in algebraic logic and π -institutions*, Journal of Pure and Applied Algebra **221** (2017), no. 1, 1–24.
- [141] N. Galatos and R. Horčík, *Cayley’s and Holland’s theorems for idempotent semirings and their applications to residuated lattices*, Semigroup Forum **87** (2013), 569–589.
- [142] N. Galatos and R. Horčík, *Densification via polynomials, languages, and frames*, Journal of Pure and Applied Algebra **226** (2022), no. 3, 106852.
- [143] N. Galatos and P. Jipsen, *Residuated frames with applications to decidability*, Transactions of the American Mathematical Society **364** (2013), 1219–1249.
- [144] N. Galatos and P. Jipsen, *Distributive residuated frames and generalized bunched implication algebras*, Algebra Universalis **78** (2017), no. 3, 303–336.
- [145] N. Galatos, P. Jipsen, T. Kowalski, and H. Ono, *Residuated lattices: an algebraic glimpse at substructural logics*, Elsevier, 2007.
- [146] N. Galatos and G. Metcalfe, *Proof theory for lattice-ordered groups*, Annals of Pure and Applied Logic **167** (2016), no. 8, 707–724.
- [147] N. Galatos and H. Ono, *Cut elimination and strong separation for substructural logics: an algebraic approach*, Annals of Pure and Applied Logic **161** (2010), no. 9, 1097–1133.

- [148] N. Galatos and H. Ono, *Algebraization, parametrized local deduction theorem and interpolation for substructural logics over FL*, Studia Logica **83** (2006), 279–308.
- [149] N. Galatos and J.G. Raftery, *Adding involution to residuated structures*, Studia Logica **77** (2004), no. 2, 181–207.
- [150] N. Galatos and J.G. Raftery, *Idempotent residuated structures: some category equivalences and their applications*, Transactions of the American Mathematical Society **367** (2014), 3189–3223.
- [151] N. Galatos and G. St. John, *Most simple extensions of FL_e are undecidable*, Journal of Symbolic Logic **87** (2022), no. 3, 1156–1200.
- [152] N. Galatos and C. Tsinakis, *Generalized MV-algebras*, Journal of Algebra **283** (2005), no. 1, 254–291.
- [153] N. Galatos and C. Tsinakis, *Equivalence of closure operators: an order-theoretic and categorical perspective*, Journal of Symbolic Logic **74** (2009), no. 3, 780–810.
- [154] A. Galli, R.A. Lewin, and M. Sagastume, *The logic of equilibrium and Abelian lattice ordered groups*, Archive for Mathematical Logic **43** (2004), 141–158.
- [155] G. Gentzen, *Untersuchungen über das logische schließen I, II*, Mathematische Zeitschrift **39** (1935), no. 1, 176–210, 405–431.
- [156] G. Georgescu and A. Iorgulescu, *Pseudo-MV algebras*, Multiple-Valued Logic **6** (2001), no. 1–2, 95–135.
- [157] G. Gierz, K.H. Hofmann, K. Keimel, J. Lawson, M. Mislove, and D. Scott, *Continuous lattices and domains*, Cambridge University Press, 2003.
- [158] J. Gil-Férez, *Representation of structural closure operators*, Archive for Mathematical Logic **50** (2011), no. 1, 45–73.
- [159] J. Gil-Férez, A. Ledda, and C. Tsinakis, *The failure of the amalgamation property for semi-linear varieties of residuated lattices*, Mathematica Slovaca **65** (2015), no. 4, 817–828.
- [160] J. Gil-Férez, F.M. Lauridsen, and G. Metcalfe, *Integrally closed residuated lattices*, Studia Logica **108** (2020), no. 5, 1063–1086.
- [161] J. Gil-Férez, P. Jipsen, and G. Metcalfe, *Structure theorems for idempotent residuated lattices*, Algebra Universalis **81** (2020), 1–25.
- [162] J. Gil-Férez, L. Spada, C. Tsinakis, and H. Zhou, *Join-completions of partially ordered algebras*, Annals of Pure and Applied Logic **171** (2020), 102842.
- [163] J-Y. Girard, *Linear logic*, Theoretical Computer Science **50** (1987), 1–102.
- [164] J-Y. Girard, *Proof theory and logical complexity*, Bibliopolis, 1987.
- [165] A.M.W. Glass and Y. Gurevich, *The word problem for lattice-ordered groups*, Transactions of the American Mathematical Society **280** (1983), no. 1, 127–138.
- [166] V. Glivenko, *Sur quelques points de la logique de M. Brouwer*, Bulletin Academie des Sciences de Belgique **15** (1929), 183–188.
- [167] K. Gödel, *Zum intuitionistischen aussagenkalkül*, Anzeiger der Akademie der Wissenschaften in Wien **32** (1932), 65–66.
- [168] G. Grätzer, *A note on the amalgamation property. Abstract.*, Notices of the American Mathematical Society **22** (1975), 453.
