CURRICULUM VITAE

Alexander Leitsch

November 4, 2019

I was born in Vienna as son of Emilie and Walter Leitsch the 20th of May 1952. From 1958 till 1962 I went to elementary school, next I went to secondary school from which I graduated the 15th of June 1970 ("Matura" at the Bundesgymnasium Wien VIII in Vienna).

From 1970 to 1974 I studied Mathematics and Physics at the University of Vienna. As a more advanced student I dealt with measure theory and probability theory and a wrote a thesis on stochastic point processes. The 22th of November 1974 I got the doctor's degree (Dr.phil) in mathematics.

From November 1974 to May 1976 I was assistant professor at the computer center of the University of Vienna. My main task was to give seminars on the theory of automata and on the theory of algorithms. During this period I started working on the theory of self-reproducing automata, the main topic of my Habilitation thesis written in 1984.

In May 1976 I became scientific worker at the institute of brain research, which is a section of the Austrian Academy of Sciences. My task was the computer simulation of brain waves (created by epileptic fits) in order to test some variance properties.

In July 1976 I entered the military service which was terminated by my departure for Amsterdam (the Netherlands) in September 1976; I stayed there during the winter semester 1976/77 with a fellowship of the Dutch government. There I participated in a seminar on complexity theory which was organized by Peter van Emde Boas. During this period I was suspended from my work at the Academy of Sciences.

In January 1977 I married Marjan van Sister in Amsterdam. We have two sons (David born in 1978 and Emanuel born in 1982).

In October 1977 I started working as system analyst at the Computer Center of the Department of the Interior in Vienna. There I was responsible for

task involving (mathematical) statistics. I held this position till September 1980.

In 1979/80 I became lecturer at the University of Technology in Vienna. My task was to give lectures on automated theorem proving.

In September 1980 I became assistant professor at the University of Economy in Vienna. Here I gave various lectures and seminars on statistics and mathematics.

In 1980/81 I started a cooperation with Georg Gottlob and Helmut Ortner in the field of automated theorem proving. We developed a resolution theorem prover and tested the efficiency of subsumption algorithms. This work was the starting point for publications on subsumption together with G.Gottlob.

In 1983/84 I became lecturer at the University of Linz and took part in the CAMP project created by Bruno Buchberger. My contribution to this project consisted in giving lectures on automated theorem proving and on the theory of algorithms.

In June 1985 I became Universitätsdozent at the University of Linz; the title of my (habilitation) thesis was "Enumeration of Subrecursive Classes and Self-Reproducing Automata".

From September 1986 - September 1987 I was visiting associate professor at the University of Delaware (USA). There I gave courses on theoretical computer science and automated theorem proving.

In October 1987 I was appointed associate professor for Mathematics and Theoretical Computer Science at the University of Technology in Vienna; in 1998 I received the position of full professor at the same institution. My task is to give lectures on theoretical computer science and mathematical logic, and to supervise teaching and research in these fields. From 1991 to 2003 I was head of the Institute of Computer Languages and in particular of the formal logic group where the main research is focussed on automated deduction.

From October 1, 2001 to December 31, 2001 I worked as a visiting researcher at the Laboratoire Leibniz at IMAG in Grenoble, France (rank: Directeur de Recherche). The main purpose of the visit was the completion of a common book project (title: Automated Model Building) together with Ricardo Caferra and Nicolas Peltier.

Tragic death of my wife Marjan in September 2003 in California.

From 2004 -2013 local coordinator of the international Master study *Computational Logic* (in the Erasmus Mundus programme) at the TU-Vienna.

Birth of my grandsons Attila (on December 14, 2009), Felix (on May 29, 2012) and of Gabor (on September 7, 2018).

Retired since October 1, 2017.

1   PUBLICATIONS

1.1   Books and Monographs

1. Resolution Methods for the Decision Problem, Lecture Notes in Artificial Intelligence 679 (1993) (with C. Fermüller, T. Tammet, N. Zamov).

