# Talks

Egon Börger

## 1 Talks Fall 1971 – Summer 1989 (Logic and Complexity)

1. **A new method for the construction of reduction classes in first-order classical predicate logic.**
   Laboratorio di Cibernetica, CNR, Arco Felice (Napoli). Sept. 1971.

2. **Entscheidungsprobleme für Klassen von Kromformeln.**
   *Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 16.04. - 22.04.1972 (s. Tagungsberichte 16 (1972) 2 - 3.)

3. **Problemi di decisione per calcoli logici ed automi.**
   Gruppo di Cibernetica e Logica Matematica, Università di Napoli, Febr. 1973.

4. **Problemi di decisione per la logica dei predicati e loro rapporto con la logica dei calcolatori.**
   Istituto di Matematica, Università di Genova, 08.03. - 09.03.1973.

5. **Per una teoria delle fallacie dal punto di vista della logica simbolica.**
   Goethe-Institut, *Associazione Filosofica Ligure,* Genua, 07.03.1973.

6. **Reduktion des Entscheidungsproblems auf Klassen von Kromformeln mit einer Prädikatenkonstanten und Funktionszeichen.**
   *Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 08.04. - 14.04.1973 (s. Tagungsberichte 13 (1973) 9).

7. **The undecidability of $AE^{\infty}A$-formulae with binary disjunctions.**
   *Logic Colloquium,* Bristol, 16.07. - 21.07.1973. (s. abstract in: The Journal of Symbolic Logic 39 (1974) 412 - 413).

8. **Das Problem der Begründung der Mathematik bei Frege im Lichte des heutigen Standes der mathematischen Grundlagenforschung.**
   Invited Lecture, *Arbeitstagung über Freges Bedeutung für die Entstehung und heutige Gestalt der mathematischen Grundlagenforschung,* Bad Homburg, 08.12. - 09.12.1973.

9. **Principi euristici ed intelligenza artificiale.**
   Invited Lecture, *Il futuro della mente,* Perugia, 07.12. - 09.12.1973.

10. **Die Komplexität einiger prädikatenlogischer Probleme in der Kleene-Mostowski-Hierarchie.**
    *Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 21.03. - 27.03.1974 (s. Tagungsbericht 17, 1974, 9 - 10).

11. **Philosophie der Mathematik und das Problem der Begründung bei Frege im Lichte gegenwärtiger mathematischer Grundlagenforschung.**
    Leibniz-Gesellschaft, Hannover, 29.04.1974.

12. **Kompliziertheit logischer Entscheidungsprobleme.**
    Mathematisches Institut, Technische Universität Hannover, 30.04.1974.

13. **Ein einfacher Beweis für die Kreativität der Prädikatenlogik.**
    Institut für math. Logik und Grundlagenforschung, Universität Münster, Mai 1974.

14. **Ein einfacher Beweis für die Kreativität formaler Systeme.**
    Institut für angewandte Informatik und formale Beschreibungsverfahren, Universität Karlsruhe, 10.05.1974.

15. **Elementary proof of the unsolvability of some standard algorithmic problems.**
    *Intern. Summer Institute and Logic Colloquium,* Kiel 17.07. - 03.08.1974 (s. abstract in: The Journal of Symbolic Logic 41 (1976) 263 - 264).

16. **Einige formale Systeme zur Berechenbarkeit von Funktionen.**
    - Mathematisches Institut, Universität Tübingen, 09.10.1974.
    - Institut für Mathematik, Technische Hochschule Aachen, 15.10.1974.

17. (a) **Complessità di modelli.**
    (b) **Complessità di metodi di decisione.**

(c) **Complessità di problemi di decisione di classi di espressioni.**

Invited Lectures, *Coloquio sobre logica Simbolica, Centro de Calculo de la Universidad Complutense,* Madrid, 19.02. - 21.02.1975.

18. **On interpretations of register machine programs with applications for decision problems.**
*Incontro su complessità di calcolo, codici e liuguaggi formali,* Laboratorio di Cibernetica, CNR, Arco Felice, Neapel, 13.03. - 14.03.1975.

19. **Concetti di semplicità e di riducibilità di sistemi per l'elaborazione di informazioni.**
*Seminario di Storia e Filosofia della Scienza,* Universität Florenz, 18.04.1975.

20. **Metodi di riduzione tra calcoli logici e sistemi combinatori.**
Logik Kolloquium, Universität Florenz, 19.04.1975.

21. **Sur les problèmes de décision pour les machines de Minsky, les systèmes semithueiens et les grammaires de type zéro.**
*Seminaire international d'été et colloque international de logique,* Clermont-Ferrand, 15.07. - 26.07.1975 (s. abstract in: The Journal of Symbolic Logic 42 (1977) 128).

22. (a) **Die Erarbeitung des Begriffs der formalen Sprache.**

(b) **Die Rolle der formalen Sprachen in der Informatik und Linguistik.**

Landesinstitut für schulpädagogische Bildung in Düsseldorf, Abteilung III für Mathematik und Naturwissenschaften, Landesstelle MNU, Recklinghausen, 02.10. - 03.10.1975.

23. **Die Unlösbarkeit des zehnten Hilbertschen Problems.**
Fachbereich Mathematik, Universität Osnabrück, 12.11.1975.

24. **Eine einfache Methode zur Bestimmung der Unlösbarkeitsgrade der Entscheidungsprobleme kombinatorischer Systeme und formaler Sprachen.**
*Automatentheorie und formale Sprachen,* Math. Forschungsinstitut Oberwolfach, 23.11. - 29.11.1975 (s. Tagungsbericht 46, 1975).

25. **Komplexität kombinatorischer Entscheidungsprobleme.**
Informatik Kolloquium, Institut für Mathematik, Technische Hochschule Aachen, 22.01.1976.

26. **Über Entscheidungsprobleme formaler Systeme: Logikkalküle, Berechenbarkeitsformalismen, Chomsky-Grammatiken.**
Organisationseinheit Mathematik und Naturwissenschaften, Gesamthochschule Kassel, 30.01.1976.

27. **Diophantische Gleichungen: Positive Auswirkungen der Unlösbarkeit des 10. Hilbertschen Problems.**
Habilitationskolloquium. Fachbereich Mathematik, Universität Münster, 11.02.1976.

28. **Assiomatizzazione di proprietà di programmi e problemi di decisione.**
Institut für Informationsverarbeitung (IEI), CNR, Pisa, 01.04.1976.

29. **Darstellungen rekursiver Unlösbarkeitsgrade durch Entscheidungsprobleme formaler Systeme.**
*Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 11.04. - 17.04.1976 (s. Tagungsbericht 16 (1976) 2 - 3).

30. (a) **Généralités sur les problémes de décision.**

(b) **Utilisation des machines à registres pour le traitment des problèmes de décision.**

*Groupe d'etudes d'informatique théorique,* Institut de Programmation, Université de Paris VI, 27.04.1976.

31. **Quelques réflexions sur les rapports entre la logique et l'informatique.**
Institut de Programmation, Université de Paris VI, 29.04.1976.

32. **Gedanken zur aristotelischen Irrtumslehre aus der Sicht der Berechenbarkeitstheorie.**
Institut für Philosophie, Universität Salzburg, 16.06.1976.

33. **Logische Entscheidungsverfahren für Eigenschaften von Programmen.**
Informatik Kolloquium, Institut für Informatik, Universität Stuttgart, 22.06.1976.

34. **Einige Bemerkungen zu Methoden zum Nachweis von Programmeigenschaften.**
Informatik Kolloquium, Institut für Informatik der Universität Bonn, 25.06.1976.

35. **Ein Satz über die rekursiv aufzählbare Gradkomplexität von Entscheidungsproblemen Postscher Korrespondenzklassen und formaler Sprachen.**
Institut für mathematische Logik und Grundlagenforschung, Universität Münster, 09.07.1976.

36. **Many-one degrees associated with decision problems of register machines, semi-Thue systems and single premise one-variable Post canonical forms over one-letter alphabets.**
*Logic Colloquium '76,* Oxford, 19.07. - 30.07.1976.

37. **Two new reduction classes in Krom formulae with predicate and function symbols.**
*Logic Colloquium '76,* Oxford, 19.07. - 30.07.1976.

38. **A new general approach to the theory of the many-one equivalence of decision problems for algorithmic systems.**
Invited Lecture, *Word problems in algebra,* (S. I. Adjan, W. W. Boone, G. Higman), Math. Institute, University of Oxford, Oxford, 28.06. - 30.07.1976.

39. **Über die rekursiv aufzählbare Grad-Komplexität von Klassen Postscher Korrespondenzprobleme.**
Math. Institut, Universität Linz, 31.03.1977;
*Mathematische Logik,* (W. Felscher, E. Specker), Math. Forschungsinstitut Oberwolfach, 24.04. - 30.04.1977 (s. Tagungsbericht 17 (1977) 2 - 3).

40. **Entscheidungsprobleme für algorithmische Systeme.**
Abteilung Informatik, Universität Dortmund, 24.05.1977.

41. **Über Entscheidungen von Programmeigenschaften mit logischen Mitteln.**
Abteilung Informatik, Universität Dortmund, 24.05.1977.

42. **Axiomatisierungen von Programmeigenschaften und Entscheidungsprobleme.**
Fachbereich Mathematik, Universität Frankfurt/Main, 27.05.1977.

43. **Sulla complessità di problemi di decisione per sistemi algoritmici.**
*Corso di Informatica Teorica,* Scuola Normale di Pisa, Cortona, 01.09.1977.

44. **Il problema di Cook e lo Spektralproblem.**
*Corso di Informatica Teorica,* Scuola Normale di Pisa, Cortona, 02.09.1977.

45. **Bemerkungen zum Erreichbarkeitsproblem für Petri Netze und Postsche Faktorenersetzungssysteme.**
Informatik Kolloquium, Universität Dortmund, 10.01.1978.

46. **Das Erreichbarkeitsproblem für Petri Netze und Entscheidungsprobleme in der Skolem-Arithmetik.**
Institut für Informatik, Universität Hamburg, 17.01.1978.

47. **Decision problems in the extended Presburger and Skolem arithmetik.**
*Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 02.04. - 08.04.1978.

48. **The r.e. complexity of decision problems for commutative Semi-Thue systems with recursive rule set.**
- *Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 02.04. - 08.04.1978;
- Institut für math. Logik und Grundlagenforschung, Universität Münster (Co-Autor H. Kleine Büning), 05.05.1978;
- *Intern. Mathem. Congr. Helsinki,* (Co-Autor H. Kleine Büning), 15.08. - 23.08.1978.

49. **Complexity preserving reduction methods for r.e. and for subrecursive combinatorial decision problems.**
*Intercity Logic Seminar,* Math. Institut, Universität Amsterdam, 21.04.1978.

50. **Bemerkung zu einem Reduktionstyp von Y. Gurevich.**
Institut für math. Logik und Grundlagenforschung, Universität Münster, 12.05.1978.

51. **The reachability problem for Petri nets and decision problems for Skolem arithmetic.**
*Workshop über Petrinetze,* Universität Erlangen-Nürnberg (Co-Author H. Kleine Büning), 17.05. - 19.05.1978.

52. **Hornkomplexität Boolescher Funktionen und das Cooksche Problem.**
Institut für Informatik, Universität Kaiserslautern, 26.05.1978;
*Mathematische Logik,* Math. Forschungsinstitut Oberwolfach (Co-Author S. O. Aanderaa), 02.04. - 08.04.1978.

53. **On the r. e. complexity of combinatorial decision problems.**
Math. Institut, Universität Oslo, 14.06.1978.

54. **Das Präfixproblem für Kromformeln mit Identität.**
Institut für Math. Logik, Universität Münster, 07.07.1978.

55. **Ein Zusammenhang zwischen dem Erreichbarkeitsproblem für Petri-Netze und dem Entscheidungsproblem einer Klasse von Formeln der Skolem Arithmetik.**
Informatik Kolloquium, Fakultät für Informatik, Universität Karlsruhe, 30.10.1978.

56. **The Reachability Problem for Petri Nets and Decision Problems in Presburger and Skolem Arithmetic.**
Invited Lecture, *5th Scandinavian Logic Symposium,* Aalborg (DK), 17.01. - 19.01.1979.

57. **Das Entscheidungsproblem für Klassen von Kromformeln mit Identität.**
*Math. Logik,* Math. Forschungsinstitut Oberwolfach, 22.04. - 28.04.1979.