- [169] G. Grätzer, *General lattice theory*, 2nd ed., Birkhäuser, 1998. New appendices by the author with B.A. Davey, R. Freese, B. Ganter, M. Greferath, P. Jipsen, H.A. Priestley, H. Rose, E.T. Schmidt, S.E. Schmidt, F. Wehrung, and R. Wille.
- [170] G. Grätzer, H. Lakser, and J. Płonka, *Joins and direct products of equational classes*, Canadian Mathematical Bulletin **12** (1969), 741–744.
- [171] G. Grätzer and H. Lakser, *The structure of pseudocomplemented distributive lattices. II: congruence extension and amalgamation*, Transactions of the American Mathematical Society **156** (1971), 343–358.
- [172] V.N. Grišin, *Predicate and set-theoretical calculi based on logic without the contraction rule*, Mathematical USSR Izvestiya **18** (1982), 41–59; English transl., Izvestia Akademii Nauk SSSR **45** (1981), 47–68.
- [173] A. Grothendieck, *Sur quelques points d'algèbre homologique*, Tôhoku Mathematical Journal **9** (1957), 119–221.
- [174] P. Hájek, *Metamathematics of fuzzy logic*, Trends in Logic, vol. 4, Kluwer, 1998.
- [175] P. Hájek, *Basic fuzzy logic and BL-algebras*, Soft Computing **2** (1998), 124–128.
- [176] P. Hájek, L. Godo, and F. Esteva, *A complete many-valued logic with product-conjunction*, Archive for Mathematical Logic **35** (1996), 191–208.

- [177] T. Halperin, *Boole's algebra isn't Boolean algebra*, A Boole anthology (J. Gasser, ed.), Kluwer, 2000.
- [178] Z. Hanikova and R. Horčík, *The finite embeddability property for residuated groupoids*, Algebra Universalis **72** (2014), 1–13.
- [179] G. Hansoul and B. Teheux, *Extending Łukasiewicz logics with a modality: algebraic approach to relational semantics*, Studia Logica **101** (2013), no. 3, 505–545.
- [180] J.B. Hart, L. Rafter, and C. Tsinakis, *The structure of commutative residuated lattices*, International Journal of Algebra and Computation **12** (2002), no. 4, 509–524.
- [181] J.B. Hart and C. Tsinakis, *Decompositions of relatively normal lattices*, Transactions of the American Mathematical Society **341** (1994), 519–548.
- [182] L. Henkin, J.D. Monk, and A. Tarski, *Cylindric algebras. Part II*, North-Holland, 1985.
- [183] A. Heyting, *Die formalen regeln der intuitionistischen logik*, Sitzungsberichte der Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Klasse (1930), 42–56.
- [184] R. Hinnion and T. Libert, *Positive abstraction and extensionality*, Journal of Symbolic Logic **68** (2003), no. 3, 828–836.
- [185] U. Höhle, *Commutative residuated ℓ -monoids*, Non-classical logics and their applications to fuzzy subsets (U. Höhle and P. Klement, eds.), Kluwer, 1995, pp. 53–106.
- [186] O. Hölder, *Die axiome der quantität und die lehre vom mass*, Leipziger Berichte **53**, 1 (1901), 1–64.
- [187] W.C. Holland, *The lattice-ordered group of automorphisms of an ordered set*, Michigan Mathematical Journal **10** (1963), 399–408.
- [188] W.C. Holland, *The largest proper variety of lattice-ordered groups*, Proceedings of the American Mathematical Society **57** (1976), 25–28.
- [189] W.C. Holland and S.H. McCleary, *Solvability of the word problem in free lattice-ordered groups*, Houston Journal of Mathematics **5** (1979), no. 1, 99–105.
- [190] C. Hollings, *Mathematics across the iron curtain: a history of the algebraic theory of semigroups*, AMS Publications, 2014.
- [191] R. Horčík, *Algebraic semantics: semilinear FL-algebras*, Handbook of mathematical fuzzy logic (P. Cintula, P. Hájek, and C. Noguera, eds.), College Publications, 2011, pp. 283–353.
- [192] R. Horčík, *Standard completeness theorem for ΠMTL* , Archive for Mathematical Logic **44** (2005), no. 4, 413–424.
- [193] R. Horčík, *Decidability of cancellative extension of monoidal t-norm based logic*, Logic Journal of the IGPL **14** (2006), no. 6, 827–843.
- [194] R. Horčík, *Structure of commutative cancellative integral residuated lattices on $(0, 1]$* , Algebra Universalis **57** (2007), 303–332.
- [195] R. Horčík, *Word problem for knotted residuated lattices*, Journal of Pure and Applied Algebra **219** (2015), 1548–1563.
- [196] W.A. Howard, *The formulae-as-types notion of construction*, To H.B. Curry: essays on combinatory logic, lambda calculus, and formalism (J.R. Hindley and J. Seldin, eds.), Academic Press, 1980, pp. 479–490.
