

## ***Complete List of Publications***

### **A. Edited Books and Proceedings**

#### **A.1 Special Journal Issues**

1. ‘Trends in Constructive Mathematics’ (with J. Berger, D. Pattinson, J. Zappe, eds.). Special issue, *Math. Logic Quart.* 54 (2008), no. 1, pp. 1–123
2. ‘Third Workshop on Formal Topology’ (with A. Bauer, T. Coquand, G. Sambin, eds.). Special issue, *Ann. Pure Appl. Logic* 163 (2012), no. 2, pp. 85–184
3. ‘Fourth Workshop on Formal Topology’ (with T. Coquand, M. Maietti, G. Sambin, eds.). Special issue, *Ann. Pure Appl. Logic* 167 (2016), no. 9, pp. 725–864
4. ‘Proof, Truth, Computation’ (with H. Leitgeb, I. Petrakis, H. Schwichtenberg, eds.). Special issue, *IfCoLog J. Logics Applications* 3 (2016), no. 4, pp. vii, 513–753
5. ‘Proof, Structure and Computation 2014’ (with D. Pattinson, A. Sokolova, eds.). Special issue, *J. Logic Comput.* 29 (2019), no. 4, pp. 417–575

#### **A.2 Selected Papers Volumes**

1. *Reuniting the Antipodes—Constructive and Nonstandard Views of the Continuum* (with U. Berger, H. Osswald, eds.). San Servolo, Venice, Italy, May 16–22, 1999. Symposium Proceedings. Kluwer, Dordrecht. *Synthese Library* 306 (2001), xii+316 pp.
2. *From Sets and Types to Analysis and Topology: Towards Practicable Foundations for Constructive Mathematics* (with L. Crosilla, eds.). Oxford University Press. *Oxford Logic Guides* 48 (2005), xix+376 pp.
3. *Logic, Construction, Computation* (with U. Berger, H. Diener, M. Seisenberger, eds.). Ontos, Heusenstamm. *Ontos Mathematical Logic* 3 (2012), 542 pp.
4. *Concepts of Proof in Mathematics, Philosophy, and Computer Science* (with D. Probst, eds.). Walter de Gruyter, Berlin. *Ontos Mathematical Logic* 6 (2016), x+374 pp.
5. *Proof and Computation. Digitization in Mathematics, Computer Science, and Philosophy* (with K. Mainzer, H. Schwichtenberg, eds.). World Scientific, Singapore, 2018, viii+300 pp.
6. *Mathesis Universalis, Computability and Proof* (with S. Centrone, S. Negri, D. Sarikaya, eds.). Springer, Cham, 2019, *Synthese Library* 412 (2019), x+373 pp.
7. *Well-Quasi Orders in Computation, Logic, Language and Reasoning. A Unifying Concept of Proof Theory, Automata Theory, Formal Languages and Descriptive Set Theory* (with M. Seisenberger, A. Weiermann, eds.). Springer, Cham, 2020, *Trends in Logic* 53 (2020), x+301 pp.