58. **Prefix classes of Krom formulae with identity.**
*6th International Congress of Logic, Methodology and Philosophy of Science,* Hannover 22.08. - 29.08.1979.

59. **The reachability problem for Petri nets and decision problems for Skolem arithmetic.**
Invited Lecture, *VW-Tagung Anwendungen der Rekursionstheorie in der Logik,* RWTH Aachen, 24.09. - 29.09.1979.

60. **Horn complexity of Boolean functions.**
*Komplexitätstheorie,*, Math. Forschungsinstitut Oberwolfach (C. P. Schnorr, A. Schönhage, V. Strassen), 21.10. - 27.10.1979.

61. **Horn Komplexität Boolescher Funktionen und das P=NP-Problem.**
Technische Hogeschool Twente, Enschede (NL), 12.11.1979.

62. **Grenzen der Leistungsfähigkeit algorithmischer Verfahren - Zur Komplexität und Unentscheidbarkeit mathematischer Probleme.**
- Universität Osnabrück, Osnabrück, 20.11.1979;
- Universität Osnabrück, Abteilung Vechta, 27.11.1979.

63. **Reachability problem for vector addition systems and Skolem arithmetic.**
*Workshop on Solvability Questions in Vector Addition Systems and Parallel Schemata,* Universität Münster, 11.02. - 15.02.1980.

64. **Problemi di decisione nell' aritmetica additiva o moltiplicativa ed il problema di raggiungibilità per reti di Petri.**
Informatik Kolloquium, Istituto di Scienze dell'Informazione, Universität Pisa, 20.03.1980.

65. **On conservativity of reduction procedures.**
*Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 20.04. - 26.04.1980.

66. **On complexity problems for Boolean functions.**
Gesellschaft für Mathematik und Datenverarbeitung, Bonn, 29.04.1980.

67. **On the Collatz-like rational games and Post factor replacement systems.**
*Restricted PCP and Equations in free Semigroups,* Gesellschaft für Mathematik und Datenverarbeitung, Bonn-Birlinghofen, 27.05.1980.

68. **From the study of decision problems to complexity theory in logic and computer science.**
Invited Lecture, *Complexity in natural systems,* Florence Center for the History and Philosophy of Science, Florenz, 14.07. - 18.07.1980.

69. **On the Collatz-like rational games, Post factor replacement and commutative semi-Thue systems.**
*Tagung der Deutschen Mathematiker-Vereinigung,* Sektion Mathematische Logik, Dortmund, 14.09. - 19.09.1980.

70. **Aufzählbarkeit, Entscheidbarkeit und der Fall der klassischen Prädikatenlogik - Eine Einführung in die Grundbegriffe im Hinblick auf die Problematik automatischer Beweisverfahren.**
*Short course: Das Beweisen mit Maschinen,* Cusanuswerk, Zangberg, 24.09. - 28.09.1980.

71. **Logische Irrtumslehre im Lichte der Leibnizschen Unterscheidung zwischen ars inveniendi und ars iudicandi.**
G.-W.-Leibniz-Gesellschaft, Hannover, 15.10.1980.

72. **Entscheidungsprobleme aus der Berechenbarkeitstheorie und der Logik.**
Math. Institut, Universität Köln, 28.11.1980.

73. **On the problem of Herman/Jackowski.**
*Mathematische Logik,* Math. Forschungsinstitut Oberwolfach, 05.04. - 11.04.1981.

74. **Komplexität Boolescher Funktionen.**
Informatik Kolloquium, Universität Karlsruhe, 18.05.1981.

75. **Logical description of computation processes.**
Invited Lecture *Fundamentals of Computation Theory - FCT '81,* Szeged (Ungarn), 24.08. - 28.08.1981.

76. **Komplexitätsmaße für Boolesche Funktionen.**
Informatik Kolloquium, RWTH Aachen, 04.02.1982.

77. **Alle rekursiv aufzählbaren Prädikate sind exponentiell diophantisch: der Beweis von Jones/Matijasevich.**
*Seminar für math. Logik und Grundlagenforschung,* Universität Bonn, 19.03.1982.

78. **Problemi di decisione nella logica e nell' informatica teorica: solubilità ed insolubilità.**
Ist. di Scienze dell' Informazione, Università di Salerno, 02.04.1982.

79. **Problemi ricorsivi ma difficilmente decidibili.**
Ist. di Scienze dell'Informazione, Università di Salerno, 02.04.1982.

80. **Complessità concreta: funzioni booleane.**
Ist. di Scienze dell'Informazione, Università di Salerno, 03.04.1982.

81. **The new proof by James P. Jones and Yuri Matijasevich of the Davis-Putnam-Robinson theorem that r.e. sets are exponential diophantine.**
- *Math. Logik,* Math. Forschungsinstitut Oberwolfach, 18.04. - 24.04.1982;
- Math. Institut, Universität Osnabrück, 14.06.1982.

82. **Relations between decision problems and their logical descriptions.**
Invited Lecture *Extended Summer Research Institute,* American Mathematical Society, Cornell University, Ithaca, N.Y., 28.06. - 16.07.1982.

83. **On bounded diophantine representation of subrecursive sets.**
*Extended Summer Research Institute,* American Mathematical Society, Cornell University, Ithaca, N.Y., 28.06. - 16.07.1982.

84. **Decision problems in predicate logic.**
Invited Lecture, *European Logic Colloquium,* Association of Symbolic Logic, Florenz 23.08. - 27.08.1982.

85. **Undecidability versus degree complexity of decision problems for formal grammars.**
Math. Institut der Universität Utrecht, 01.10.1982;
Invited Lecture, *Workshop Grundlagen der Theoretischen Informatik,* Universität Paderborn, 11.10. - 16.10.1982.

86. **Von Entscheidungsproblemen zur Komplexitätstheorie in Logik und Informatik.**
*Arbeitskreis Informatik und Philosophie,* Universität Dortmund, 23.11.1982.

87. **From decision problems to problems of complexity.**
Invited Lecture, *Convegno di Storia della Logica,* S. Gimignano, 04.12. - 08.12.1982.

88. **Ein logisches Komplexitätsmass für Boolesche Funktionen.**
Math. Fakultät, Universität Bielefeld, Dez. 1982.

89. **"Undecidable" versus "Difficult do Decide": An introduction into Computational Complexity of Logical Decision Problems.**
6 hrs post-graduate course on *Foundation of Computation Theory,* (Rasiowa, Karpinski, Kirin), Inter-University Centre for Post-graduate studies, Dubrovnik, 16.01. - 29.01.1983.

90. **Complexity of logical theories: some open problems.**
Course on *Foundation of Computation Theory,* (Rasiowa, Karpinski, Kirin), Inter-University Centre for Post-graduate studies, Dubrovnik, 16.01. - 29.01.1983.

91. **Logical Decision Problems: Computational Complexity and Completeness.**
*Mathematische Logik* (Felscher, Schwichtenberg), Math. Forschungsinstitut Oberwolfach, 17.04. - 23.04.1983.

92. **Was verbindet Hilberts Entscheidungsproblem mit Cooks Problem, Spektralproblem und unteren Komplexitätsschranken lösbarer Entscheidungsprobleme?**
*Math. Kolloquium,* Universität München, 17.05.1983.

93. **Spektralproblem and Completeness of Logical Decision Problems.**
*Rekursive Kombinatorik,* Universität Münster, 23.05. - 28.05.1983.

94. **Fundamental Problems in Complexity Theory.**
*6 hrs course Unesco College on Computer Science,* CISM, Udine, 07.07. - 08.07.1983.

95. **Logical Decision Problems and Complexity of Computations.**
*7th Intern. Congress of Logic, Methodology and Philosophy of Science,* Salzburg, 11.07. - 16.07.1983.

96. **Scholz' Spektralproblem and Completeness Results.**
- *Rekursive Kombinatorik,* Math. Forschungsinstitut Oberwolfach, 16.10. - 22.10.1983 (s. Tagungsbericht 45 (1983) 2).
- Invited Lecture, *Logic and Philosophy of Science, today,* San Gimignano, 07.12. - 11.12.1983.

97. **Logica Matematica: Indecidibilità, Incompletezza e Complessità.**
20 hrs course, Universität Perugia, 12.03. - 30.03.1984.

98. **Determinismo, Struttara di Horn e Complessità di Funzioni Booleane.** Dipartimento di Informatica, Università Pisa, 08.03.1984.

99. **Moderne Lösungen des Hilbertschen Entscheidungsproblems.**
Math. Institut, Universität Basel, 13.04.1984.

100. **Logic and Complexity.**
Kolloquium Math. Institut, Institut für Informatik, Universität Oslo, 04.06. - 06.06.1984.

101. **Determinism, Horn structure and complexity of Boolean functions.**
Departement of Computer Science, State University of New York at Buffalo, 17.08.1984.

102. **The Spektrum Problem.**
Departement of Mathematics, Departement of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, 30.08.1984.

103. **On Complexity of Halting Problems for Machines and Logical Decision Problems.**
Departement of Computer Science, University of Washington, Seattle, 04.09.1984.

104. **Complexity relations between machine and logical decision problems.**
6 hrs course, CISM, Udine, 24.09. - 05.10.1984.

105. **PROLOG-Definierbarkeit und Komplexität rekursiver Funktionen.**
*Festkolloquium aus Anlaß der 100. Wiederkehr des Geburtstages des Institutsgründers,* Institut für math. Logik und Grundlagenforschung der Universität Münster, 08.02. - 09.02.1985.

106. **Komplexität logischer Entscheidungsprobleme.**
Math. Institut, Universität Münster, 26.04.1985.

107. **Complexity of logical decision problems and normal forms for PROLOG programs.**
*Meeting of the Association for Symbolic Logic,* Stanford University, Center for the Study of Language and Information, 08.07. - 19.07.1985.

108. **On a modular theory of automata with an application to specifications of distributed systems.**
Departement of Electrical Engineering and Computer Science, Division of Computer Science and Engineering, University of Michigan, Ann Arbor, 30.07.1985.

109. **Mathematical properties of logic programs.**
Department of Computer Science, State University of New York at Buffalo, 02.08.1985.

110. **Logical decision problems and complexity of logic programs.**
8 Lectures, *Semester on Math. Problems in Computation Theory,* Stefan Banach International Math. Center, Institute of Mathematics. Polish Academy of Sciences, Warsaw, 17.09. - 27.09.1985.

111. **Mathematische Eigenschaften von Programmen.**
Fachbereich Mathematik-Informatik der Universität-Gesamthochschule
Paderborn, 05.11.1985.

112. **Logical decision problems and complexity of logic programs.**
*Math. Logik,* Math. Forschungsinstitut Oberwolfach (W. Felscher, H. Schwichtenberg), Tagungsber. 45/1985, pg. 2.

113. **Die Unentscheidbarkeit der Erlaubtheitsbeziehung für Datenbankanfragen in MU-PROLOG.**
Informatik-Kolloquium, Universität Dortmund, 13.02.1986.

114. **Complessità strutturale e computazionale di programmi PROLOG.**
Meeting *Complessità di algoritmi*, Università di Bologna, 10.03. - 11.03.1986.

115. **Riflessioni sul rapporto tra logica e informatica.**
Invited Lecture, *X Incontro di Logica Matematica,* Università di Siena, 02.04. - 04.04.1986.

116. **Komplexitätsbeziehungen zwischen Programmen und logischen Ausdrücken.**
Sektion Mathematik, Universität Jena, 26.04. - 01.05.1986.

117. **Entscheidungsprobleme für MU-PROLOG Programme.**
- IBM Wissenschaftliches Zentrum Heidelberg, 12.05.1986;
- Informatik Kolloquium, RWTH Aachen, 15.05.1986.

118. **The Undecidability of the Floundering Property in MU-PROLOG.**
Invited Lecture, *Church's Thesis after fifty years*, University of Utrecht, 14.06. - 15.06.1986.

119. **Entscheidungsprobleme und Komplexitätseigenschaften von Prolog Programmen.**
- Informatik Kolloquium, Universität Frankfurt, 16.06.1986;
- Informatik Kolloquium, Universität Stuttgart, 03.07.1986.

120. **Logical and Computational Complexity of Classes of Logic Programs.**
Invited Lecture, *Logica e Informatica: Nuove Tendenze ed Applicazioni*, Seminario Matematico e Dipartimento di Informatica, Università di Torino, 13.10. - 15.10.1986. (See Rend. Sem. Mat. Univ. Pol. Torino, Fascicolo Speciale 1987, Logic and Computer Sciences, 153-163.)