- [197] A. Hsieh and J.G. Raftery, *Semiconic idempotent residuated structures*, Algebra Universalis **61** (2009), 413–430.
- [198] E.V. Huntington, *Sets of independent postulates for the algebra of logic*, Transactions of the American Mathematical Society **5** (1904), 288–309.
- [199] A. Indrzejczak, *Sequents and trees: an introduction to the theory and applications of propositional sequent calculi*, Barnes and Noble, 2021.
- [200] A. Indrzejczak, *Stanisław Jaśkowski and natural deduction systems*, The Lvov-Warsaw school. past and present (A. Garrido and U. Wybraniec-Skardowska, eds.), Birkhäuser, 2018, pp. 465–483.
- [201] S. Jenei, *Group representation for even and odd involutive commutative residuated chains*, Studia Logica **110** (2022), 881–922.
- [202] S. Jenei and F. Montagna, *A proof of standard completeness for Esteva and Godo's logic MTL*, Studia Logica **70** (2002), no. 2, 183–192.
- [203] P. Jipsen and F. Montagna, *On the structure of generalized BL-algebras*, Algebra Universalis **55** (2006), 226–237.
- [204] P. Jipsen and F. Montagna, *The Blok-Ferreirim theorem for normal GBL-algebras and its application*, Algebra Universalis **60** (2009), 381–404.

- [205] P. Jipsen and F. Montagna, *Embedding theorems for normal GBL-algebras*, Journal of Pure and Applied Algebra **214** (2010), 1559–1575.
- [206] P. Jipsen and C. Tsinakis, *A survey of residuated lattices*, Ordered algebraic structures (J. Martinez, ed.), Kluwer, 2002, pp. 19–56.
- [207] B. Jónsson, *Universal relational structures*, Mathematica Scandinavica **4** (1956), 193–208.
- [208] B. Jónsson, *Homogeneous universal relational structures*, Mathematica Scandinavica **8** (1960), 137–142.
- [209] B. Jónsson, *Sublattices of a free lattice*, Canadian Journal of Mathematics **13** (1961), 146–157.
- [210] B. Jónsson, *Algebraic extensions of relational systems*, Mathematica Scandinavica **11** (1962), 179–205.
- [211] B. Jónsson, *Extensions of relational structures*, The theory of models: Proceedings of the 1963 symposium at Berkley, North-Holland, 1965, pp. 146–157.
- [212] B. Jónsson and C. Tsinakis, *Products of classes of residuated structures*, Studia Logica **77** (2004), 267–292.
- [213] D.M. Kan, *Adjoint functors*, Transactions of the American Mathematical Society **87** (1958), 294–329.
- [214] I. Kaplanski, *Fields and rings*, Chicago Lectures in Mathematics, Chicago University Press, 1965.
- [215] K. Keimel, *Some trends in lattice-ordered groups and rings*, Lattice theory and its applications (K.A. Baker and R. Wille, eds.), Heldermann Verlag, 1995, pp. 131–161.
- [216] O. Ketonen, *Untersuchungen zum prädikatenkalkül*, Annales Academiae Scientiarum Fenniae **I**, **23** (1944).
- [217] H. Kihara and H. Ono, *Interpolation properties, Beth definability properties and amalgamation properties for substructural logics*, Journal of Logic and Computation **20** (2010), no. 4, 823–875.
- [218] Y. Komori, *Predicate logics without the structural rules*, Studia Logica **45** (1986), 393–404.
- [219] T. Kovář, *A general theory of dually residuated lattice-ordered monoids*, Ph.D. Thesis, Palacký University Olomouc, 1996.
- [220] T. Kowalski, A. Ledda, and F. Paoli, *On independent varieties and some related notions*, Algebra Universalis **70** (2013), 107–136.
- [221] T. Kowalski and G. Metcalfe, *Uniform interpolation and coherence*, Annals of Pure and Applied Logic **170** (2019), no. 7, 825–841.
- [222] R. Krömer, *Tool and object: a history and philosophy of category theory*, Birkhäuser, 2007.
- [223] J. Kühr, *Ideals of noncommutative DRL monoids*, Czechoslovak Mathematical Journal **55** (2005), 97–111.
- [224] J. Kühr, *Prime ideals and polars in DRℓ-monoids and pseudo BL-algebras*, Mathematica Slovaca **53** (2003), 233–246.
- [225] J. Kühr, *Representable dually residuated lattice-ordered monoids*, Discussiones Mathematicae, General Algebra and Applications **23** (2003), 115–123.
- [226] J. Kühr, *Pseudo BL-algebras and DRL-monoids*, Mathematica Bohemica **128** (2003), 199–208.
- [227] J. Kühr, *Ideals of noncommutative DRℓ-monoids*, Czechoslovak Mathematical Journal **55** (2005), 97–111.