2. The Resolution Calculus, EATCS Texts in Theoretical Computer Science, Springer (1997).

3. Automated Model Building, Applied Logic Series 31, Kluwer (2004) (with R. Caferra, N. Peltier).

4. Methods of Cut-Elimination, Trends in Logic vol. 34, Springer, (2011) (with M. Baaz).

5. *(as editor)*: Computational Logic and Proof Theory, Proc. of the 3rd Kurt Gödel Colloquium, KGC'93, Lecture Notes in Computer Science 713 (1993) (co-editors: G. Gottlob, D. Mundici).

6. *(as editor)*: Computational Logic and Proof Theory, Proc. of the 5th Kurt Gödel Colloquium, KGC'97, Lecture Notes in Computer Science 1289 (1997) (co-editors: G. Gottlob, D. Mundici).

7. *(as editor)*: Automated Reasoning, Proc. of the First Joint Conference on Automated Reasoning, IJCAR 2001, Lecture Notes in Artificial Intelligence 2083 (2001) (co-editors: R. Goré, T. Nipkow).

1.2   Journal Articles and Chapters in Books

1. Aufzählung subrekursiver Klassen und konstruierende Automaten, Sitzungsberichte der Öst. Akad. der Wiss. Math.Nat. Klasse 42, 23–46 (1979) (with W. Ettl).

2. Complexity of Index Sets and Translating Functions, Fundamenta Informaticae vol. III(2), 181–188 (1980).

3. Fiducial Intervals for the Waiting Time in Batch- and Time-Sharing Systems, Computing 28, 289–303 (1982).

4. Versuch einer inhaltlichen Analyse des Mathematischen Funktionsbegriffes, Philosophia Naturalis vol. 20(2), 134–146 (1983) (with H.D. Schwabl).

5. Decision Algorithms for the Associativity of Latin Squares, Intern. Journal of Computer Mathematics 12, 217–226 (1983).

6. Subsumptionsalgorithmen mit Faktorisierung, Sitzungsber. der Öst. Akad. der Wiss. Math.Nat. Klasse 192, 45–66 (1983).

7. Enumerations of Subrecursive Classes and Self-Reproducing Automata I: Effective Translations and Decidable Index Sets, Sitzungsber. der Öst. Akad. der Wiss. Math.Nat. Klasse 193, 19–44 (1984).

8. Enumerations of Subrecursive Classes and Self-Reproducing Automata II: Index Complexity and Translation Complexity, Sitzungsber. der Öst. Akad. der Wiss. Math.Nat. Klasse 193, 135–158 (1984).

9. Enumerations of Subrecursive Classes and Self-Reproducing Automata III: Self-Reproducing Automata of Subrecursive Type, Sitzungber. der Öst. Akad. der Wiss. Math.Nat. Klasse 193, 289–317 (1984).

10. On the Efficiency of Subsumption Algorithms, Journal of the ACM 32(2), 280–295 (1985) (with G. Gottlob).

11. Die Anwendung starker Reduktionsregeln im Automatischen Beweisen, Sitzungsber. der Österr. Akad. d. Wiss II 194, 287–307 (1985) (with M. Baaz).

12. Implication Algorithms for Classes of Horn Clauses, in: Statistik, Informatik und Ökonomie 172–189 Springer (1988).

13. On Some Formal Problems in Resolution Theorem Proving, Yearbook of the Kurt Gödel Society 1988, 35–52 (1988).

14. On Different Concepts of Resolution, Zeitschr. f. Math. Logik und Grundlagen d. Math. 35, 71–77 (1989).

15. Complexity of Resolution Proofs and Function Introduction, Annals of Pure and Applied Logic 57, 181–215 (1992) (with M. Baaz).