121. **Entscheidungsprobleme in PROLOG.**
Informatik Kolloquium, Universität Bonn, 04.11.1986.

122. **The Undecidability of the Floundering Property in MU-PROLOG.**
Conference *Math. Logik*, Math. Forschungsinstitut Oberwolfach, 19.04. - 25.04.1987. (Abstract 17/1987, pg.3).

123. **On the Equivalence of Restricted Algol-Programs and a Class of Logic Programs.**
- *Computer Science Logic* Workshop, Univ. Karlsruhe, 12.10. - 16.10.1987;
- Informatik Kolloquium, Universität Frankfurt, 17.10.1987;
- Informatik Kolloquium ETH Zürich, April 1988.

124. **Über den logikorientierten Ansatz operationaler Semantik für Modula.**
Kolloquium der praktischen Informatik, Universität Duisburg, 19.05.1988.

125. **On the Complexity of Decision Problems of Procedural Languages.**
Invited Lecture *La Logique dans L'Informatique*, CIRM, Marseille-Luminy, 20.06. - 24.06.1988.

126. **Einführung in die Berechnungstheorie - erste Erfahrungen eines COSTOC-Kurses.**
- Informatik Kolloquium, Universität Dortmund, 11.10.1988
- Informatik Kolloquium, Universität Hagen 12.10.1988
- Informatik Kolloquium, Universität Oldenburg 14.10.1988
- Informatik Kolloquium, Universität Osnabrück 15.10.1988.

127. **Komplexität von Entscheidungsproblemen in der Logik.**
Kolloquium der angewandten Informatik, Universität Wien, 31.10.1988.

128. **First Order Description of Some Programming Constructs and Complexity Questions.**
Conference *Math. Logik*, Math. Forschungsinstitut Oberwolfach, 06. - 12.11.1988, Abstract 47/1988, pp. 1 - 2.

129. **A method of minimal logical description of algorithmic processes.**
IBM Almaden Research Center, San Jose, 10.05.1989.

# 2 Fall 1989 – 2010 (Abstract State Machines Method)

1. **On a logical operational semantics for full Prolog.**
- Invited Lecture, *Kurt-Gödel-Kolloquium*, Universität Salzburg, 22.09. - 23.09.1989;
- Invited Lecture *CSL '89*, Universität Kaiserslautern.

2. **Complexity of Logical Decision Problems. An Introduction.**
Invited Lecture *International School of Philosophy of Science*, Trieste, 02.10. - 14.10.1989.

3. **Gurevichs dynamische Algebren und Semantik von Prolog.**
Abteilung Mathematik, Universität Jena, 09.10.1989.

4. **Eine Beschreibung von PROLOG mittels dynamischer Algebren.**
Abteilung Informatik, Universität Leipzig, 11.10.1989.

5. **Eine formale Beschreibung der Gesamtsprache PROLOG.**
Abteilung Mathematik, Humboldt Universität und Akademie der Wissenschaften, Berlin, 12.10.1989.

6. **Gurevichs dynamische Algebren: eine Anwendung für Prolog und resultierende Anwendungen in der endlichen Modelltheorie.**
Abteilung Mathematik, Universität Greifswald, 13.10.1989.

7. **A logical operational semantics for full Prolog.**
- Invited Lecture, *Logic from Computer Science* Workshop, Mathematical Sciences Research Institute (MSRI), University of Berkeley, 13.11. - 17.11.1989;
- Stanford Research Institute (SRI), Menlo Park, 20.11.1989.

8. **Computational Complexity of Logical Theories.**
10 hrs course *First International School for Computer Science Researchers,* Acireale, Sicily, 03.12.-09.12.1989.

9. **Eine logische Semantik für Prolog mit eingebauten Prädikaten.**
Informatik Kolloquium, Universität Karlsruhe, 17.01.1990.

10. **Eine neuartige logische Semantikdefinition für Programmiersprachen und ihre Rückwirkungen auf endliche Modelltheorie.**
Math. Kolloquium, Universität Heidelberg, 23.01.1990.

11. **Eine mathematische Präzisierung von Kontrollprädikaten in Standard Prolog.**
Informatik Kolloquium, Institut für Mathematik u. Informatik, Universität Bern, 30.01.1990.

12. **Ein einfaches mathematisches Modell für den DIN/ISO-Prologstandard.** *DIN Prolog Standard Komitee,* München, 09.02.1990.

13. **Eine mathematische Präzisierung der eingebauten Datenbankprädikate in Standard Prolog.**
Informatik Kolloquium, Universität Oldenburg, 15.02.1990.

14. **Ein Vorschlag zur Semantik von ISO-PROLOG.**
*DIN PROLOG Standard Seminar,* Bad Kohlgrub, 23.02. - 27.02.1990.

15. **Wahlverwandtschaften von Logik und Computern.**
- IBM Kolloquium, Wissenschaftliches Zentrum Heidelberg, 09.03.1990;
- IBM Entwicklungslabor Böblingen, 22.03.1990.

16. **Eine neuartige logische Methode der Semantikdefinition für wirkliche Programmiersprachen am Fallbeispiel der Gesamtsprache PROLOG.**
IBM Germany, Institut für Wissensbasierte Systeme, Stuttgart, 26.04.1990.

17. **Eine abstrakte logische Semantik für Kontroll- und Datenbankprädikate in Prolog.**
Informatik Kolloquium, Universität Osnabrück, 27.04.1990.

18. **Proposal of a Logical Prolog Semantics for ISO Prolog Standardization.**
*ISO WG 17 Meeting,* Vienna, 30.04. - 04.05.1990.

19. **Der DIN-Prolog Semantikvorschlag für ISO WG 17.**
Kolloquium der Angewandten Informatik, Technische Universität Wien, 04.05.1990.

20. **Angewandte Logik am Fallbeispiel der Semantik von PROLOG.**
Informatik Kolloquium, Universität Freiburg, 15.06.1990.

21. **Eine Präzisierung des call und verwandter Konstrukte in Prolog.**
Informatik Kolloquium, RWTH Aachen, 21.06.1990.

22. **A Logical Prolog Machine.**
Invited Lecture *Symposium on Logic and Computer Science,* CIRM, Marseille-Luminy, 25.06. - 29.06.1990.

23. **Application of the dynamic algebra approach to Prolog and Prolog III.**
Computer Science Department, College of Swansea, University of Wales, 02.07.1990.

24. **A logical abstract interpreter for full Prolog.**
- Computer Science Department, University of Bristol, 04.07.1990,
- Joint *Theory and Formal Methods* and *Logic Programming Seminar,* Computer Science, Imperial College, University of London, GB, 11.07.1990.

25. **Gurevich's concept of dynamic algebras and its relevance for semantics of real programming languages.**
National Physical Laboratory, Teddington, Middlesex, 09.07.1990.

26. **A method of minimal logical implementation of computation formalisms and its application to complexity questions for logical decision problems.**
Colloquium, Department of Math., Queen Mary College, University of London, 12.07.1990.

27. **Ein abstrakter logischer Interpreter für die Gesamtsprache Prolog.**
Informatik Kolloquium, Universität Passau, 17.07.1990.

28. **Anwendung von Logik auf Semantik von Programmiersprachen.**
Kolloquium der Mathematik und Informatik, Univ. Würzburg, 10.08.1990.

29. **Eine neue logische Spezifikationsmethode für die Semantik interaktiver Programmiersprachen am Beispiel der ISO/DIN Prologstandardisierung.**
IBM Germany, Entwicklungslabor Böblingen, 14.08.1990.

30. **A Logical Semantics for Dynamic Code in Prolog.**
Invited Lecture *Mathematical Foundations of Computer Science* (MFCS '90), Banska Bystrica, CSSR, 27.08.-31.08.1990.

31. **A Formal Model for Semantics of Constraint Logic Programming Systems.**
Invited Lecture *Logic and Computer Science* (LIRA), Dubrovnik, 06.09. - 09.09.1990.

32. **The Dynamic Algebra Approach to Semantics of Prolog and Prolog III.**
2 Invited Lectures *International Summer Seminar on Artificial Intelligence* (CAS), Dubrovnik, 03.09. - 07.09.1990.

33. **Une Semantique Logique pour Prolog Standard et pour Prolog III qui se base sur les algebres dynamiques de Y. Gurevich.**
- 6 hrs course Groupe de Logique et Informatique, Faculté des Sciences de Luminy, Marseille, 10.09. - 14.09.1990;
- 6 hrs course Groupe de Logique et Informatique, Université de Montpellier, 17.09. - 19.09.1990.

34. **Operational Semantics for Prolog III using Dynamic algebras.**
*Computer Science Logic Workshop CSL '90,* Heidelberg, 01.10. - 05.10.1990 (co-author P.Schmitt).

35. **Logical specification of sequential and parallel logic and constraint logic programming systems.**
European Computer-Industry Research Center (ECRC), München, 12.10.1990.

36. **Dynamic Algebras as Specification Tool for Implementation of High Level Programming Languages.**
3 Lectures, Institut für Informatik V, Universität Bonn, 14.10. - 20.10.1990.

37. **Eine logische Beschreibung von Prolog III als Verfeinerung von Standard-Prolog.**
Informatik Kolloquium, Universität Dortmund, 16.10.1990.

38. **Leibnizens Idee einer Universalsprache und eines allgemeinen Problemlösungskalküls im Lichte der Logikprogrammierung.**
Leibniz-Gesellschaft, Hannover, 17.10.1990.

39. **Über das Spannungsfeld zwischen Logik und Informatik.**
Kolloquium der Fakultät für Mathematik und Informatik, Universität Mannheim, 23.10.1990.

40. **Neuere Entwicklungen zur Semantik von Logikprogrammierungssystemen.** Internes Kolloquium, *IWBS,* IBM Heidelberg, 25.10.1990.

41. **Eine logische Semantik für die Gesamtsprache Prolog.**
*Mathematische Logik* (W. Felscher, H. Schwichtenberg, A. S. Troelstra), Mathematisches Forschungsinstitut Oberwolfach, 16.12. - 22.12.1990.
Tagungsbericht 55/1990, p.2.

42. **A formal specification of the Warren Abstract Machine and its correctness proof with respect to an abstract Prolog specification.**
4 Invited Lectures to *The 3rd Logic Programming Winter School and Seminar. LOP'91.*, Brno, 28.01. - 31.01.1991.

43. **Eine Herleitung der Warren Abstract Machine aus einer abstrakten Prologspezifikation mittels dynamischer Algebren.**
IBM Germany, IWBS Stuttgart, 31.01. - 02.02.1991.

44. **On formal specification of logic programming systems using Gurevich's notion of evolving algebras.**
Department of Electrical Engeneering and Computer Science, University of Michigan, Ann Arbor, 13.03.1991.

45. **The Jones-Matijasevic proof for unsolvability of exponential diophantine equations using register machines.**
Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, 18.03. - 22.03.1991.

46. **A formal specification of full Prolog and related languages.**
Joint Colloquium Talk, Department of Computer Science and Department of Mathematics, University of Pennsylvania, Philadelphia, 19.03. - 21.03.1991.

47. **A simple proof of a strong form of Goedel's first incompleteness theorem using diophantine description of r.e.sets.**
Logic Seminar, Department of Mathematics, University of Michigan, Ann Arbor, 04.04.1991.

48. **An application of logic to semantics of programming.**
Department of Mathematics and Computer Science, University of Illinois, Urbana 12.04. - 13.04.1991.

49. **A formal derivation of the WAM out of a formal description of Prolog and its correctness proof.**
Logic Group, University of Indiana, Bloomington, 15.04.1991.

50. **A formal definition of Parlog.**
Theory Seminar, Dept. of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, 24.04.1991.

51. **Eine formale Spezifikationsmethode am Beispiel der Warren Abstract Machine und möglicher Erweiterungen.**
Deutsches Forschungsinstitut für Künstliche Intelligenz, Universität Kaiserslautern, 26.04. - 27.04.1991.

52. **Formal Analysis of Prolog Database Views and Their Uniform Implementation.**
Conference *Deductive Systems* (W. W. Bledsoe, G. Jäger, M. M.Richter), Mathematisches Forschungsinstitut Oberwolfach, 28.04. - 04.05.1991.
Tagungsbericht 19/1991, p.7.