## B. Books and Proceedings Contributions

1. ‘Elementary choiceless constructive analysis’. In: P.G. Clote and H. Schwichtenberg, eds., *Computer Science Logic*. 14th International Workshop, CSL 2000. 9th Annual Conference of the EACSL. Fischbachau, Germany, August 21–26, 2000. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 1862 (2000) 512–526
2. ‘Apartness as a relation between subsets’ (with D. Bridges, L. Viță). In: C.S. Calude, M.J. Dinneen, S. Sburlan, eds., *Combinatorics, Computability and Logic*. 3rd International Conference, DMTCS01. Constanța, Romania, July 2–6, 2001. Springer, London. *Discr. Math. Theoret. Comput. Sci. Ser.* (2001) 203–214
3. ‘Compactness and continuity, constructively revisited’ (with D. Bridges, H. Ishihara). In: J. Bradfield, ed., *Computer Science Logic*. 16th International Workshop, CSL 2002. 11th Annual Conference of the EACSL. Edinburgh, Scotland, September 22–25, 2002. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 2471 (2002) 89–102
4. ‘Constructive solutions of continuous equations’ (with H. Schwichtenberg). In: G. Link, ed., *One Hundred Years of Russell’s Paradox. Mathematics, Logic and Philosophy*. De Gruyter, Berlin. *De Gruyter Series in Logic and Its Applications* 6 (2004) 227–245
5. ‘Do Noetherian modules have Noetherian basis functions?’ (with J. Zappe). In: A. Beckmann, U. Berger, B. Löwe, J.V. Tucker, eds., *Logical Approaches to Computational Barriers*. Second Conf. on Computability in Europe, CiE 2006. Swansea, UK, June/July 2006. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 3988 (2006) 481–489
6. ‘Problems as solutions’. In: S. B. Cooper, B. Löwe, A. Sorbi, eds., *Computation and Logic in the Real World*. Third Conference on Computability in Europe, CiE 2007. Siena, Italy, June 2007. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 4497 (2007) 676–684
7. ‘Dini’s theorem in the light of reverse mathematics’ (with J. Berger). In: S. Lindström, E. Palmgren, K. Segerberg, V. Stoltenberg-Hansen, eds., *Logicism, Intuitionism, and Formalism—What has become of them?* Springer, Dordrecht. *Synthese Library* 341 (2009) 153–166
8. ‘A direct proof of Wiener’s theorem’ (with M. Hendtlass). In: S. B. Cooper, A. Dawar, B. Löwe, eds., *How the World Computes*. Turing Centenary Conference and 8th Conference on Computability in Europe, CiE 2012, Cambridge, UK, June 2012, Proceedings. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 7318 (2012) 294–303
9. ‘Induction in algebra: a first case study’.<sup>1</sup> In: *Proceedings of the 2012 27th Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2012*, June 2012, Dubrovnik, Croatia. IEEE Computer Society Publications (2012) 581–585
10. ‘Finite methods in mathematical practice’ (with L. Crosilla). In: G. Link, ed., *Formalism and Beyond. On the Nature of Mathematical Discourse*. Walter de Gruyter, Boston and Berlin. *Logos* 23 (2014) 351–410

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<sup>1</sup>This is an advance communication of the homonymous article (*Log. Methods Comput. Sci.* 2013).

11. ‘Lindenbaum’s Lemma via Open Induction’ (with F. Ciraulo, D. Rinaldi).  
In: R. Kahle, T. Strahm, T. Studer, eds., *Advances in Proof Theory*. Birkhäuser, Basel. *Progress in Computer Science and Applied Logic* 28 (2016) 65–77
12. ‘An algorithmic approach to the existence of ideal objects in commutative algebra’ (with T. Powell, F. Wiesnet). In: R. Iemhoff, M. Moortgat, R. de Queiroz, eds., *Logic, Language, Information, and Computation. WoLLIC 2019*. Proceedings. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 11541 (2019) 533–549
13. ‘The computational significance of Hausdorff’s Maximal Chain Principle’ (with D. Wessel). In: M. Anselmo, G. Della Vedova, F. Manea, A. Pauly, eds., *Beyond the Horizon of Computability*. 16th Conference on Computability in Europe, CiE 2020, Fisciano, Italy, June 29–July 3, 2020, Proceedings. Springer, Berlin and Heidelberg. *Lect. Notes Comput. Sci.* 12098 (2020) 239–250
14. ‘Resolving finite indeterminacy: A definitive constructive universal prime ideal theorem’ (with D. Wessel). In: *Proceedings of the 35th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS ’20)*, July 8–11, 2020, Saarbrücken, Germany. ACM, New York, NY, USA (2020) 820–830
15. ‘Modal logic for induction’ (with G. Fellin, S. Negri). In: N. Olivetti, R. Verbrugge, S. Negri, G. Sandu, eds., *Advances in Modal Logic*. Advances in Modal Logic 2020, Helsinki, Finland (on-line), August 24–28, 2020. Proceedings. College Publications, London. *AiML* 13 (2020) 209–227