16. Deciding Clause Classes by Semantic Clash Resolution, Fundamenta Informaticae 18, 163–182 (1993).

17. On Skolemization and Proof Complexity, Fundamenta Informaticae 20(4), 353–379 (1994)(with M. Baaz).

18. Methods of Functional Extension, in Collegium Logicum - Annals of the Kurt Gödel Society vol.1, Springer Wien New York, 87–122 (1995) (with M. Baaz).

19. Hyperresolution and Automated Model Building, Journal of Logic and Computation 6(2), 173–203 (1996) (with C. Fermüller).

20. Completeness of a First-Order Temporal Logic with Time Gaps, Theoretical Computer Science 160, 241–270 (1996) (with M. Baaz and R. Zach).

21. Decision Procedures and Model Building in Equational Clause Logic, Journal of the Interest Group in Pure and Applied Logic (IGPL) Vol.6 No.1, 17–41 (1998) (with C. Fermüller).

22. Extension Methods in Automated Deduction, in "Automated Deduction, a Basis for Application", eds. W. Bibel, P. Schmitt, vol. II, 331–359, Kluwer (1998) (with M. Baaz, U. Egly).

23. Cut Normal Forms and Proof Complexity, Annals of Pure and Applied Logic 97, 127–177 (1999) (with M. Baaz).

24. Resolution and the Decision Problem, in *Logic and Foundations of Mathematics*, eds. A. Cantini, E. Casari and P. Minari, 249–269 Kluwer (1999).

25. Cut-Elimination and Redundancy-Elimination by Resolution, Journal of Symbolic Computation 29, 149–176 (2000) (with M. Baaz).

26. Resolution Decision Procedures, in *Handbook of Automated Reasoning*, eds. A. Robinson and A. Voronkov, vol. II, chapter 25, 1793–1849, Elsevier Science Publishers (2001) (with C. Fermüller, U. Hustadt and T. Tammet).

27. Normal Form Transformations, in *Handbook of Automated Reasoning*, eds. A. Robinson and A. Voronkov, vol. I, chapter 5, 275–333, Elsevier Science Publishers (2001) (with M. Baaz and U. Egly).

28. The Resolution Principle, in the Handbook of Philosophical Logic, vol. 12, 87–174, eds. D. Gabbay and F. Guenther, Kluwer Academic Publishers (2004) (with C. Fermüller).

29. Towards a Clausal Analysis of Cut-Elimination, *Journal of Symbolic Computation*, 41, pp. 381–410, (2006) (with M.Baaz).

30. Event-Related Outputs of Computations in P Systems, *Journal of Automata, Languages and Combinatorics* 11, pp. 263–278, (2006) (with M. Cavaliere, R. Freund and G. Paun).

31. Towards an Algorithmic Construction of Cut-Elimination Procedures, *Mathematical Structures in Computer Science* 18, 81–105, (2008) (with Agata Ciabattoni) .

32. CERES: An Analysis of Fürstenberg's Proof of the Infinity of Primes, *Theoretical Computer Science* 403, pp. 160–175, (2008) (with M. Baaz, S. Hetzl, C. Richter and H. Spohr)

33. How to Acknowledge Hypercomputation? *Complex systems* 18, pp. 131–143, (2008) (with Günter Schachner and Karl Svozil).

34. Fast Cut-Elimination by CERES, in *Proofs, Categories and Computations*, College Publications, 2010 (with M. Baaz).

35. CERES in Higher-Order Logic, *Annals of of Pure and Applied Logic* 162, pp. 1001–1034 (2011) (with S. Hetzl and D. Weller).

36. CERES for First-Order Schemata. CoRR abs/1303.4257 (2013) (with C. Dunchev, M. Rukhaia, D. Weller).

37. Cut-elimination: Syntax and Semantics. *Studia Logica* 102(6): 1217-1244 (2014) (with M. Baaz).

38. Algorithmic Introduction of Quantified Cuts. *Theoretical Computer Science* 549: 1-16 (2014) (with S. Hetzl, D. Weller, G. Reis)

39. On Proof Mining by Cut-Elimination. In *All about Proofs, Proofs for All*, eds. D. Delahaye and B.Woltzenlogel Paleo. College Publications, series *Mathematical Logic and Foundations*, vol. 55, 173-200 (2015).