- [228] J. Kühr, *Dually residuated ℓ-monoids having no non-trivial convex subalgebras*, Acta Universitatis Palackianae Olomucensis, Facultas Rerum Naturalium, Mathematica **45** (2006), 103–108.
- [229] J. Kühr, *Representable pseudo-BCK-algebras and integral residuated lattices*, Journal of Algebra **317** (2007), 354–364.
- [230] Y. Lafont, *The finite model property for various fragments of linear logic*, Journal of Symbolic Logic **62** (1997), 1202–1208.
- [231] J. Lambek, *The mathematics of sentence structure*, American Mathematical Monthly **65** (1958), 154–170.
- [232] A. Ledda, F. Paoli, and C. Tsinakis, *Semilinear varieties of lattice-ordered algebras*, P. Hájek on mathematical fuzzy logic (F. Montagna, ed.), Springer, 2014, pp. 207–221.
- [233] A. Ledda, F. Paoli, and C. Tsinakis, *The Archimedean property: new horizons and perspectives*, Algebra Universalis **79** (2018), no. 4.

- [234] J. Legris, *Paul Hertz's systems of propositions as a proof-theoretical conception of logic*, Advances in natural deduction (L. Pereira, E. Haeusler, and V. de Paiva, eds.), Springer, 2014, pp. 93–101.
- [235] C.I. Lewis and C.H. Langford, *Symbolic logic*, The Century Company, 1932.
- [236] P. Lincoln, J. Mitchell, A. Scedrov, and N. Shankar, *Decision problems for propositional linear logic*, Annals of Pure and Applied Logic **56** (1992), no. 1–3, 239–311.
- [237] E. Linés Escardó and R. Mallol Balmaña, *On ℓ -groups (Spanish)*, Revista Matemática Hispanoamericana **12** (1952), no. 4, 129–136.
- [238] J. Łos and R. Suszko, *Remarks on sentential logic*, Indagationes Mathematicae **20** (1958), 177–183.
- [239] J. Łukasiewicz, *O logice trójwartościowej*, Polish logic 1920–1939 (S. McCall, ed.), Clarendon Press, 1967, 1920.
- [240] J. Łukasiewicz and A. Tarski, *Untersuchungen über den aussagenkalkül*, Comptes Rendus des Séances de la Société des Sciences et des Lettres de Varsovie, Classe III **23** (1930).
- [241] R.C. Lyndon, *The representation of relational algebras*, Annals of Mathematics **51** (1950), no. 3, 707–729.
- [242] S. MacLane, *Categories for the working mathematician*, Springer, 1971.
- [243] R.D. Maddux, *Relation algebras*, North Holland, 2006.
- [244] S. Maehara, *On the interpolation theorem of Craig (Japanese)*, Sugaku **12** (1960), 235–237.
- [245] L.L. Maksimova, *On models of calculus E*, Algebra i Logika **6** (1967), 5–20.
- [246] A.I. Mal'cev, *On the embedding of associative systems in groups* (Russian), Matematicheskii Sbornik **6** (1939), 331–336.
- [247] A.I. Mal'cev, *The metamathematics of algebraic systems. Collected papers: 1936–1967*, North-Holland, 1971. Translated, edited, and provided with supplementary notes by B.F. Wells, III; Studies in Logic and the Foundations of Mathematics, Vol. 66.
- [248] J.C.C. McKinsey, *Solution of the decision problem for Lewis S2 and S4 systems with an application to topology*, Journal of Symbolic Logic **6** (1941), 117–134.
- [249] J.C.C. McKinsey and A. Tarski, *On closed elements in closure algebras*, Annals of Mathematics **47** (1946), no. 1, 122–162.
- [250] R. McNaughton, *A theorem about infinite-valued sentential logic*, Journal of Symbolic Logic **16** (1951), 1–13.
- [251] E. Marchioni, *Amalgamation through quantifier elimination for varieties of commutative residuated lattices*, Archive for Mathematical Logic **51** (2012), no. 1–2, 15–34.
- [252] E. Marchioni and G. Metcalfe, *Craig interpolation for semilinear substructural logics*, Mathematical Logic Quarterly **58** (2012), no. 6, 468–481.
- [253] J. Martinez, *Torsion theory for lattice-ordered groups*, Czechoslovak Mathematical Journal **25** (1975), no. 2, 284–299.
- [254] T. Merlier, *Sur les demi-groupes réticulée et les o-demi-groupes*, Semigroup Forum **2** (1971), 64–70.
- [255] G. Metcalfe and F. Montagna, *Substructural fuzzy logics*, Journal of Symbolic Logic **72** (2007), no. 3, 834–864.
- [256] G. Metcalfe, F. Montagna, and C. Tsinakis, *Amalgamation and interpolation in ordered algebras*, Journal of Algebra **402** (2014), 21–82.