53. **Algebre dinamiche come metodo di specifica di sistemi di programmazione logica.**
Dipartimento di Matematica e Informatica, Università di Padova, 23.05. - 24.05.1991.

54. **Un metodo logico di definire la semantica del linguaggio intero Prolog.**
Dipartimento di Filosofia, Università di Firenze, 01.06.1991.

55. **An Analysis of Database Views and their Uniform Implementation.**
Invited Lecture, 13th International Conference on *Information Technology Interface* (ITI'91), Dubrovnik-Cavtat, Yugoslavia, 10.06. - 14.06.1991.

56. **Correctness proof for a class of Prolog Compilers on Warren's Abstract Machine.**
Invited Lecture, 13th International Conference on *Information Technology Interface*(ITI'91), Dubrovnik-Cavtat, Yugoslavia, 10.06. - 14.06.1991.

57. **Evolving algebras in logic programming.**
Workshop *Semantics of Programming Languages and Model Theory* (M. Droste, Y .Gurevich), Dagstuhl, 23.06. - 29.06.1991. Dagstuhl-Seminar-Report 16, pg.1

58. **Evolving algebra analysis of Prolog database views and their uniform implementation.**
Workshop *Semantics of Programming Languages and Model Theory* (M. Droste, Y. Gurevich), Dagstuhl, 23.06. - 29.06.1991 (co-author D. Rosenzweig). Dagstuhl-Seminar-Report 16, pg.2

59. **An evolving algebra semantics of Parlog.**
Workshop *Semantics of Programming Languages and Model Theory* (M. Droste, Y. Gurevich), Dagstuhl, 23.06. - 29.06.1991 (co-author E. Riccobene). Dagstuhl-Seminar-Report 16, pg.3

60. **Problems with assert, retract and abolish in Prolog.**
ISO WG 17 Meeting, Paris, 01.07. - 03.07.1991 (co-author D. Rosenzweig).

61. **A formal analysis of built-in predicates for dynamic Prolog code.**
IBM Germany, Scientific Center, IWBS Stuttgart, 04.07. - 05.07.1991.

62. **A Framework to Specify Database Update Views.**
*PLILP'91* (Third International Symposium on Programming Languages Implementation and Logic Programming). Passau, 26.08. - 28.08.1991 (co-author B. Demoen).

63. **Logical Operational Semantics of Parlog: Or-Parallelism.**
Russian Conference on Logic Programming, Leningrad, 11.09. - 16.09.1991 (co-author E. Riccobene).

64. **WAM-Algebras: A Mathematical Study of Implementation.**
Russian Conference on Logic Programming, Leningrad, 11.09. - 16.09.1991 (submitted by title).

65. **A WAM Extension for Type-Constrained Logic Programming and its Correctness Proof.**
*Computer Science Logic CSL'91,* Bern, 07.10. - 11.10.1991 (co-author C. Beierle).

66. **A Formal specification of Constraint Logic Programming Systems.**
Conference *Theorem Proving and Logic Programming with Constraints* (H. Comon, H. Ganzinger, H. Kirchner, G. Smolka, M. Dincbas, C. Kirchner, J.-L. Lassez), Dagstuhl, 21.10. - 25.10.1991. Seminar-Report 16, pg.1.

67. **The evolving algebra approach for formal specification of logic programming systems, with particular emphasis on a formal semantics for full Prolog.**
Invited Lecture to: Special Session *Standardization of Prolog: proposals for formal semantics*, ILPS'91 (International Logic Programming Symposium), San Diego (California), 28.10. - 01.11.1991.

68. **A Formal Specification of Standard Prolog and Related Systems.**
The Baskin Center for Computer Engineering and Information Sciences, University of California at Santa Cruz, 04.11.1991.

69. **Tree algebras and their projection into Börger's stack algebras as model for Prolog.**
Quintus Company, Palo Alto, 05.11.1991.

70. **The evolving algebra approach for logic programming.**
Computer Science Department, Stanford University, Palo Alto 05.11.1991.

71. **A Correctness Proof for a Class of Prolog Compilers for the Warren Abstract Machine.**
Computer Science Department, University of Austin, 07.11. - 09.11.1991.

72. **A rational reconstruction of the WAM and its correctness proof.**
Argonne National Laboratory, Argonne (Chicago), 11.11.1991.

73. **An evolving algebra specification of Parlog and Concurrent Prolog.**
Dept. of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, 12.11.1991

74. **Evolving algebras as formal specification tool for logic programming systems.**
Department of Computer Science, Syracuse University, Syracuse (NY), 13.11. - 15.11.1991.

75. **Evolving Algebras: A Computation Model and Specification Method.**
Computer Science Colloquium, City University of New York, Brooklyn College, New York, 18.11.1991.

76. **An evolving algebra specification of the and-or structure in Warren's Abstract Machine and its correctness with respect to Börger's Prolog Algebras.**
Seminar in *Applications of Logic and Theoretical Computer Science,* City University of New York, Graduate Center, New York, 19.11.1991.

77. **The correctness of a formally specified class of compilers on the WAM with respect to Börger's Prolog Algebras.**
Seminar in *Applications of Logic and Theoretical Computer Science,* City University of New York, Graduate Center, New York, 19.11.1991.

78. **An evolving algebra specification of constrained logic programming systems, in particular of Prolog III.**
Computer Science Colloquium, University of Leuven, Leuven, 05.12.1991.

79. **Eine neuartige logische Spezifikationsmethode für die Semantik interaktiver Programmiersprachen am Beispiel der ISO/DIN Prologstandardisierung.**
Kolloquium der Informatik, Universität Frankfurt, Frankfurt/M., 20.02.1992.

80. **Die Methode dynamischer Algebren für Korrektheitsbeweise komplexer Systeme am Beispiel von Prologcompilern auf der WAM.**
- Kolloquium der Informatik, Universität Kiel, 21.02.1992,
- Kolloquium der Informatik, Universität Bonn, 24.02.1992.

81. **Dynamische Baumalgebren für Prolog und ihre Implementierung auf dem Stack.**
IBM Germany Scientific Center, IWBS Stuttgart, 25.02. - 26.02.1992.

82. **A new methodology for specification and correctness proofs for large systems.**
Computer Science Colloquium, Univ. of Goeteborg, Goeteborg, 05.03.1992.

83. **Una specifica formale di standard Prolog e di altri sistemi di programmazione logica.**
Dipartimento di Scienze dell'Informazione, Università degli Studi di Milano, Milano, 26.03.1992.

84. **Recent results on formal specification and correctness proof for Prolog compilers on the WAM.**
*First Compulog-Network Meeting on Programming Languages,* Pisa, 06.04. - 07.04.1992.

85. **Logical Tools for Specification of Programming Languages.**
Conference *Mathematische Logik* (W. Felscher, H. Schwichtenberg, A. S. Troelstra), Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, 12.04. - 18.04.1992. Abstract in: Tagungsbericht 16/1992, pg.2.

86. **The method of evolving algebras for formal specification of hierarchical systems.**
Invited Lecture *XV Incontro di Logica Mathematica,* Università di Camerino, Camerino, 22.04. - 24.04.1992.

87. **Evolving Algebras and Logic Programming.**
Invited Lecture *3rd Workshop Logic and Computer Science,* CIRM, Marseille-Luminy, 15.06. - 19.06.1992.

88. **A rational reconstruction of the Warren Abstract Machine.**
*4th International School for Computer Science Researchers,* Acireale, Sicily, 22.06. - 03.07.1992.

89. **A new specification and correctness proof for the WAM.**
Workshop *Computer Science Logic* (E.Börger, Y. Gurevich, H.Kleine Büning, M.M.Richter), Dagstuhl, 13.07. - 17.07.1992. s.Dagstuhl-Seminar-Report 40, pg.7

90. **On the Horn complexity as measure for Boolean functions.**
Invited Lecture *4th European Summer School on Logic, Language and Information,* Workshop *Structurally Related Complexity Theory* (P. Young, Chairman), University of Essex, Colchester (GB), 20.08.1992.

91. **Complexity of logical decision problems and finite model theory.**
10 hrs course *4th European Summer School on Logic, Language and Information,* University of Essex, Colchester (GB), 17.08. - 28.08.1992.

92. **A Methodology for Proving Prolog Compilers Correct.**
*INRIA Rocquencourt* (Paris), 03.12.1992.

93. **Ein abstraktes prozedurales Modell der neuen Programmiersprache Gödel.**
Kolloquium der Informatik, Universität Stuttgart, 17.03.1993.

94. **Eine mathematische Einführung der neuen Programmiersprache Gödel.**
IBM Germany Scientific Center, Heidelberg, 19.03.1993.

95. **La metodologia delle algebre dinamiche: Compilazione di Prolog sulla WAM.**
Dipartimento di Mathematica, Università di Roma, 25.03.1993.

96. **Eine formale Spezifikation von OCCAM im Hinblick auf beweisbar korrekte Kompilierung auf dem Transputer.**
Fachbereich Mathematik-Informatik, Universität Paderborn, 12.05.1993.

97. **Formale Spezifikation eines beweisbar korrekten Kompilierungsschemas für Prolog auf der WAM.**
6 hrs course, Fachbereich Mathematik-Informatik, Universität Paderborn, 19.05. - 26.05.1993.

98. **Die neue Programmiersprache Gödel.**
- Informatik Kolloquium, RWTH Aachen, 01.06.1993
- Informatik Kolloquium, Universität Bonn, 02.06.1993
- Informatik Kolloquium, Universität Saarbrücken, 04.06.1993.

99. **Simple Mathematical Interpreters for OCCAM.**
*Semantics of Programming Languages and Algebra,* (Y. Gurevich, M. Droste) Schloß Dagstuhl 07.06. - 11.06.1993.
s. Dagstuhl-Seminar-Report 65, pg.4

100. **Evolving algebra based specification of logic programming systems.**
10 hrs course *5th International School for CS Researchers,* Lipari, Sicily, 21.06. - 03.07.1993.

101. **Full Prolog in a Nutshell.**
Poster presentation (co-author D. Rosenzweig) *10th International Conference on Logic Programming,* ICLP '93, Budapest, 21.06. - 24.06.1993. f.D.S.Warren (Ed.): *Logic Programming (Proc.)*, MIT Press 1993, pg.832.

102. **Die Methode der dynamischen Algebren zur Spezifikation von Logikprogrammiersystemen.**
Informatik Kolloquium, Universität Dortmund, 06.07.1993.

103. **Der Klassifikationssatz von Gurevich für logische Entscheidungsprobleme.**
Fachbereich Mathematik-Informatik, Universität Paderborn, 07.07.1993.

104. **Formale Spezifikation beweisbar korrekter Kompilierung für Occam auf dem Transputer.**
Institut für Informatik, TU München, 12.07.1993.

105. **Spezifikation der Kontrollstrukturen in der Programmiersprache GOEDEL mittels dynamischer Algebren.**
Centrum für Informations- und Sprachverarbeitung, Universität München, 13.07.1993.

106. **Die Spezifikationsmethode der dynamischen Algebren. Ein sequentielles und ein verteiltes Fallbeispiel: WAM-Architektur und Transputer.**
Fachbereich Mathematik-Informatik, Universität Paderborn, 14.07.1993.

107. **Mathematische Korrektheitsbeweise fuer grosse Softwaresysteme.**
Fakultät für Mathematik und Technische Fakultät, Universität Bielefeld, 20.07.1993.