40. On the Complexity of Translations from Classical to Intuitionistic Proofs. *IFCoLog Journal of Logics and their Applications*, 4(4), pp. 901–938 (2017) (with M. Baaz).

41. Ceres in intuitionistic logic. *Annals of Pure and Applied Logic* 168, pp. 1783–1836 (2017) (with D. Cerna, G. Reis, S. Wolfsteiner)

42. CERES for first-order schemata. *Journal of Logic and Computation* 27(7): 1897-1954 (2017) (with N. Peltier, D. Weller)

43. The problem of Pi-2-cut-introduction. *Theoretical Computer Science* 706: 83-116 (2018) (with M. Lettmann)

44. Extraction of Expansion Trees. *Journal of Automated Reasoning* 62(3), 393-430 (2019) (with A. Lolic)

45. On the Generation of Quantified Lemmas. *Journal of Automated Reasoning* 63(1), 95-126 (2019) (with Gabriel Ebner, Stefan Hetzl, Giselle Reis, Daniel Weller)

1.3 Edited Volumes of Journals

Special Issue *Cut-elimination in Classical and Nonclassical Logic*, Studia Logica 82. No.1, 2006 (Springer).

1.4 Contributions to Conference Proceedings

1. Unsolvability in Systems of Constructing Automata, Progress in Cybernetics and Systems Research vol. III Hemisphere Publ. Corp. John Wiley & Sons, 117–124 (1978).

2. Enumerations of Subrecursive Classes and Generations of Automata, Progress in Cybernetics and Systems Research vol VIII Hemisphere Publ. Corp. John Wiley & Sons, 243–250 (1982) (with W. Ettl).

3. Fast Subsumption Algorithms, EUROCAL 85, Lecture Notes in Computer Science 204, 64–77 (1985) (with G. Gottlob).

4. Eine Methode zur automatischen Problemreduktion, Informatik Fachberichte 106, 154–163 (1985) (with M. Baaz).

5. Strong Splitting Rules in Automated Theorem Proving, in: Proc. EUROCAL 87, Lecture Notes in Computer Science 378, 424–425 (1989) (extended abstract, with M. Baaz).

6. Deciding Horn Clause Implication Problems by Ordered Semantic Resolution, Computational Intelligence II North Holland, 19–26 (1990) (with G. Gottlob).

7. Deciding Horn Classes by Hyperresolution, CSL'89 Lecture Notes in Computer Science 440, 225–241 (1990).

8. A Strong Problem Reduction Method Based on Function Introduction, ISSAC'90 ACM Press, Addison Wesley, 30–37 (1990) (with M. Baaz).

9. Model Building by Resolution, Proc. of the CSL'92, Lecture Notes in Computer Science 702, 134–148 (with C. Fermüller) (1993).

10. A Non-Elementary Speed-Up in Proof Length by Structural Clause Form Transformation, in: Proceedings of LICS'94 (Paris 1994), IEEE Computer Science Press, 213–219 (1994) (with M. Baaz, C. Fermüller).

11. Incompleteness of a First-order Gödel Logic and some Temporal Logics of Programs, CSL'95, Springer Lecture Notes in Computer Science 1092, 1–15 (1996) (with M. Baaz and R. Zach).

12. Fast Cut-Elimination by Projection, in the Proc. of the CSL'96, Springer Lecture Notes in Computer Science 1258, 18–33 (1997) (with M. Baaz).

13. Cut-Elimination by Resolution, Intern. Workshop on First-Order Theorem Proving FTP'97, RISC-Linz Report Series No. 97-50, 7–10 (1997) (Extended Abstract, with M. Baaz).