- [257] G. Metcalfe, N. Olivetti, and D. Gabbay, *Analytic proof calculi for product logics*, Archive for Mathematical Logic **43** (2004), no. 7, 859–889.
- [258] G. Metcalfe, N. Olivetti, and D. Gabbay, *Sequent and hypersequent calculi for Abelian and Łukasiewicz logics*, ACM Transactions of Computational Logic **6** (2005), no. 3, 578–613.
- [259] G. Metcalfe, N. Olivetti, and D. Gabbay, *Proof theory for fuzzy logics*, Springer, 2008.
- [260] G. Metcalfe, F. Paoli, and C. Tsinakis, *Ordered algebras and logic*, Uncertainty and rationality (H. Hosni and F. Montagna, eds.), Publications of the Scuola Normale Superiore di Pisa, Vol. 10, 2010, pp. 1–85.
- [261] G. Metcalfe and L. Reggio, *Model completions for universal classes of algebras: necessary and sufficient conditions*, Journal of Symbolic Logic **88** (2023), no. 1, 381–417.
- [262] G. Metcalfe and C. Tsinakis, *Density revisited*, Soft Computing **21** (2017), no. 1, 175–189.
- [263] G. Metcalfe and O. Tuyt, *A monadic logic of ordered abelian groups*, Proceedings of AiML 2020 (S. Negri, N. Olivetti, G. Sandu, and R. Verbrugge, eds.), Advances in Modal Logic, vol. 13, College Publications, 2020, pp. 441–457.

- [264] R.K. Meyer, *Topics in modal and many-valued logic*, Ph.D. thesis, University of Pittsburgh, 1966.
- [265] R.K. Meyer and H. Ono, *The finite model property for BCK and BCIW*, Studia Logica **53** (1994), 107–118.
- [266] R.K. Meyer and J.K. Slaney, *Abelian logic (from A to Z)*, Paraconsistent logic: essays on the inconsistent (G. Priest, R. Routley, and J. Norman, eds.), Philosophia, 1989, pp. 245–288.
- [267] G. Mints, *Some calculi of modal logic*, Logical and logical-mathematical calculus, part I, Trudy Mathematical Institute Steklov, vol. 98, 1968, pp. 88–111.
- [268] G. Mints, *Cut-elimination theorem for relevant logics*, Journal of Soviet Mathematics **6** (1976), 422–428.
- [269] J.D. Monk, *The contributions of A. Tarski to algebraic logic*, Journal of Symbolic Logic **51** (1986), 899–906.
- [270] F. Montagna, *Storage operators and multiplicative quantifiers in many-valued logics*, Journal of Logic and Computation **14** (2004), no. 2, 299–322.
- [271] F. Montagna, *Interpolation and Beth's property in propositional many-valued logics: a semantic investigation*, Annals of Pure and Applied Logic **141** (2006), 148–179.
- [272] F. Montagna and C. Tsinakis, *Ordered groups with a conucleus*, Journal of Pure and Applied Algebra **214** (2010), no. 1, 71–88.
- [273] F. Montagna and H. Ono, *Kripke semantics, undecidability and standard completeness for Esteva and Godo's logic MTL λ* , Studia Logica **71** (2002), no. 2, 227–245.
- [274] A. Monteiro, *L'arithmetique des filtres et les espaces topologiques*, Segundo Symposium de Matematics-Villavicencio (Mendoza, Buenos Aires) (1954), 129–162.
- [275] A. Monteiro, *L'arithmetique des filtres et les espaces topologiques. I, II*, Notas Logica Mat. (1974), 29–30.
- [276] E.H. Moore, *Introduction to a form of general analysis*, New Haven, 1910.
- [277] T. Moraschini, *A study of truth predicates in matrix semantics*, Review of Symbolic Logic **11** (2018), no. 4, 780–804.
- [278] P.S. Mostert and A.L. Shields, *On the structure of semigroups on a compact manifold with boundary*, Annals of Mathematics **65** (1957), 117–143.
- [279] D. Mundici, *Interpretation of AF C*-algebras in Łukasiewicz sentential calculus*, Journal of Functional Analysis **65** (1986), no. 1, 15–63.
- [280] D. Mundici, *Free products in the category of Abelian ℓ -groups with strong unit*, Journal of Algebra **113** (1988), 89–109.
- [281] D. Mundici, *Advanced Łukasiewicz calculus and MV-algebras*, Springer, 2011.
- [282] Y. Maruyama, *Fibred algebraic semantics for a variety of non-classical first-order logics and topological logical translation*, Journal of Symbolic Logic **86** (2021), no. 3, 1189–1213.
- [283] S. McCleary, *Free lattice-ordered groups*, Ordered algebraic structures (W. Powell and C. Tsinakis, eds.), Lecture Notes in Pure and Applied Mathematics, Marcel Dekker, 1985, pp. 139–154.