108. **The Mathematics of Set Predicates in Prolog.**
Invited Lecture *Third Kurt Gödel Colloquium*, Brno 24.-27.8.1993

109. **The methodology of evolving algebras for correctness proofs of compilation schemes: the case of OCCAM and TRANSPUTER.**
Oxford University Computing Laboratory, Programming Research Group, Oxford 9.9.1993

110. **The methodology of evolving algebras for specification and verification of large software systems.**
University of Leeds, Centre for Theoretical Computer Sciene, 10.9.1993

111. **Evolving algebras and temporal reasoning.**
Conference *Computer Science Logic*, Swansea 13.-17.9.1993

112. **The CLAM Specification and Compiler Correctness.**
co-author Rosario Salamone, Project Meeting *Modelli della Computazione e dei Linguaggi di Programmazione*, CNR (Italian Research Council), Centro Studi, Volterra 20.-22.9.1993

113. **Logic versus Logic Programming: A Model for control in the language GÖDEL.**
Workshop *Non-classical Logics in Computer Science* (V.Marek, A.Nerode, P.H.Schmitt), Schloß Dagstuhl 20.09. 24.09.1993.
cf. Seminar-Report 73, pg.8

114. **Evolving algebras for specification of logic programming systems.**
Invited Lecture *9.Workshop Logische Programmierung*,ALP/G and FG 1.2/1.1 GI, University of Hagen, 11.10.1993

115. **Formale Spezifikation beweisbar korrekter Kompilierung für Occam auf dem Transputer.**
- Informatik Kolloquium, Universität Siegen, 12.10.1993
- Informatik Kolloquium, Universität Frankfurt, 13.10.1993

116. **Dynamische Algebren als Instrument zur Entwicklung sicherheitskritischer Software.**
Institut für Informatik und Gesellschaft, Universität Freiburg, 14.10.1993

117. **A formal model for the APE100 architecture viewed through the APESE language.**
Dip. di Fisica, Università di Pisa, co-author D.Rosenzweig, 28.10.1993

118. **Occam and the Transputer Instruction Set Architecture.**
Heinz Nixdorf Institut, Universität Paderborn, 16.11.1993

119. **Una specifica formale di Occam ed una prova di correttezza per uno schema di compilazione di programmi Occam sul Transputer.**
Dipartimento di Matematica, Universita di Catania, 11.1.1994

120. **A Mathematical Specification of the APE100 Architecture.**
Invited Lecture to ProCos Working Group Workshop, Lyngby-Copenhague, 18.-20.1.1994

121. **A formal specification of Occam and its compilation to the Transputer Instruction Set.**
BRICS Seminar, Department of Computer Science, University of Aarhus, 21.1.1994

122. **zCPU in APE100: A mathematical Model for ZIC and LEX.**
co-author D.Rosenzweig. Dip. di Fisica, Università di Pisa, 28.2.1994

123. **Logical tools for reliable system specification.**
Workshop *Logical Theory for Program Construction* (Jean-Pierre Finance, Stefan Jähnichen, Jacques Loeckx, Douglas Smith, Martin Wirsing), Schloß Dagstuhl 7.3. - 11.3.1994. cf. Seminar-Report 84, pp.33-34.

124. **The primary model for Occam.**
Informatikkolloquium, Universität Oldenburg, 21.3.1994

125. **The compilation chain in the APE100 parallel architecture.**
Kolloqium Heinz Nixdorf Institut, Universität Paderborn, 24.3.1994

126. **Evolving algebras as a tool for mathematical analysis of distributed algorithms. The example of Lamport's Bakery Algorithm.**
Siemens Corporate Research ZFE, München, 5.5.1994

127. **Evolving algebras as a tool to describe dynamics in formal grammars.**
Centrum für Informations- und Sprachverarbeitung, Universität München, 6.5. + 13.5.1994

128. **Dynamische Algebren zur Spezifikation beweisbar korrekter Kompilierung für Occam auf dem Transputer.**
Universität Hamburg, 19.5.1994

129. **A formal specification of the parallel virtual machine.**
PVM 1994 Users' Group Meeting, Oak Ridge/Tennessee, 19.-20.5.1994 (co-author U.Glässer)

130. **The evolving algebra approach for a formal specification of VHDL'92.** Technische Universität München, 24.5.1994

131. **Evolving algebra analysis of distributed algorithms.**
Universität München, Institut für Informatik, 25.5.1994

132. **Reliable system design and logical specification concepts.**
Workshop der GI-Fachgruppe *Logik in der Informatik*, Universität Paderborn, 27.5.1994, cf. Technical Report tr-ri-94-146, pg.26

133. **A formal specification of the PVM architecture**
Workshop der GI-Fachgruppe *Logik in der Informatik*, Universität Paderborn, 27.5.1994, cf. Technical Report tr-ri-94-146, pp.8-10 (co-author U.Glässer)

134. **An evolving algebra correctness proof for Lamport's Bakery Algorithm**
Informatik-Kolloquium, Universität Stuttgart, 30.5.1994

135. **Occam: specification and compiler correctness**
IFIP TC2 working Conference *Programming Concepts, Methods and Calculi*, San Miniato, 6.-10.6.1994

136. **An illustration of the evolving algebra approach to formal specification: a simple and abstract correctness proof for Lamport's Bakery Algorithm.**
IFIP WG 2.2 Meeting, San Miniato, 11.-13.6.1994

137. **On reliable system specification with evolving algebras.**
Invited Lecture *Logic and Computer Science*, CIRM, Luminy 27.6.-1.7.1994

138. **Evolving algebras for specification and verification of parallel algorithms and architectures.**
*6th International School for CS Researchers,* Lipari, Sicily, 4.07. - 15.07.1994.

139. **A simple abstract account of different procedure disciplines in programming.**
Universität Paderborn, 23.-27.8.1994

140. **Evolving algebras as a specification tool for the working computer scientist.**
Prolog Forum, ETH and Universität Zürich, 15.-16.9.1994

141. **The semantics of behavioral VHDL'92 descriptions.**
*European Design Automation Conference with EURO-VHDL* (EUROD-DAC), Grenoble, 19.-23.9.1994 (co-author W.Müller)

142. **How formal methods can correspond to a practical need.**
Panel on *Formal Semantics: Practical Need or Academic Pleasure?* at the *European Design Automation Conference with EURO-VHDL* (EUROD-DAC), Grenoble, 19.-23.9.1994

143. **Logic Programming: The Evolving Algebra Approach.**
*IFIP 13th World Computer Congress 1994*, Hamburg 29.9.-2.10.1994

144. **An abstract model of the parallel virtual machine (PVM).**
*7th International Conference on Parallel and Distributed Computing Systems* (PDCS'94), Las Vegas/Nevada, 5.-9.10.1994 (co-author U.Glässer) and *First European PVM Users Group Meeting*, Roma 9.-10.10.1994

145. **Verteilte dynamische Algebren am Fallbeispiel des Lamportschen Bakery Algorithmus.**
Universität Bonn, Abteilung Informatik, 9.12.1994

146. **Evolving algebras and parallel architectures.**
Invited course (3 hrs) to the Workshop *Models of Parallel Computation*, Istituto per le Applicazioni del Calcolo, CNR, Roma 12.-14.12.1994

147. **A mathematical model for the IEEE standard hardware description language VHDL.**
University of Cambridge, GB, 9.1.1995

148. **Proof of correctness of a scheme for compilation of Occam programs on the Transputer.**
ProCoS Working Group Workshop, University of Oxford, 10.-11.1.1995

149. **Eine Methode für korrekten Entwurf von Hardware am Beispiel eines allgemeinen Pipelining Schemas für RISC Architekturen.**
Arbeitskreis SPIQ (Software Process Improvement and Quality), Universität Freiburg, 12.1.1995.

150. **Ein neuer Korrektheitsbeweis für den Lamportschen Bakery Algorithmus.**
Universität Heidelberg, Abteilung math. Logik, 13.1.1995

151. **Ein formales Modell fuer VHDL'93.**
Universität Frankfurt/M., Fachbereich Informatik, 30.3.1995

152. **Beweisbar korrekte Kompilierung von Occamprogrammen auf dem Transputer.**
Universität Karlsruhe, Institut für Informatik, 31.3.1995

153. **Logical foundation of formal specification methods.**
Mathematisches Forschungsinstitut Oberwolfach, 3.04. - 8.04.1995.

154. **Über den Einsatz dynamischer Algebren in der Softwaretechnik.**
Universität Freiburg, 8.5.1995

155. **Mathematische Analyse nebenläufiger Systeme mittels dynamischer Algebren.**
Universität Bonn, Institut für Informatik, 15.5.1995

156. **Beweisbar korrektes Pipelining in RISC Architekturen.**
Universität Karlsruhe, Institut für Angewandte Informatik und Formale Beschreibungsverfahren, 2.6.1995

157. **On the correctness of a general pipelining scheme in RISC architectures.**
IFIP WG 2.2 Meeting, Amsterdam, CWI, 13.6.1995

158. **The APE100 Reverse Engineering Project.**
Istituto per le Applicazioni del Calcolo, CNR, Roma 21.6.1995

159. **Spezifikation von Pipelining Methoden in RISC Architekturen mittels dynamischer Algebren.**
Universität Paderborn, Heinz-Nixdorf Institut, 27.7.1995.

160. **A formal model for the IEEE VHDL'93 standard definition.**
ProCoS Working Group Workshop *Linking Theorie*, Vedbaek (Copenhague) 21-23 August 1995.

161. **Eine praktische Methode für den kontrollierten Entwurf komplexer HW- und SW-Systeme.**
IBM Germany, Entwicklungslabor Böblingen, 12.09.1995.

162. **Spezifikation komplexer Systeme mittels dynamischer Algebren.**
Universität Ulm, 13.9.1995.

163. **Eine Methodik zur beweisbar korrekten Kompilierung imperativer Programme.**
GMD-FIRST, Abteilung Softwaretechnologie, Berlin, 15.9.1995.

164. **Die Methodik der dynamischen Algebren zur beweisbar korrekten Spezifikation komplexer Systeme.**
Universität Koblenz, 21.9.1995.

165. **Eine praktische Methode für kontrolliertes HW/SW-Co-Design .**
ETH Zürich, Institut für technische Informatik und Kommunikationsnetze, 22.09.1995.

166. **A survey of the evolving algebra approach to specification and verification of computer systems.**
Rutgers University, DIMACS, 6.10.1995.

167. **A correctness proof for pipelining on RISC architectures using evolving algebras.**
New Jersey Institute of Technology, Newark, Real-time Computing Lab, 10.10.1995.

168. **Evolving algebras and Parnas tables.**
McMaster University, Faculty of EE, Communications Research Lab, Hamilton (Ontario), Dept of EE, 18.10.1995

169. **The evolving algebra approach to modular development of well documented software. A case study: the steam-boiler control program.**
McMaster University, Faculty of EE, Communications Research Lab, Hamilton (Ontario), Dept of EE, 20.10.1995.

170. **An illustration of the evolving algebra approach to formal specification: a simple and abstract correctness proof for Lamport's Bakery Algorithm.**
CUNY, Graduate School, New York 26.10.1995.

171. **An evolving algebra specification of pipelining on RISC architectures.**
ATT Research Labs, Murray Hill, NJ, 27.10.1995.

172. **rigorous definition of the ISO'95 Prolog standard and of its implementation.**
The University of Chicago, Dep of CS, 1.11.1995.

173. **An evolving algebra specification of pipelining on RISC architectures.**
University of Michigan, Dept of EECS, Ann Arbor 2.11.1995.

174. **A formal method for provably correct composition of a real–life processor out of basic components (The APE100 reverse engineering project).**
First IEEE Int. Conf. on Engineering of Complex Computer Systems, Ft. Lauderdale (Florida) Nov 6.11. - 10.11.1995.

175. **Why use evolving algebras for hardware and software engineering.**
Invited lecture SOFSEM'95 22nd Seminar on Current Trends in Theory and Practice of Informatics, Milovy (Czech Republic), 23.11.-1.12.1995.

176. **Die Methodik der dynamischen Algebren zur Spezifikation und Verifikation der Semantik von Programmiersprachen.**
Universität Tübingen, 4.12.1995.

177. **Beweisbar korrektes Pipelining in RISC Architekturen.**
Universität Frankfurt/M, 5.12.1995.

178. **An introduction into the evolving algebra approach for the specification of large programming systems.**
University of Oslo, CS Dept., 6.12.1995.

179. **An evolving algebra specification and an abstract correctness proof for Lamport's Bakery Algorithm.**
University of Oslo, CS Dept., 7.12.1995

180. **Methodisches zum beweisbar korrekten Entwurf von RISC Architekturen mit Pipelining.**
LM Universität München, 6.2.1996

181. **A survey of the evolving algebra approach for the provably correct specification of complex computer systems.**
Mitre Corporation Research Center, Boston 19.2.1996

182. **A formal specification and a correctness proof for pipelining in RISC architectures.**
CAV-Seminar, Stanford University, Palo Alto 20.2.1996.