14. System Description: CutRes 0.1: Cut Elimination by Resolution, in the Proc. of the CADE-16, Springer Lecture Notes in Artificial Intelligence 1632, 212–216 (1999) (with M. Baaz and G. Moser).

15. Decision Procedures and Model Building or How to Improve Logical Information in Automated Deduction, in: Automated Deduction in Classical and Non-Classical Logics, Springer Lecture Notes in Artificial Intelligence 1761, 62–79 (2000).

16. Comparing the Complexity of Cut-Elimination Methods, in: Proof Theory in Computer Science, Springer Lecture Notes in Computer Science 2183, 49–67 (2001) (with M. Baaz).

17. Resolution Theorem Proving: A Logical Point of View, in: Logic Colloquium '01, Lecture Notes in Logic 20, 3-42, Association of Symbolic Logic (2005).

18. CERES in Many-Valued Logics, in the Proc. of LPAR 2004, Springer Lecture Notes in Artificial Intelligence 3452, 1-20 (2005) (with M. Baaz).

19. Cut -Elimination: Experiments with CERES, in the Proc. of LPAR 2004, Springer Lecture Notes in Artificial Intelligence 3452, 481-495 (2005) (with M. Baaz, S. Hetzl, C. Richter, H. Spohr).

20. Proof Transformation by CERES, in the Proceedings of *Mathematical Knowledge Management 2006*, Springer Lecture Notes in Computer Science 4108, 82-93 (2006) (with M. Baaz, S. Hetzl, C. Richter, H. Spohr).

21. Proof Transformations and Structural Invariance, in *Algebraic and Proof Theoretic Aspects of Non-classical Logics*, Lecture Notes in Computer Science 4460, 201-230 (2007) (with Stefan Hetzl).

22. Herbrand Sequent Extraction, in AISC/Calculemus/MKM 2008, Lecture Notes in Computer Science 5144, 462-477 (2008) (with S. Hetzl, D. Weller, B. Woltzenlogel Paleo).

23. Proof Analysis with HLK, CERES and ProofTool: Current Status and Future Directions. Proceedings of the CICM Workshop on Empirically Successful Automated Reasoning in Mathematics, CEUR Workshop Proceedings Vol-378 (2008), ISSN 1613-0073 (with S. Hetzl, D. Weller, B. Woltzenlogel Paleo).

24. A Clausal Approach to Proof Analysis in Second-Order Logic, Proceedings of the LFCS 2009, Lecture Notes in Computer Science 5407, 214-229 (2009) (with S. Hetzl, D. Weller, B. Woltzenlogel Paleo).

25. System Description: The Proof Transformation system CERES, Proceedings of IJCAR'10, Lecture Notes in Computer Science 6173, 427-433 (2010) (with T. Dunchev, T. Libal, D. Weller, B. Woltzenlogel Paleo).

26. Towards Algorithmic Cut-Introduction, LPAR-18, Lecture Notes in Computer Science 7180, 228-242 (2012) (with S. Hetzl, D. Weller).

27. Towards CERes in Intuitionistic Logic, CSL 2012, 485-499 (2012) (with G. Reis, B. Woltzenlogel Paleo).

28. PROOFTOOL: a GUI for the GAPT Framework. UITP 2013: 1-14 (2013) (with C. Dunchev, T. Libal, M.Riener, M. Rukhaia, D. Weller, B. Woltzenlogel Paleo).

29. Introducing Quantified Cuts in Logic with Equality. IJCAR 2014: 240-254 (2014) (with S. Hetzl, G. Reis, J. Tapolczai, D. Weller)

30. A Note on the Complexity of Classical and Intuitionistic Proofs. LICS 2015, 657-666 (with M. Baaz, G. Reis)

31. Cut-Elimination and Proof Schemata. In Logic, Language and Computation, 117-136, Lecture Notes in Computer Science 8984 (2015) (with C. Dunchev, M. Rukhaia, D. Weller)

32. Schematic Cut Elimination and the Ordered Pigeonhole Principle. IJCAR 2016: 241-256 (2016) (with D. Cerna).

33. A Sequent-Calculus Based Formulation of the Extended First Epsilon Theorem. LFCS 2018: 55-71 (2018) (with M. Baaz, A. Lolic)

2   Invited Talks and Lectures (1991 - 2008)

1. *Hyperresolution as Decision Procedure*, Estonian Academy of Sciences, Tallinn, Estonia, February 1991.