- [284] T. Nakano, *Rings and partly ordered systems*, Mathematische Zeitschrift **99** (1967), 355–376.
- [285] S. Negri and J. von Plato, *Structural proof theory*, Cambridge University Press, 2001.
- [286] B.H. Neumann and T. Taylor, *Subsemigroups of nilpotent groups*, Proceedings of the Royal Society of London Series A **274** (1963), no. 1356, 1–4.
- [287] C. Nicolai, M. Piazza, and M. Tesi, *Non-contractive logics, paradoxes, and multiplicative quantifiers* (2023). Manuscript.
- [288] M. Okada, *Phase semantics for higher order completeness, cut-elimination and normalization proofs (extended abstract)*, Electronic Notes in Theoretical Computer Science **3** (1996), 22 pp. (electronic).
- [289] M. Okada, *An introduction to linear logic: expressiveness and phase semantics*, Theories of types and proofs (M. Takahashi, M. Okada, and M. Dezani, eds.), MSJ-Memoir 2, Mathematical Society of Japan, 1998.
- [290] M. Okada, *Phase semantic cut-elimination and normalization proofs of first- and higher-order linear logic*, Theoretical Computer Science **227** (1999), 333–396.
- [291] M. Okada and K. Terui, *The finite model property for various fragments of intuitionistic linear logic*, Journal of Symbolic Logic **64** (1999), 790–802.
- [292] H. Ono, *Interpolation and the Robinson property for logics not closed under the Boolean operations*, Algebra Universalis **23** (1986), 111–122.

- [293] H. Ono, *Structural rules and a logical hierarchy*, Mathematical logic (P.P. Petkov, ed.), Plenum, 1990, pp. 95–104.
- [294] H. Ono, *Semantics for substructural logics*, Substructural logics (K. Došen and P. Schröder-Heister, eds.), Oxford University Press, 1993, pp. 259–291.
- [295] H. Ono, *Decidability and the finite model property of substructural logics*, Tbilisi symposium on logic, language and computation: selected papers (J. Ginzburg, Z. Khasidashvili, C. Vogel, J.-J. Lévy, and E. Valduví, eds.), CSLI, Stanford, 1998, pp. 263–274.
- [296] H. Ono, *Proof-theoretic methods for nonclassical logic: an introduction*, Theories of types and proofs (M. Takahashi, M. Okada, and M. Dezani-Ciancaglini, eds.), Mathematical Society of Japan, 1998, pp. 207–254.
- [297] H. Ono, *Substructural logics and residuated lattices: an introduction*, 50 years of Studia Logica (V.F. Hendricks and J. Malinowski, eds.), Kluwer, 2003, pp. 177–212.
- [298] H. Ono, *Closure operators and complete embeddings of residuated lattices*, Studia Logica **74** (2003), no. 3, 427–440.
- [299] H. Ono, *Crawley completions of residuated lattices and algebraic completeness of substructural predicate logics*, Studia Logica **100** (2012), no. 1–2, 339–359.
- [300] H. Ono and Y. Komori, *Logics without the contraction rule*, Journal of Symbolic Logic **50** (1985), 169–201.
- [301] Ø. Ore, *Linear equations in non-commutative fields*, Annals of Mathematics **32**, **2** (1931), 463–477.
- [302] Ø. Ore, *Galois connexions*, Transactions of the American Mathematical Society **55** (1944), 493–513.
- [303] F. Paoli, *Substructural logics: a primer*, Kluwer, 2002.
- [304] F. Paoli, **-autonomous lattices and fuzzy sets*, Soft Computing **10** (2006), 607–617.
- [305] F. Paoli, M. Spinks, and B. Veroff, *Abelian logic and the logic of pointed lattice-ordered varieties*, Logica Universalis **2** (2008), 209–233.
- [306] F. Paoli and C. Tsinakis, *On Birkhoff’s common abstraction problem*, Studia Logica **100** (2012), 1079–1105.
- [307] K.R. Pierce, *Amalgamations of lattice ordered groups*, Transactions of the American Mathematical Society **172** (1972), 249–260.
- [308] D. Pigozzi, *Amalgamations, congruence-extension, and interpolation properties in algebras*, Algebra Universalis **1** (1972), 269–349.
- [309] G. Pottinger, *Uniform, cut-free formulations of T, S4 and S5 (abstract)*, Journal of Symbolic Logic **48** (1983), no. 3, 900.
- [310] A.M. Pitts, *On an interpretation of second order quantification in first order intuitionistic propositional logic*, Journal of Symbolic Logic **57** (1992), 33–52.
- [311] E.L. Post, *Recursive unsolvability of a problem of Thue*, Journal of Symbolic Logic **12** (1947), no. 1, 1–11.
- [312] A. Přenosil, *Cut elimination, identity elimination, and interpolation in super-Belnap logics*, Studia Logica **105** (2017), 1255–1289.