### C. Commissioned Articles in Journals

1. ‘Sequential compactness in constructive analysis’ (with D. Bridges, H. Ishihara).  
*Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 208 (1999) 159–163

### D. Peer-Reviewed Articles in Journals

1. ‘Identifying variable points on a smooth curve’.  
*Manuscripta Math.* 94 (1997) 195–210
2. ‘The moduli of substructures of a compact complex space’.  
*Proc. Amer. Math. Soc.* 126 (1998) 1983–1987
3. ‘A very weak Nullstellensatz over Heyting fields’.  
*Indagationes Math. (N.S.)* 10 (1999) 117–122
4. ‘Linear independence without choice’ (with D. Bridges, F. Richman).  
*Ann. Pure Appl. Logic* 101 (2000) 95–102
5. ‘A constructive look at generalised Cauchy reals’.  
*Math. Logic Quart.* 46 (2000) 125–134
6. ‘A weak countable choice principle’ (with D. Bridges, F. Richman).  
*Proc. Amer. Math. Soc.* 128 (2000) 2749–2752

7. ‘Adjoint, absolute values and polar decompositions’ (with D. Bridges, F. Richman).  
*J. Operator Theory* 44 (2000) 243–254
8. ‘Too simple solutions of hard problems’.  
*Nordic J. Philosophical Logic* 6 (2001) 138–146
9. ‘A constructive uniform continuity theorem’ (with H. Ishihara).  
*Quart. J. Math.* 53 (2002) 185–193
10. ‘Trace–class operators’ (with D. Bridges, F. Richman).  
*Houston J. Math.* 28 (2002) 565–583
11. ‘Apartness, topology, and uniformity: a constructive view’ (with D. Bridges, L. Vîță).  
*Math. Logic Quart.* 48 (2002) Suppl. 1, 16–28
12. ‘Real numbers as black boxes’.  
*New Zealand J. Math.* 31 (2002) 189–202
13. ‘Strong versus uniform continuity: a constructive round’ (with D. Bridges, L. Vîță).  
*Quaestiones Math.* 26 (2003) 171–190
14. ‘Unique existence, approximate solutions, and countable choice’.  
*Theoret. Comput. Sci.* 305 (2003) 433–455
15. ‘Countable choice as a questionable uniformity principle’.  
*Philosophia Math.* (3) 12 (2004) 106–134
16. ‘The polydisk Nullstellensatz’ (with D. Bridges, R. Mines, F. Richman).  
*Proc. Amer. Math. Soc.* 132 (2004) 2133–2140
17. ‘Compactness under constructive scrutiny’ (with H. Ishihara).  
*Math. Logic Quart.* 50 (2004) 540–550
18. ‘A nilregular element property’ (with T. Coquand, H. Lombardi).  
*Arch. Math. (Basel)* 85 (2005) 49–54
19. ‘Products in the category of apartness spaces’ (with D. Bridges, H. Ishihara, L. Vîță).  
*Cah. Topol. Géom. Différ. Catég.* 46 (2005), 139–153
20. ‘On constructing completions’ (with L. Crosilla, H. Ishihara).  
*J. Symb. Log.* 70 (2005) 969–978
21. ‘Strong continuity implies uniform sequential continuity’ (with D. Bridges, H. Ishihara, L. Vîță).  
*Arch. Math. Logic* 44 (2005) 887–895
22. ‘What is continuity, constructively?’  
*J. UCS* 11 (2005) 2076–2085
23. ‘Logisch zwingende Teilprinzipien von ZFC’.  
*Logique et Analyse (N.S.)* 48 (2005) 301–310
24. ‘Formal Zariski topology: positivity and points’.  
*Ann. Pure Appl. Logic* 137 (2006) 317–359