183. **Evolving algebras as a specification tool for the working computer scientist.**
CSL Seminar, SRI, Menlo Park 21.2.1996

184. **The evolving algebra approach to modular development of well documented software. A case study: The Steam-Boiler control program.**
CS Dept Seminar, Stanford University, Palo Alto 22.2.1996

185. **The classical decision problem and Turing's reduction method.**
Logic Seminar, Stanford University, Palo Alto 23.2.1996

186. **A formal specification and a correctness proof for pipelining in RISC architectures.**
CAV-Seminar, University of California at Berkeley, 26.2.1996

187. **Tutorial on the evolving algebra approach for controlled design and analysis of large software systems.**
Rockwell Science Center, Software Engineering Group, Thousand Oaks (Los Angeles, CA) 28.-29.2.1996

188. **The evolving algebra method for specification of distributed systems. The example of Lamport's Bakery Algorithm.**
Logic Colloquium UCLA, Los Angeles 1.3.1996

189. **Über den Einsatz dynamischer Algebren in der Softwaretechnik.**
Deutsche Telekom, Forschungs- und Technologiezentrum,
Darmstadt 5.3.1996

190. **Systematische Codeentwicklung mittels dynamischer Algebren am Beispiel eines C++-Programms zur Steuerung der Fertigungszelle.**
Siemens Corporate Research ZFE T Software Engineering,
München 15.3.1996

191. **Eine Methode zur Unterstützung korrekten Entwurf von Hardware (demonstriert am Beispiel von Pipelining in RISC Architekturen).**
Siemens Corporate Research ZFE T Software Engineering,
München 20.3.1996

192. **On the use of evolving algebras for classical computation theory.**
Invited lecture, Workshop on Computability, Complexity and Logic, March 27-30, 1996, Usedom

193. **How to use evolving algebras for controllable hardware design.**
Invited lecture, 2'nd annual meeting of the ESPRIT Working Group NADA (New Hardware Design Methods), 14-16 April 1966, Marielund (Uppsala).

194. **Eine Methode zur Unterstützung korrekten Entwurfs von Hardware (demonstriert am Beispiel von Pipelining in RISC Architekturen).**
Fachgruppe Rechnersysteme, Institut für Datentechnik, TH Darmstadt, 8.5.1996

195. **Evolving algebras as a specification tool for the working computer scientist.**
CS Seminar, SUNY at Stony Brook, 10.5.1996

196. **The evolving algebra approach to modular development of well-documented software for complex computer systems. A case study: the production cell control program.**
DIMACS Workshop on Controllers for Manufactoring and Automation: Specification, Synthesis, and Verification Issues, May 13-15, 1996, DIMACS, Rutgers University (NJ)

197. **How to use evolving algebras for a verification driven design of RISC architectures with correct pipelining.**
CS Seminar, Wesleyan University, Middletown/CT 16.5.1996

198. **Il metodo della algebre dinamiche per specifica e verifica rigorosa di sistemi hw/sw complessi.**
Dipartimento di Elettronica e Informazione, Politecnico di Milano, Milano 28.5.1996

199. **Die Methode der dynamischen Algebren für modulare Entwicklung wohl dokumentierter Software. Fallstudie: Das Steam-Boiler Kontrollprogramm.**
Institut für Informatik, Universität Stuttgart, 18.6.1996
Institut für Informatik, Technische Universität München, 4.7.1996

200. **Evolving algebras and Parnas tables.**
Workshop *Specification and Semantics* (Hartmut Ehrig, Friedrich von Henke, Jose Meseguer, Martin Wirsing), Schloß Dagstuhl 8.7. - 12.7.1996.

201. **Eine abstrakte Modellierung von Fahrstrassenanforderungen in Stellwerken für den Fernverkehr**
VT Siemens, Braunschweig 9.7.1996
Siemens Corporate Research ZFE T Software Engineering, München
19.7.1996

202. **Die Methode der dynamischen Algebren für Spezifikation und Verifikation von Logikprogrammiersystemen.**
Institut für Informatik, Universität Passau, 23.7.1996

203. **Dynamische Algebren als Spezifikationswerkzeug für den angewandten Informatiker.**
Informatikkolloquium, Universität Augsburg, 29.7.1996

204. **Remarks on the history and some perspective of Abstract State Machines in software engineering.**
Workshop *The History of Software Engineering*, (W. Aspray, R. Keli-Slwaik, D.L.Parnas), Seminar No.9635, Schloß Dagstuhl August 1996.

205. **Methodik zur Erfassung von Kundenfunktionalitäten durch Pseudo-Code (abstrakte Euris-Diagramme)**
VT Siemens, Braunschweig 14.8.1996 und Siemens Corporate Research ZFE T Software Engineering, München 13./21.8.1996

206. **Ueber den Einsatz dynamischer Algebren in der Softwaretechnik.**
GMD-FIRST, Abteilung Softwaretechnologie, Berlin, 11.9.1996.

207. **Parnas Tables and Abstract State Machines**
IFIP WG 2.2 meeting, 23 – 27 September 1996, Macau

208. **Formal Specification and Verification of Pipelining in RISC Architectures.**
Academy of Sciences, Bejing, 27.9. - 3.10.1996

209. **A Provably Correct Compilation Scheme for OCCAM Programs into Transputer Code.**
Academy of Sciences, Bejing, 10.1996

210. **Korrektheitsbeweise im Kompilerbau mittels strukturierbarer abstrakter Maschinen.**
Abteilung Informatik, Universität Dresden,7.10.1996

211. **Eine Methodik für systematischen Entwurf wohl dokumentierten und formal inspizierbaren Codes, am Beispiel der Entwicklung eines C++-Steuerprogramms zur Dampfkesselkontrolle.**
Joint Seminar GMD-FIRST (Abteilung Softwaretechnologie) und TU, Berlin, 1o.10.1996.

212. **Eine praktische Methode fuer kontrollierten Entwurf komplexer Hardware- und Softwaresysteme.**
Technische Universität Braunschweig, 14.10.1996

213. **On the use of Gurevich's Abstract State Machines for modular development of well documented formally inspectable software. A case study: The Steam-Boiler control program.**
Invited Lecture, Verifix-Workshop, Universität Karlsruhe, 28.-29.10.1996

214. **Über Anwendungen der Gurevischen Abstrakten Zustandssyteme fuer Softwaredokumentation und Reverse Engineering**
ZT AN1 Siemens, Klausurtagung Eggersberg, 4.12.1996

215. **Theory and practical applications of Gurevich's Abstract State Machines.**
Invited Lecture *Colloquium on Computability, Complexity, and Logic*,
Abteilung Theoretische Informatik, Universität Stuttgart, 5.-6.12. 1996

216. **Über den Einsatz von Abstract State Machines in der Softwaretechnik.** Kolloquium der Abteilung Informatik, Technische Universität, Berlin, 9.12. 1996

217. **Anwendungen der Gurevichen Abstract State Machines im Softwareengineering.**
Kolloquium der Abteilung Informatik, Universität Dortmund, 10.12. 1996

218. **Über beweisbar korrekten Entwurf von Hardware mittels der Gurevichen Abstract State Machines.**
Kolloquium der Abteilung Informatik, Universität Ulm, 11.12. 1996

219. **How to use Abstract State Machines in Software Engineering.**
Dagstuhl Seminar on *Logic for System Engineering* (Organizers
S. Jähnichen, J. Loeckx, D.R. Smith, M. Wirsing), Dagstuhl 3.-7.3.1997

220. **Industrial Use of ASMs for System Documentation.**
Dagstuhl Seminar on *Logic for System Engineering* (Organizers S. Jähnichen, J. Loeckx, D.R. Smith, M. Wirsing), presented by Co-author P. Päppinghaus, Dagstuhl 3.-7.3.1997

221. **Specifying and Programming the Steam Boiler Control: Report on a Competition of Formal Methods.**
Invited Lecture *ZUM'97*, Reading 3.-4.4.1997

222. **On the use of Abstract State Machines for developing well documented and formally inspectable code: The production cell case study.**
Procos Meeting, Reading (GB) 7.-9.4.1997

223. **Das Hilbertsche Entscheidungsproblem und seine Beziehungen zur Komplexität von Berechnungssytemen.**
LMU Kolloqium, Universität München, 17.7.1997

224. **An ASM model defining the semantics of Java.**
BRICS, University of Aarhus (DK), 2.9.1997.

225. **The ASM approach to modular development of well documented software for complex systems. A case study.**
BRICS, University of Aarhus (DK), 4.9.1997.

226. **An ASM definition of the semantics of Java.**
IFIP WG 2.2, University of Graz, 22.-26.9.1997.

227. **On the use of ASMs for software engineering.**
Fraunhofer Institute for Experimental Software Engineering (IESE) and Informatik-Kolloquium University of Kaiserslautern, 27.10.1997.

228. **A rational reconstruction of the Java language and of the Java VM.**
Siemens Corporate Research, ZT Software Engineering 4, München 21.11.1997

229. **A new ASM model for the Java language.**
Siemens Corporate Research, ZT Software Engineering 4, München 15.1.1998

230. **A rigorous definition for the semantics of Java.**
INRIA, Sophia-Antipolis, 27.4.1998.

231. **Java Formal Semantics.**
Invited Lecture, III Simposio Brasileiro de Linguagens de Programacao (SBLP'99), Porto Alegre 5.-7.5.1998

232. **Formal Specification of Programming Languages.**
Invited Tutorial, III Simposio Brasileiro de Linguagens de Programacao (SBLP'99), Porto Alegre 5.-7.5.1998

233. **Modeling Java and the Java VM for a mathematical analysis of Java programs.**
GSN'98 (Grand Seminaire d'informatique de Nantes) (IRIN- EMN-IRCYN), 7.5.1998

234. **A programmer friendly modular definition of the semantics of Java.**
MFPS XIV (Conference on the Mathematical Foundations of Programming Semantics), Queen Mary - Westfield College of the University of London, London, May 10 to May 13, 1998 (presented by co-author W. Schulte)

235. **Construction de modeles de bases et leur transformation en code executable.**
IUT, Universite de Nantes, 11.5.1998

236. **Une preuve de correction pour un schema de compilation de programmes Java en code sur la machine virtuelle pour Java.**
Ecole Des Mines de Nantes, 18.5.1998

237. **Une approche pratique au developement certifie de compilateurs pour de vrais langages de programmation.**
Seminaire du Laboratoire de Recherche en Informatique, Universite Paris XI, 22.5.1998

238. **Modeling Java and the Java VM for proving compilers to be correct and programs to be safe.**
Invited lecture, LUC-Symposium on Logic and Computer Science, Hasselt, Belgium, 27.5.1998

239. **Operational models for compiler verification.**
Dagstuhl Seminar on *Programs: Improvements, Complexity and Meaning*, 7.-12.6. 1998, Organizers: A.D.Gordon (Cambridge), N.D.Jones (Copenhague), O.de Moor (Oxford), J.S.Royer (Syracuse). Dagstuhl-Seminar-Report 213 (98231), p.10.

240. **On the integration of formal and semi-formal techniques using ASMs.**
Dagstuhl Seminar on *Semi-Formal and Formal Specification Techniques for Software Systems*, 12.07.1998 - 17.07.1998, Organizers: H. Ehrig (TU, Berlin), G. Engels (Paderborn), F. Orejas (Barcelona), M. Wirsing (Universität München). See Dagstuhl-Seminar-Report 218 (98281), 6-8.

241. **The ASM Approach to System Design**.
Hungarian Academy of Sciences, Research Institute of Computing and Automatisation, Budapest 19.8.1998

242. **Mathematical Analysis of Java programs**.
Invited Lecture MFCS'98, Brno, Cech Republic, 24.-28.8.1998

243. **ASM Tutorial: Applications.**
MFCS'98, Brno, Cech Republic, 24.-28.8.1998

244. **After 10 years of ASMs: Where are we and where should we go?**
Invited Lecture ASM workshop, GI-Jahrestagung Informatik'98, Magdeburg 21.-22.9.1998

245. **Modellierung von Java und der Java Virtual Machine.**
Universität Paderborn, Heinz-Nixdorf Institut, 22.9.1998.

246. **The Abstract State Machines Method for the Design and Analysis of Complex Computing Systems.**
Invited Lecture, International Workshop on Current Trends in Applied Formal Methods, Boppard 7.-9.10.1998.