- [313] A. Přenosil, *From partially ordered monoids to partially ordered groups via free nuclear preimages*, Journal of Algebra **610** (2022), 119–166.
- [314] G. Priest, *The logic of paradox*, Journal of Philosophical Logic **8** (1979), 219–241.
- [315] G. Priest, *Many-valued modal logics: a simple approach*, Review of Symbolic Logic **1** (2008), 190–203.
- [316] A.P. Pynko, *Definitional equivalence and algebraizability of generalized logical systems*, Annals of Pure and Applied Logic **98** (1999), 1–68.
- [317] A.P. Pynko, *Gentzen’s cut-free calculus versus the logic of paradox*, Bulletin of the Section of Logic **39** (2010), 35–42.
- [318] J. Rachůnek, *A non-commutative generalization of MV-algebras*, Czechoslovak Mathematical Journal **52** (2002), 255–273.
- [319] J.G. Raftery, *Correspondences between Gentzen and Hilbert systems*, Journal of Symbolic Logic **71** (2006), no. 3, 903–957.
- [320] J.G. Raftery, *The equational definability of truth predicates*, Reports on Mathematical Logic **41** (2006), 95–149.
- [321] J.G. Raftery, *Representable idempotent commutative residuated lattices*, Transactions of the American Mathematical Society **359** (2007), no. 9, 4405–4427.

- [322] J.G. Raftery, *Order algebraizable logics*, Annals of Pure and Applied Logic **164** (2013), no. 3, 251–283.
- [323] H. Rasiowa, *An algebraic approach to non-classical logics*, North-Holland, 1974.
- [324] B. Da R'e and L. Rosenblatt, *Contraction, infinitary quantifiers, and omega paradoxes*, Journal of Philosophical Logic **47** (2018), no. 4, 611–629.
- [325] J. Rebagliato and V. Verdú, *On the algebraization of some Gentzen systems*, Fundamenta Informaticae **18** (1993), 319–338.
- [326] V.B. Repnitskiĭ, *Bases of identities of varieties of lattice-ordered semigroups*, Algebra i Logika **22** (1983), no. 6, 649–665.
- [327] G. Restall, *An introduction to substructural logics*, Routledge, 2000.
- [328] A. Rose and J.B. Rosser, *Fragments of many-valued statement calculi*, Transactions of the American Mathematical Society **87** (1958), 1–53.
- [329] K.I. Rosenthal, *Quantales and their applications*, Pitman Research Notes in Mathematics, vol. 234, Longman, 1990.
- [330] R. Routley, V. Plumwood, R.K. Meyer, and R.T. Brady, *Relevant logics and their rivals*, Ridgeview, 1982.
- [331] W. Rump and Y. Yang, *On Bosbach's cone algebras*, Studia Logica **98** (2011), 375–386.
- [332] W. Rump, *The structure group of a generalized orthomodular lattice*, Studia Logica **106** (2018), no. 1, 85–100.
- [333] J.D. Rutledge, *A preliminary investigation of the infinitely many-valued predicate calculus*, Ph.D. thesis, Cornell University, 1959.
- [334] W. Scharlau, *Richard Dedekind 1831–1981, festschrift 1981*, Vieweg, 1982.
- [335] J. Schmidt, *Beiträge zur filtertheorie, II*, Mathematische Nachrichten **10** (1953), 197–232.
- [336] J. Schmidt, *Universal and internal properties of some extensions of partially ordered sets*, Journal für die reine und angewandte Mathematik **253** (1972), 28–42.
- [337] J. Schmidt, *Universal and internal properties of some completions of k-join-semilattices and k-join-distributive partially ordered sets*, Journal für die reine und angewandte Mathematik **255** (1972), 8–22.
- [338] J. Schmidt, *Each join-completion of a partially ordered set is the solution of a universal problem*, Journal of the Australian Mathematical Society **17** (1974), 406–419.
- [339] J. Schmidt and C. Tsinakis, *Relative pseudo-complements, join-extensions and meet-retractions*, Mathematische Zeitschrift **157** (1977), 271–284.
- [340] K.D. Schmidt, *A common abstraction of Boolean rings and lattice ordered groups*, Compositio Mathematica **54** (1985), 51–62.
- [341] K.D. Schmidt, *Minimal clans: a class of ordered partial semigroups including Boolean rings and partially ordered groups*, Semigroups: theory and applications, Springer, 1988, pp. 300–341.
- [342] O. Schreier, *Die untergruppen der freien gruppen*, Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg **5** (1927), no. 1, 161–183.
- [343] J. Schulte Mönting, *Cut elimination and word problems for varieties of lattices*, Algebra Universalis **12** (1981), 290–321.
- [344] P. Simons, *Philosophy and logic in central Europe from Bolzano to Tarski*, Kluwer, 1992.
- [345] T. Skolem, *Studies on the axiom of comprehension*, Notre Dame Journal of Formal Logic **4**, **3** (1963), 162–179.