2. *Complexity of Resolution and Function Introduction*, Estonian Academy of Sciences, Tallinn, Estonia, February 1991.

3. *Resolution Methods in the Decision Problem*, Stefan Banach International Center, Polish Academy of Sciences, Warsaw, November 1991.

4. *Semantic Clash Resolution as Decision Procedure*, Institute for Cybernetics, Academy of Sciences, Kiew, Ucraine, May 1992.

5. *Complexity of Resolution Proofs and Function Introduction*, Institute for Cybernetics, Academy of Sciences, Kiew, Ucraine, May 1992.

6. *Resolution Decision Procedures and Automated Model Building*, Seminar on *Deduction*, Dagstuhl, Germany, March 1993.

7. *Resolution Decision Procedures and Automated Model Building*, University of Milan, Italy, May 1993.

8. *Resolution Methods for the Decision Problem*, University of Kazan, Russia, October 1993.

9. *Methods of Functional Extension*, University of Florence, Italy, May 1994.

10. *Resolution Decision Procedures*, University of Udine, Italy, May 1994.

11. *Resolution Decision Procedures*, CADE-12, Nancy, Frankreich, Juli 1994 (Tutorial)

12. *Model Building by Hyperresolution*, CADE-12, Nancy, Frankreich, Juli 1994. (Workshop)

13. *Functional Extension and Proof Complexity*, Workshop "Proof-Theory and Proof-Search", Université Paris 7, Frankreich, November 1994.

14. *Automated Model Building*, Workshop "Proof-Theory and Proof-Search", Université Paris 7, Frankreich, November 1994.

15. *Resolution and the Decision Problem*, Workshop "New Trends in Theoretical Informatics", Innsbruck, March 1995.

16. *Function Introduction in Clause Logic*, Seminar *Deduction*, Dagstuhl, March 1995.

17. *The Resolution Calculus*, one-week lecture at the University of Udine, Mai 1995.

18. *Hyperresolution and Automated Model Building*, Workshop "Logik in der Informatik", Karlsruhe, Germany June 1995.

19. *Resolution and the Decision Problem*, Conference on Logic, Methodology and Philosophy of Science, Florence, August 1995.

20. *Cut-Normalization and Proof Complexity*, Workshop on Proof Theory, Paris, November 1995.

21. *Automated Model Building by Resolution*, University of Milan, Italy, April 1996.

22. *Automated Model Building: Representation, Construction, Evaluation*, State Univ. of New York at Stony Brook, USA, August 1996.

23. *Extension Methods in Automated Deduction*, University Paris XII , November 1996.

24. *Automated Model Building: Representation, Construction and Evaluation*, Dagstuhl, Germany, February 1997.

25. *Resolution Decision Procedures and Automated Model Building*, University of Brno, Czech Republic, October 1997.

26. *Cut-elimination by Resolution*, INTAS Meeting, Corsica, France, October 1997.

27. *Model Building by Hyperresolution*, Grenoble, France, June 1998.

28. *Resolution Decision Procedures and Automated Model Building*, Tallinn, Estonia, October 1998.

29. *Cut Normal Forms and Proof Complexity*, Collegium Logicum on *Complexity*, Vienna, October 1998.

30. *Normal Forms and Proof Complexity*, Tübingen, Germany, October 1998.

31. *Automated Model Building or How to Improve Locical Information in Theorem Proving*, Workshop FTP'98, Vienna, November 1998.