247. **Eine mathematische Definition der Semantik von Java.**
Graduiertenkolleg *Intelligente Systeme für die Informations- und Automatisierungstechnik*, Technische Universität Darmstadt, 7.12.1998

248. **Eine mathematische Definition der Implementierung von Java.**
Graduiertenkolleg, Universität Darmstadt, 8.12.1998

249. **Modellierung von Java und der JVM.**
Informatikkolloquium, Universität Frankfurt (Main), 8.12.1998

250. **Models of Java and of its implementation on the JVM.**
Workshop "Tecniche formali", Università di Roma, 21.-23.12.1998

251. **Eine Definition der Java Virtual Machine.**
Informatik-Kolloquium, Humboldt University, Berlin, 10.6.1999

252. **Structuring the Java VM.**
IFIP WG 2.2, University of Udine, 28.6.-1.7.1999

253. **Rigorous Methods for Requirements Capture and Software Architecture.**
Research Evaluation, Dipartimento di Informatica, Universita di Pisa, Pisa 8.-9.7.1999

254. **Modeling the Java Virtual Machine using ASM composition principles.**
Meeting IFIP Working Group 1.3 on Foundations of System Specification, Bonas (FRANCE) 13.-15.9.1999

255. **Composition Principles for ASMs.**
Workshop ADTS, Bonas (France) 16.-18.9.1999

256. **Introduction and Survey of ASMs.**
Opening talk to the ASM UG Meeting at the FM'99 Congress, Toulouse (France),20.-24.9.1999

257. **Using ASMs for Integrating Different Design And Analysis Methods.**
Dagstuhl Seminar "Rigorous Analysis and Design for Software Intensive Systems", 07.11.1999 - 12.11.1999, Organizers: S. Jaehnichen (Berlin), M. Lemoine (Toulouse), T. Maibaum (London), M. Wirsing (Univ. Muenchen).

258. **Analyse der Fehlerbehandlung in Java und auf der Java Virtual Machine.**
University of Munich (LMU), 14.12.1999.

259. **Composition and Submachine Concepts for Sequential ASMs.**
Microsoft Research Redmond, 9.2.2000

260. **Sulla Semantica di UML Activity Diagrams e di UML State Machines.** Workshop SALADIN Project, Universita di Pisa, 13.3.2000.

261. **Structured Design for the Java Virtual Machine.**
Invited Lecture, ASM workshop, Ascona/Switzerland, 20.-24.3.2000.

262. **The ASM refinement method.**
ASM crash course (second lecture), Microsoft Research Redmond, 13.4.2000

263. **Using ASMs for Software Development.**
MTA SZTAKI Computer and Automation Research Institute, Budapest, 2.5.2000

264. **Ueber den Einsatz von ASMs in industrieller Softwareentwicklung.**
Institut fuer Informatik, Universität Linz (Austria), 4.5.2000

265. **Ein Korrektheitsbeweis fuer Fehlerbehandlung in Java und der JVM.**
Technische Universität Wien, 5.5.2000

266. **Reliable Practical Software Development using ASMs.**
Institute for Information Processing and Computer Supported New Media, Graz University of Technology, 6.5.2000

267. **An ASM Semantics for UML Activity Diagrams.**
AMAST'2000, Iowa/USA, 23.-27.5.2000

268. **Abstract State Machines and their Industrial Employment: A Survey.**
Tutorial, Fifth NASA Langley Formal Methods Workshop (Lfm2000), 13.-15.6.2000, Williamsburgh, Virginia, USA.

269. **Using Abstract State Machines in Requirements Engineering.**
Tutorial, Fourth International IEEE Conference on Requirement Engineering (ICRE'2000), 19.-23.6.2000, Schaumburg, Illinois, USA.

270. **Submachine Concepts for ASMs.**
IFIP WG 1.3 Meeting, 29.6.-1.7.2000, Stanford University, Palo Alto/CA.

271. **A Modular Definition of Java and of its Implementation on the JVM.**
Kestrel Institute, Palo Alto/CA, 5.7.2000

272. **A correctness proof for the exception handling in Java/JVM.**
Stanford Research Institute (SRI), Palo Alto/CA, 6.7.2000

273. **Reliable Software Development Using Abstract State Machines.**
University of California at Berkeley, EECS, Berkeley/CA, 7.7.2000

274. **Structuring Abstract State Machines.**
Invited Lecture, Gurevich Symposium at CSL'2000, Munich/Germany, 21.-26.8.2000

275. **Using ASMs as oracle for testing.**
Microsoft Research Redmond/WA, 6.9.2000

276. **Abstract State Machines tailored to UML diagram visualizable machines.**
Microsoft Research Redmond/WA, 20.9.2000

277. **Modeling Virtual Machines by ASMs.**
University of Minnesota, Institute of Technology, Department of Computer Science, Minneapolis/MN, 22.9.2000

278. **A modular high-level definition of the dynamics of C sharp.**
Microsoft, C sharp Development Group, Redmond 27.9.2000

279. **Applying ASMs to the formal definition of Java and its provably correct implementation on the Java Virtual Machine.**
Part II of the Tutorial on *Abstract State Machines and their Applications* (with U. Glässer, R. Gotzhein, A. Prinz), FORTE/PSTV 2000, IFIP TC6/WG6.1 International Conference, Pisa 10.-13.10.2000. See http://forte-pstv-2000.cpr.it/WEB-PAGES/online-slides.html

280. **Proposing ASMs for database applications.** Dagstuhl Seminar on Semantics of Databases, organized by L.Bertossi (Santiago), G.Katona (Budapest), K.-D.Schewe (Massey), B. Thalheim (Cottbus), Dagstuhl (Germany), 8.-12.1.2001

281. **Design for Reuse: Java compilation and JVM bytecode verification.**
Universität Kaiserslautern, 12.1.2001

282. **Analyse von Java und seiner Implementierung auf der JVM.**
Universität Karlsruhe (Germany), 15.1.2001

283. **Modeling, Analysing and Verifying Java and its Implementation on the JVM.**
Programming Research Lab, Oxford University, 29.1.2001, and University of Manchester, 31.1.2001

284. **Problems with Formal Methods in Design and Analysis of Software Systems.**
University of Manchester, 2.2.2001

285. **Structuring the JVM Architecture.**
Workshop Project Saladin (Software Architecture and Languages to Coordinate Mobile Distributed Components), Universita di Venezia, 14.-16.2.2001

286. **Using ASMs to define, verify and validate Java and the JVM: Surveying a real-life case study book.**
International ASM Workshop at EUROCAST'2001, Las Palmas, 19.2. - 23.2.2001

287. **Design for reuse via composition techniques applied to Abstract State Machines.**
IFIP WG1.3, Genova, 30.-31.3. 2001

288. **Abstract State Machines: Surveying their Theory and their Industrial Employment.**
Tutorial at ETAPS'2001, Genova, 1.4.2001

289. **Identifying the modular structure of the Java Virtual Machine.**
IFIP Working Group 2.2 meeting, Rennes, 14. - 17.5.2001

290. **Modeling, Validating and Verifying Java and its Implementation on the JVM.**
Ecole des Mines de Nantes, 18.5.2001

291. **A Mathematical Analysis of Java and the JVM.**
Universite de Paris 12 (Creteil), 21.5.2001

292. **Some formal methods cope with software-intensive systems, IF ... .**
Dagstuhl Seminar on *Can formal methods cope with software-intensive systems?* 28.5.-1.6.2001

293. **Java and the Java Virtual Machine. Verifying and validating bytecode verification and execution.**
INRIA, Sophia-Antipolis, 13.7.2001

294. **Die ASM-Methodik für industriellen Softwareentwurf und Analyse.**
Festvortrag at Diron, Münster i.W., 7.9.2001

295. **Analyse der Java Virtual Machine und ihres Bytecode Verifiers.**
Abteilung Informatik, Universität Halle, 12.9.2001

296. **The Abstract State Machines Method in Software Engineering.**
Course delivered at the Summer School on "Formalware Engineering", CISM, Udine (Italy), 24.-29.9.2001

297. **To what extent is Java/JVM a safe programming environment for the internet?**
Invited Lecture, JCCS-2001 (XXI Conferencia Internacional de la Sociedad Chilena de Ciencia de la Computacin). Talk presented by Joachim Schmid, Chile 5.-9.11.2001

298. **ASM Component Model.**
2nd Workshop "Saladin" on Software Architectures and Languages to Coordinate Mobile Distributed Components. L'Aquila, 6.-8.2.2002

299. **Definitional Suggestions for Computation Theory.**
Dagstuhl Seminar "Theory and Applications of Abstract State Machines", Schloss Dagstuhl, Germany, 4. - 8.3.2002. See Abstract in Dagstuhl Seminar Reports at http://www.dagstuhl.de/02101/

300. **Using ASMs for Requirmeents Engineering.**
Lectures at Lipari Summer School on Software Engineering, 1.7. - 12.7.2002, Lipari Island/Sicily

301. **Analysis of the Java Virtual Machine.**
18.7.2002, Colloquium at Dept. of Computer Science, University of Aarhus

302. **Refinement Method for Abstract State Machines**
Invited Lecture at *REFINE 2002*, Workshop on Refinement, FLOC'02, 20.7.2002, Copenhague

303. **Computation and Specification Models. A Comparative Study**
Invited Lecture at *Workshop on Action Semantics*, 21.7.2002, FLOC'02, Copenhague

304. **Abstract Operational Model for the Semantics of C#**
Rotor Workshop 23.-26.7.2002, Microsoft Research, Cambridge, Queen's College

305. **Turbo ASMs: marrying sequential execution and synchronous parallelism**.
Formal Methods and Tools Day, CNR Pisa (Italian National Research Council), 17.10. 2002

306. **Remarks on Turbo ASMs for Functional Equations and Recursion Schemes**
Workshop Abstract State Machines 2003, Taormina, 3.-8.3.2003

307. **Abstract State Processes**
Invited Lecture, Workshop Abstract State Machines 2003, Taormina, 3.-8.3.2003

308. **The Abstract State Machines Refinement Method**
Seminar on "Formal Approaches to Software", ETH Zürich, 21.5.2003

309. **The Abstract State Machines Ground Model Method**
Invited Lecture to *International Symposium on Verification* (Manna Symposium), Taormina 29.6.-4.7.2003

310. **The Abstract State Machine Method: bridging the gap between specification and design**
Keynote Lecture to FDL'03 (Forum on Specification and Design Languages), Frankfurt 23.-26.9.2003. See Proc. FDL'03, ISSN 1636-9874

311. **Exploiting the "A" in Abstract State Machines for Specification Reuse. A Java/C# Case Study**
Invited Lecture to FMCO 2003, University of Leiden, Lorentz Center, 4.-7.11.2003. Lecture Slides at http://fmco.liacs.nl/fmco03.html

312. **Il doppio ruolo della logica tra sapienza e tecnologia**
Incontro *Informatica e Civiltà: Logica, Tecnologia e Sapienza*, Università di Pisa, Pisa 9.12.2003

313. **Teaching ASMs to Practice-Oriented Students with Limited Mathematical Background**
Workshop *Teaching Formal Methods: Practice and Experience*, Oxford Brookes University (Applied Formal Methods Group in association with BCS-FACS), Oxford 12.12.2003

314. **The ASM refinement notion**
Workshop Sahara, University of Bologna, 29.-30.1.2004

315. **Exploiting abstractions for specification reuse. The Java/C# case study**.
Invited Lecture, Workshop CASSIS (Construction and Analysis of Safe, Secure and Interoperable Smart cards), 10.-13.3.2004, Marseille. See http://www-sop.inria.fr/everest/events/cassis04/

316. **Modeling with Abstract State Machines: A support for accurate system design and analysis**
GI-Meeting *Modellierung 2004*, Industrieforum, Marburg 23.-26.3.2004 (See GI-Edition Lecture Notes in Informatics, Vol. P-45 (B. Rumpe and W. Hesse, Eds.), pg. 235-239)

317. **A comparative analysis of Java and C#.**
University of Braunschweig (10.5.2004) and University of Frankfurt/M (11.5.2004)

318. **An introduction into ASMs**.
University of Braunschweig, 10.5.2004

319. **Turning the ASM model for Java into a model of C#.**
Invited Lecture at *ASM 2004*, Halle-Wittenberg 24.-28.5.2004

320. **Von endlichen Automaten zu abstrakten Zustandsmaschinen**.
Praezisionswerkzeug Logik - Gedenkkolloquium für Dieter Rödding, Universität Osnabrück, 4.5.2004.

321. **Describing the semantics of object-oriented programming languages**.
IFIP WG 2.2 Meeting at Bertinoro (Bologna), 15.-18.9.2004

322. **A comparative analysis of Java and C#.**

- Humboldt Universität Berlin (4.10.2004)
- University of Stuttgart (6.10.2004)
- Max Planck Institut Saarbrücken (7.10.2004)
- University of Bielefeld (8.10.2004)

323. **Java and C#: two instances of one language type**. Informatikkolloquium, Universität Kiel, 22.10.2004

324. **From Java to C#: a mathematical analysis**. PAM Seminar at CWI, Amsterdam, 17.11.2004.