- [346] T. Skolem, *Logisch-kombinatorische untersuchungen über die erfüllbarkeit und beweisbarkeit mathematischer Sätze, nebst einem theoreme über dichte mengen*, Videnskapsselskapets skrifter I. Matematisk-naturvidenskabelig klasse, 4 (1920).
- [347] J. Snodgrass and C. Tsinakis, *The finite basis theorem for relatively normal lattices*, Algebra Universalis **33** (1995), 40–67.
- [348] M.H. Stone, *The theory of representations for Boolean algebras*, Transactions of the American Mathematical Society **40** (1936), no. 1, 37–111.
- [349] S. Surma, *On the origin and subsequent applications of the concept of the Lindenbaum algebra*, Logic, methodology and philosophy of science VI, North Holland, 1982, pp. 719–734.
- [350] K.L.N. Swamy, *Dually residuated lattice-ordered semigroups*, Mathematische Annalen **159** (1965), 105–114.
- [351] K.L.N. Swamy, *Dually residuated lattice-ordered semigroups II*, Mathematische Annalen **160** (1965), 64–71.

- [352] K.L.N. Swamy, *Dually residuated lattice-ordered semigroups III*, Mathematische Annalen **167** (1966), 71–74.
- [353] G. Takeuti, *Proof theory*, 2nd ed., North-Holland, 1987.
- [354] A. Tarski, *Contributions to the theory of models*, Indagationes Mathematicae **17** (1955), 56–64.
- [355] A. Tarski, *Logic, semantics, metamathematics*, Clarendon Press, 1956.
- [356] K. Terui, *Which structural rules admit cut elimination? — an algebraic criterion*, Journal of Symbolic Logic **72** (2007), no. 3, 738–754.
- [357] A.S. Troelstra and H. Schwichtenberg, *Basic proof theory*, 2nd ed., Cambridge University Press, 2000.
- [358] A. Urquhart, *Semantics for relevant logic*, Journal of Symbolic Logic **37** (1972), 1059–1073.
- [359] A. Urquhart, *Free Heyting algebras*, Algebra Universalis **3** (1973), 94–97.
- [360] A. Urquhart, *The undecidability of entailment and relevant implication*, Journal of Symbolic Logic **49** (1984), no. 4, 1059–1073.
- [361] C.J. van Alten, *Representable biresiduated lattices*, Journal of Algebra **247** (2002), 672–691.
- [362] C.J. van Alten, *The finite model property for knotted extensions of propositional linear logic*, Journal of Symbolic Logic **70** (2005), no. 1, 84–98.
- [363] R. Vaught, *Model theory before 1945*, Proceedings of the Tarski symposium, American Mathematical Society, 1974.
- [364] S. van Gool, G. Metcalfe, and C. Tsinakis, *Uniform interpolation and compact congruences*, Annals of Pure and Applied Logic **168** (2017), 1827–1948.
- [365] M. Ward, *Structure residuation*, Annals of Mathematics **39** (1938), 558–568.
- [366] M. Ward, *The closure operations of a lattice*, Annals of Mathematics **43** (1942), 191–196.
- [367] M. Ward and R.P. Dilworth, *Residuated lattices*, Proceedings of the National Academy of Sciences **24** (1938), 162–164.
- [368] M. Ward and R.P. Dilworth, *Residuated lattices*, Transactions of the American Mathematical Society **45** (1939), 335–354.
- [369] E.C. Weinberg, *Free lattice-ordered Abelian groups*, Mathematische Annalen **151** (1963), 187–199.
- [370] P. Whitman, *Free lattices*, Annals of Mathematics **42** (1941), 325–329.
- [371] A.M. Wille, *Residuated structures with involution*, Ph.D. thesis, Technische Universität Darmstadt, 2006.
- [372] R. Wójcicki, *Logical matrices strongly adequate for structural sentential calculi*, Bulletin de l’Académie Polonaise des Sciences, Classe III **17** (1969), 333–335.
- [373] A. Wroński, *Interpolation and amalgamation properties of BCK-algebras*, Mathematica Japonica **29** (1984), 115–121.
- [374] O. Wyler, *Clans*, Compositio Mathematica **17** (1966), 172–189.
- [375] S. Wang and B. Zhao, *HpsUL is not the logic of pseudo-uninorms and their residua*, Logic Journal of the IGPL **17** (2009), no. 4, 413–419.
- [376] W. Young, *Heyting algebras as intervals of commutative, cancellative residuated lattices* (2014). Manuscript.
- [377] W. Young, *From interior algebras to unital ℓ -groups: a unifying treatment of modal residuated lattices*, Studia Logica **103** (2015), no. 2, 265–286.
- [378] J. Zygmunt and R. Purdy, *Adolf Lindenbaum: notes on his life, with bibliography and selected references*, Logica Universalis **8** (2014), no. 3–4, 285–320.