25. ‘The fan theorem and unique existence of maxima’ (with J. Berger, D. Bridges).  
*J. Symb. Log.* 71 (2006) 713–720
26. ‘Quasi-apartness and neighbourhood spaces’ (with H. Ishihara, R. Mines, L. Vîță).  
*Ann. Pure Appl. Logic* 141 (2006) 296–306
27. ‘Apartness and formal topology’ (with E. Palmgren).  
*New Zealand J. Math.* 35 (2006) 77–84
28. ‘Finitely generated Banach algebras and local Nullstellensätze: a constructive treatment’ (with D. Bridges, R. Havea). *Publ. Math. Debrecen* 69/1–2 (2006) 171–184
29. ‘Classifying Dini’s theorem’ (with J. Berger).  
*Notre Dame J. Formal Logic* 47 (2006) 253–262
30. ‘A simple constructive proof of Kronecker’s density theorem’ (with D. Bridges).  
*Elem. Math.* 61 (2006) 152–154
31. ‘Unique solutions’. *Math. Logic Quart.* 52 (2006) 534–539. Corrigendum: 53 (2007) 214
32. ‘Binary refinement implies discrete exponentiation’ (with P. Aczel, L. Crosilla, H. Ishihara, E. Palmgren). *Studia Logica* 84 (2006) 361–368
33. ‘Ideals in constructive Banach algebra theory’ (with D. Bridges, R. Havea).  
*J. Complexity* 22 (2006) 729–737
34. ‘Almost locatedness in uniform spaces’ (with D. Bridges, H. Ishihara, R. Mines, F. Richman, L. Vîță). *Czechoslovak Math. J.* 57 (2007) 1–12
35. ‘Spatiality for formal topologies’ (with N. Gambino).  
*Math. Structures Comput. Sci.* 17 (2007) 65–80
36. ‘The shrinking principle and the axiom of choice’ (with B. Banaschewski).  
*Monatshefte Math.* 151 (2007) 263–270
37. ‘The projective spectrum as a distributive lattice’ (with T. Coquand, H. Lombardi).  
*Cah. Topol. Géom. Différ. Catég.* 48 (2007) 220–228
38. ‘Apartness, compactness, and nearness’ (with D. Bridges, H. Ishihara, L. Vîță).  
*Theoret. Comput. Sci.* 405 (2008) 3–10
39. ‘The Zariski spectrum as a formal geometry’.  
*Theoret. Comput. Sci.* 405 (2008) 101–115
40. ‘A continuity principle, a version of Baire’s theorem, and a boundedness principle’ (with H. Ishihara). *J. Symb. Log.* 73 (2008) 1354–1360
41. ‘Über das Kripke-Schema und abzählbare Teilmengen’ (with J. Zappe).  
*Logique et Analyse (N.S.)* 51 (2008) 317–329
42. ‘Spectral schemes as ringed lattices’ (with T. Coquand, H. Lombardi).  
*Ann. Math. Artif. Intell.* 56 (2009) 339–360