32. *Cut-Elimination by Resolution*, Seminar *Deduction*, Internationales Begegnungszentrum Dagstuhl, Germany, March 1999.

33. *Automated Model Building in Equational Clause Logic*, Workshop on *Model Building*, Grenoble, France, October 1999.

34. *Cut-Elimination by Resolution*, Collegium Logicum on *Proof Theory*, Vienna, November 1999.

35. *Syntactic Model Building by Calculi*, CADE-Workshop on Model Computation, Pittsburgh, USA, June 2000.

36. *Decision Procedures and Model Building by Meta-term Inference*, Summer Retreat on Automated Deduction, Max Planck Institute for Computer Science, Saarbrücken, Germany, August 2000.

37. *Meta-Term Inference*, Seminar *Deduction*, Internationales Begegnungszentrum Dagstuhl, Germany, March 2001.

38. *Resolution Theorem Proving*, Logic Colloquium 2001, Vienna, Austria, August 2001 (tutorial, 3 hours).

39. *Cut-Elimination by Resolution*, Seminar *Proof Theory in Computer Science*,Internationales Begegnungszentrum Dagstuhl, Germany, October 2001.

40. *Clause Evaluation over Herbrand Interpretations*, Seminar *Deduction and Infinite-state Model Checking*, Internationales Begegnungszentrum Dagstuhl, Germany, April 2003.

41. *Cut-Elimination by Resolution*, First Vienna-Florence Workshop on Logic and Computation, University of Florence, Italy, January 2004.

42. *Cut-Elimination by Resolution*, University of Utrecht, The Netherlands, September 2004.

43. CERES: *Cut-Elimination by Resolution*, University Paris VII, France, December 2004.

44. CERES: *Cut-Elimination by Resolution*, LPAR 2004, Montevideo, Uruguay, March 2005.

45. *CERES in many-valued logics*, Second Vienna-Florence Workshop on Logic and Computation, University of Florence, Italy, November 2005.

46. *CERES: Cut-elimination by Resolution*, MANYVAL 06, Gargnano, Italy, March 2006

47. *CERES: Analysis of the fifth Proof of the Infinity of Primes*, Workshop on "Non-classical Logics: from Foundations to Applications", Pisa, Italy April 2008.

3   Courses given in Summer Schools

1. *Resolution Theorem Proving*, European Summer School on Logic, Language and Information, Colchester, UK, August 1992.

2. *Resolution and Proof Complexity*, Summer School on Automated Deduction, Chambery, France, July 1994.

3. *Methods of Cut-Elimination*, European Summer School on Logic, Language and Information, Utrecht, The Netherlands (August 1999).

4. *Computational Analysis of Proofs*, European Summer School on Logic, Language and Information, Edinburgh, Scotland (August 2005).

5. *Methods of Cut-Elimination*, Ninth International Tbilisi Summer School in Logic and Language, Tbilisi, Georgia (October 2013).

6. *Methods of Cut-Elimination*, International Summer School for Proof Theory in First-Order Logic, Funchal, Madeira (August 2017).

4   Work in Program Committees

4.1   Chair of a Program Committee

1. *Computational Logic and Proof Theory*, 3rd Kurt Gödel Colloquium, Brno, Czech Republic, August 1993.

2. *Computational Logic and Proof Theory*, 5th Kurt Gödel Colloquium, Vienna, Austria, August 1997.

3. *IJCAR'01* International Joint Conference on Automated Reasoning, Siena, Italy, June 2001 (cochairs: R. Gore, T. Nipkow).

4. *ESSLLI 2003* European Summer School in Logic, Language and Information, Vienna, August 2003 (local cochair, chair: Ivana Kruijff-Korbajova)

4.2   Member of a Program Committee

1. *LPAR'92*, Intern. Conference on Logic Programming and Automated Reasoning, St. Petersburg, Russia, July 1992.

2. *CADE-12* 12th International Conference on Automated Deduction, Nancy, France, June/July 1994.

3. *CADE-13* 13th International Conference on Automated Deduction, New Brunswick, NJ, USA, July/August 1996.

4. *Gödel'96* Logical Foundations of Mathematics, Computer Science and Physics – Kurt Gödels Legacy, Brno, Czech Republic, August 1996.

5. *CADE-14* 14th International Conference on Automated Deduction, Townsville, Queensland, Australia, July 1997.

6. Intern. Conference *TABLEAUX'97*, Pont-à-Mousson, France, May 1997.

7. *FTP'97*, International Workshop on First-Order Theorem Proving, Linz, Austria, October 1997.

8. *CSL'98*, International Conference on Computer Science Logic, Vienna, Austria, September 1998.

9. *CADE-16*, 16th International Conference on Automated Deduction, Trento, Italy, July 1999.

10. *CADE-18*, 18th International Conference on Automated Deduction, Copenhagen, Denmark, July 2002.

11. *Horizons of Truth*, Gödel Centenary 2006, Vienna, Austria, April 2006.

12. *LPAR'08*, 15th International Conference on Logic for Programming, Artificial Intelligence and Reasoning, Doha, Qatar, November 2008.

13. *FTP 2009*, International Workshop on First-Order Theorem Proving Oslo, Norway, July 2009.

14. *CADE-22*, 22th International Conference on Automated Deduction, Montreal, Canada, August 2009.

15. *CADE-23*, 23th International Conference on Automated Deduction, Wroclaw, Poland, July-August 2011.

16. *Turing 100*, Turing Centenary 2012, Manchester, Great Britain, June 2012.

17. *NCL 16*, Nonclassical Logic 2016, Lodz, Poland, September 2016.

18. *LPAR-21* 21th International Conference on Logic for Programming, Artificial Intelligence and Reasoning,Maun Botswana, 7-12th May 2017.

5 Projects and International Cooperations

1. Project "Automated Model Building for First-Order Logic with Equality" supported by the Austrian Science Fund, November 1996 - November 1998, nr. P11624-MAT.

2. "New Methods in Program Synthesis and Automated Deduction", Cooperation with the University Paris VII, 1994 - 1996, bilateral exchange project France - Austria, nr. 94.43.02.

3. ”Automated Model Building”, Cooperation with IMAG Grenoble, 1997 - 1999, Action Integree AMADEE, bilateral project France - Austria, nr. 9j/97.

4. INTAS Project ”Automated Deduction and Program Synthesis” (head of the project A. Voronkov), cooperation Moscow -Kiev - St. Petersburg - Kazan - Uppsala - Paris - Edinburgh - Vienna nr. INTAS-RFBR 95-0095, 1997-1998.

5. ”Designing Proof Tactics via Automated Model Building”, Cooperation with IMAG Grenoble, 2002 - 2004, Action Integree AMADEE, bilateral project France - Austria, nr. 15/2002.

6. Project ”Proof Transformation by Resolution”, supported by the Austrian Science Fund, February 2003 - February 2005, nr. P16264-N05.

7. Project ”Automated Analysis of Mathematical Proofs”, supported by the Austrian Science Fund, March 2005 - May 2007, nr. P 17995-N12.

8. Project ”Computer-Aided Analysis of Inductive and Second Order Proofs”, supported by the Austrian Science Fund, June 2007 - December 2009 nr. P 19875-N18.

9. Project ”Proof Theoretical Applications of CERES”, supported by the Austrian Science Fund, January 2010 - May 2012, nr. P 22028-N13.

10. International Project ”About Schemata and Proofs”, together with the Laboratory of Informatics of Grenoble (France), supported by the Austrian Science Fund, January 2010 - December 2012, nr. I 383-N18.

11. Project ”Proof Transformations via Cut-Elimination in Intuitionistic Logic”, supported by the Austrian Science Fund, May 2012 - July 2015, nr. P 24300-N18.

Vienna, November 4, 2019

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