43. ‘Problems, solutions, and completions’.  
*J. Logic Algebr. Program.* 79 (2010) 84–91
44. ‘Kronecker’s density theorem and irrational numbers in constructive reverse mathematics’ (with H. Ishihara). *Math. Semesterber.* 57 (2010) 57–72
45. ‘On choice principles and fan theorems’ (with H. Diener).  
*J. UCS* 16 (2010) 2556–2562
46. ‘On the contrapositive of countable choice’ (with H. Ishihara).  
*Arch. Math. Logic* 50 (2011) 137–143
47. ‘Noetherian orders’ (with H. Perdry).  
*Math. Structures Comput. Sci.* 21 (2011) 111–124
48. ‘Minima and best approximations in constructive analysis’ (with M. Hendtlass).  
*J. Log. Anal.* 3 (2011), paper 5, 17 pp.
49. ‘Uniqueness, continuity, and existence of implicit functions in constructive analysis’ (with H. Diener). *LMS J. Comput. Math.* 14 (2011) 127–136
50. ‘Unique paths as formal points’ (with T. Coquand).  
*J. Log. Anal.* 3 (2011), paper 6, 9 pp.
51. ‘A predicative completion of a uniform space’ (with J. Berger, H. Ishihara, E. Palmgren).  
*Ann. Pure Appl. Logic* 163 (2012) 975–980
52. ‘The Gröbner ring conjecture in one variable’ (with H. Lombardi, I. Yengui).  
*Math. Z.* 270 (2012) 1181–1185
53. ‘The weak König lemma, Brouwer’s fan theorem, de Morgan’s law, and dependent choice’ (with J. Berger, H. Ishihara). *Rep. Math. Logic* 47 (2012) 63–86
54. ‘The Kripke schema in metric topology’ (with R. Lubarsky, F. Richman).  
*Math. Logic Quart.* 58 (2012) 498–501
55. ‘A generalised cut characterisation of the fullness axiom in CZF’ (with L. Crosilla, E. Palmgren). *Log. J. IGPL* 21 (2013) 63–76
56. ‘Are there enough injective sets?’ (with P. Aczel, B. van den Berg, J. Granström).  
*Studia Logica* 101 (2013) 467–482
57. ‘Induction in algebra: a first case study’.<sup>2</sup> *Log. Methods Comput. Sci.* 9 (3:20) (2013)
58. ‘Approximating Beppo Levi’s principio d’approssimazione’ (with R. Bruni).  
*Bull. Symb. Log.* 20 (2014) 141–169
59. ‘Constructing Gröbner bases for Noetherian rings’ (with H. Perdry).  
*Math. Structures Comput. Sci.* 24 (2) (2014), e240206, 29 pp.
60. ‘The basic Zariski topology’ (with D. Rinaldi, G. Sambin).  
*Confluentes Math.* 7 (1) (2015) 55–81

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<sup>2</sup>This is the full version of the homonymous conference paper (*Logic in Computer Science – LICS – 2012*).

61. ‘A universal Krull–Lindenbaum theorem’ (with D. Rinaldi).  
*J. Pure Appl. Algebra* 220 (9) (2016) 3207–3232
62. ‘Eliminating disjunctions by disjunction elimination’ (with D. Rinaldi, D. Wessel).<sup>3</sup>  
*Bull. Symb. Log.* 23 (2) (2017) 181–200
63. ‘Eliminating disjunctions by disjunction elimination’ (with D. Rinaldi, D. Wessel).<sup>4</sup>  
*Indag. Math. (N.S.)* 29 (1) (2018) 226–259
64. ‘Suzumura consistency, an alternative approach’ (with D. Wessel).  
*J. Appl. Logic–IfCoLog J. Logic Appl.* 5 (1) (2018) 263–286
65. ‘A general extension theorem for directed-complete partial orders’ (with D. Wessel).  
*Rep. Math. Logic* 53 (2018) 79–96
66. ‘Some forms of excluded middle for linear orders’ (with D. Wessel).  
*Math. Logic Quart.* 65 (2019) 105–107
67. ‘Der Satz von Hahn–Banach per Disjunktionselemination’  
(with K. Schlagbauer, D. Wessel). *Confluentes Math.* 11 (1) (2019) 79–93
68. ‘On Scott’s semantics for many-valued logic’ (with S. Niki).  
*J. Logic Comput.* 30 (6) (2020) 1291–1302

#### **E. Forthcoming Items (Accepted for Publication)**

1. ‘Syntax for semantics: Krull’s maximal ideal theorem’ (with D. Wessel). In: G. Heinzmann, G. Wolters, eds., *Paul Lorenzen: Mathematician and Logician*. Springer.

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<sup>3</sup>This is an advance communication of the homonymous article (*Indag. Math. (N.S.)* 2017).

<sup>4</sup>This is the full version of the homonymous communication (*Bull. Symb. Logic* 2017).