325. **A practice-oriented course on the principles of computation, programming and system design and analysis**. CoLogNet/Formal Methods Europe Symposium TFM'04 (Teaching Formal Methods), Gent 18.-19.11.2004

326. **From FSMs to ASMs. An Introduction**.
Guest Lecture to Prof. B. Meyer's course "Trusted Components: Reuse, Contracts and Patterns", ETH Zürich, 8.12.2004.
See http://se.inf.ethz.ch/teaching/ws2004/0239/slides/AsmMethZh04.PDF

327. **The ASM Ground Model and Refinement Method**.
Two Guest Lectures to Prof. B. Meyer's course "Trusted Components: Reuse, Contracts and Patterns", ETH Zürich, 13.12.2004.
See http://se.inf.ethz.ch/teaching/ws2004/0239/slides/AsmMethZh04.PDF

328. **Asynchronous ASMs and Event-B Models**.
Guest Lecture to Prof. B. Meyer's course "Trusted Components: Reuse, Contracts and Patterns", ETH Zürich, 15.12.2004.
See http://se.inf.ethz.ch/teaching/ws2004/0239/slides/AsmMethZh04.PDF

329. **Identifying a common structure of Java and C#.**
FATS Seminar (Formal Approaches to Software), ETH Zürich, 15.12.2004

330. **The Abstract State Machines Method for High-Level System Design and Analysis**.
Dagstuhl Workshop *Modellbasierte Entwicklung eingebetteter Systeme*
*(Model-Based Development of Embedded Systems)* (MBEES 2005),
organizers T. Klein, B. Rumpe, B. Schätz, 10.-14.1.2005.
See http://beam.to/mbees

331. **Die ASM Modellierungsmethodik**.
SAP Research, Karlsruhe 7.2.2005

332. **An Abstract State Machine model for Status and Action Management status schemes**.
SAP Research, Karlsruhe 23.2.2005

333. **The ASM Method: A Cornerstone in Computer Science Education**.
Invited Lecture, *International Abstract State Machines Workshop 2005*, Special Session on Education, Paris, 8.-11.3.2005. See http://www.univ-paris12.fr/lacl/Asm05/, login Paris, password Asm05

334. **Design Pattern Abstractions and Abstract State Machines**.
*International Abstract State Machines Workshop 2005*, Paris, 8.-11.3.2005. See http://www.univ-paris12.fr/lacl/Asm05/, login Paris, password Asm05

335. **A Comparative Analysis of Java and C#.**
Abteilung Informatik, Universität Erlangen, 4.5.2005

336. **Eine vergleichende Analyse von Java/C# und JVM/.NET CLR**.
Kolloquium der Informatik, Universität Heidelberg, 15.5.2005

337. **A Mathematical Model for Process Mediation**.
Institut für Angewandte Informatik und Formale Beschreibungsverfahren, Universität Karlsruhe, 10.6.2005

338. **Using ASM for investigating the complexity of computational systems**.
Invited Lecture at DCFS'05 (Descriptional Complexity of Formal Systems), IFIP WG Descriptional Complexity, Como 30.6.-2.7. 2005. See C. Mereghetti, B. Palano, G. Pighizzini, D. Wotschke (Eds.): Proc. 7th. International Workshop on Descriptional Complexity of Formal Systems, Dip. di Informatica e Comunicazione, Universita di Milano, TR 06-05, pp. 15-22

339. **A model for web service mediators**.
CS Department, Concordia University in Montreal (Canada) 6.7.2005

340. **Web Service Interaction Patterns**.
CS Department, Simon Fraser University, Vancouver (Canada) 14.7.2005

341. **The ASM Method for System Design and Analysis. A Tutorial Presentation**.
Tutorial invited to FroCoS'05 (5th International Workshop on Frontiers of Combining Systems), Wien (Austria) 19.-21.9.2005

342. **Adding a Semantical Foundation for Program Correctness to Hoare's Verifying Compiler Challenge**.
Technische Universität Wien (Austria), 20.9.2005

343. **An Introduction into the ASM Method**.
Invited Lecture on the ASM Method to: WSMO Choreography and Orchestration Meeting. DERI Institut, Computer Science Department, Universität Innsbruck (Austria), 22.-23.9.2005

344. **A Compositional Framework for Service Interaction Patterns and Interaction Flows**.
Invited Lecture to ICFEM'05 (International Conference on Formal Engineering Methods), Manchester, 1.-4.11.2005

345. **Experiments for a New Theory of Meta-Programming**.
Computer Science Department, Universität Innsbruck (Austria), 16.1.2006

346. **An Analysis of Object-Oriented Programming constructs, illustrated through Java and C#**.
Department of Computer Science, Complutense University, Madrid, 2.3.2006

347. **Überlegungen zum Einsatz von ASMs im Hardware-Verifikationsprozess**. OneSpin-Solutions, München, 26.4.2006

348. **Characterizing Event-B models as ASMs**.
Dagstuhl Seminar *Rigorous Methods for Software Construction and Analysis*, organized by J-R Abrial and U. Glässer, Dagstuhl 7.-12.5.2006. See http://drops.dagstuhl.de/portals/06191/

349. **The ASM Method for Controllable Development of Software-Based Systems**.
HPI-Kolloquium at Hasso-Plattner-Institut für IT Systems Engineering, Potsdam (Berlin) 17.5.2006

350. **The Role of Ground Models for Software System Development and Analysis**.
Dagstuhl Seminar *The Challenge of Software Verification*, organized by P. Cousot (ENS - Paris, F), P. O'Hearn (Queen Mary College - London, GB), J. Misra (Univ. of Texas at Austin, USA), M. Broy (TU München, D), Dagstuhl 09.07. - 13.07.2006

351. **An architecture for web service mediation and discovery**.
Dagstuhl Seminar *The Role of Business Processes in Service Oriented Architectures*, organized by F. Leymann, W. Reisig, S. R. Thatte, W. van der Aalst, Dagstuhl 16.-21.7.2006

352. **The Abstract State Machines Method for Modelling and Analysis of Software-Based Systems**.
Dagstuhl Seminar *Methods for Modelling Software Systems (MMOSS)*, organized by D. Harel (Weizmann Inst. - Rehovot, IL), P. Stevens (University of Edinburgh, GB), R. Wieringa (University of Twente, NL) , Dagstuhl 27.08. - 01.09.2006

353. **Contributions of the Abstract State Machines method to program verification and some future challenges**.
40 Years of IFIP WG 2.2 Anniversary Meeting, Udine, 11.-14.9.2006

354. **The ASM Ground Model Method as a Foundation of Requirements Engineering**.
CS Department, McMaster University, Hamilton (Canada), 10.1.2007

355. **The Abstract State Machines Method for Modeling and Analysis of Software-Based Systems**.// CS Department, University of Toronto (Canada), 11.1.2007

356. **A Compositional Framework for Service Interaction Patterns and Interaction Flows**.// CS Department, University of Waterloo (Canada), 12.1.2007

357. **The Abstract State Machines Method for High-Level System Design and Analysis**.
British Computer Science Formal Aspects of Computing Seminar, London, 21.3.2007

358. **Interaktions- und Arbeitsflussmuster: Eine Fallstudie fuer präzise Pflichtenhefterstellung**.
2 Lectures on Software Technology, Universität Freiburg, Fakultät für Informatik, 4.5.2007

359. **Illustrating ASM Ground Model Construction for Business Process Mediation**.
Universität Freiburg, Fakultät für Informatik, 4.5.2007

360. **A Semantical Foundation for Hoare's Verified Software Challenge**.
Fakultätskolloquium, Fakultät für Elektrotechnik, Informatik und Mathematik, University of Paderborn, 8.5.2007

361. **A Critical Analysis of Workflow Patterns**.
*International Abstract State Machines Workshop 2007*, Grimstadt, Norway, 6.-9.6.2007

362. **Hoare's Grand Verified Software Challenge and Semantical Program Correctness**.
Logic, Abstract State Machines and Databases Workshop, Massey University, Palmerston North, New Zealand, 2.-3.11.2007

363. **The ASM System Design and Analysis Method: An Illustration by Modeling Workflow Patterns from First Principles**.
26th International Conference on Conceptual Modeling (ER 2007) Keynote, Auckland, New Zealand, 5.-9.11.2007

364. **Coupling Design and Verification in Software Product Lines**.
*The Fifth International Symposium on Foundations of Information and Knowledge Systems* (FoIKS 2008) Keynote, February 11-15, 2008, Pisa, Italy, http://2008.foiks.org/

365. **Using ASMs for System Modeling: The Case of BPMN**.
Computer Science Department, University of Kiel, Germany, 6.3.2008.

366. **A Framework for Rigorous Modeling and Analysis of Business Processes**.
Computer Science Department, University of Kiel, Germany, 16.5.2008.

367. **Business Process Modeling Notations and the OR-Join Problem**.
Technische Universität Hamburg-Harburg, 19.5.2008

368. **The Abstract State Machines Method for Verifiable System Design. With an Application to Business Process Modeling Notations**.
SFB 637- Logistik (www.sfb637.uni-bremen.de), University of Bremen, Germany, 23.5.2008.

369. **System Modeling, Verification and Validation: From Programming Languages to Business Processes**.
*Mathematical Rigour in Computer Science*, Festkolloquium on the Occasion of Peter Schmitt's 60th Birthday, University of Karlsruhe, Germany, 30.5.2008.

370. **Semantics of Business Process Modeling: Methods and Techniques**.
Invited Lecture to *19th International Workshop on Algebraic Development Techniques* (WADT'08), Pisa, Italy, June 13-16, 2008.

371. **An Introduction to ASMs via Workflow Patterns**.
Hans-Plattner-Institut, Berlin-Potsdam, Germany, 25.6.2008.

372. **Modeling the Semantics of Object-Oriented Languages**.
Computer Science Department, University of Düsseldorf, Germany, 7.11.2008.

373. **The ASM Method for Modeling and Analysis of Software-Based Systems**.
Kolloquium, Elitestudiengang Softwaretechnik, Universität Augsburg, 3.2.2009

374. **Modeling Workflow Patterns and BPMN Constructs from First Principles**.
Siemens Research, München 5.2.2009.

375. **Coupling Design and Verification in Software Product Lines**.
University of Waterloo, Ontario (Canada), 24.4.2009.

376. **Abstract State Machines and their relation to Event-B programs.**
University of Sherbrooke, Quebec (Canada), 28.4.2009.

377. **An illustration of how to develop ASM models from requirements: the Java/JVM case study.**
University of Sherbrooke, Quebec (Canada), 28.4.2009.

378. **A rigorous semantics for the OMG BPMN Standard**.
University of Sherbrooke, Quebec (Canada), 29.4.2009.

379. **The Abstract State Machines Method for Modeling and Analysis of Software-Based Systems. Survey of its Mathematical Foundation and of Characteristic Applications**.
IRMCAS Centre (Interdisciplinary Research Institute for Mathematical Sciences and Computer Science), Simon Fraser University, Vancouver (Canada), 13.5.2009

380. **Modeling Workflow Patterns from First Principles**.
Computing Science at Simon Fraser University, Vancouver (Canada), 14.5.2009

381. **Modeling Business Processes: Semantics and Analysis of the OMG Standard for BPMN**.
Carleton University, School of Computer Science, Ottawa (Canada), 19.5.2009

382. **Festvortrag** Emeritierung Prof. Dr. Dr.h.c. V. Claus, CS Dept, University of Stuttgart, 3.7.2009

383. **Modeling Operating System Kernels**.
IFIP WG 1.3 meeting, Udine 11.-12.9.2009

384. **Refinement of programs of distributed agents**.
Dagstuhl Seminar *Refinement Based Methods for the Construction of Dependable Systems*, organized by Jean-Raymond Abrial (ETH Zürich, CH), Michael Butler (University of Southampton, GB), Rajeev Joshi (Jet Propulsion Laboratory, USA), Elena Troubitsyna (Aabo Akademi University - Turku, FIN), Jim C. P. Woodcock (University of York, GB), Dagstuhl, 13.9. - 18.9.2009.

385. **Synchronous and Asynchronous Abstract State Machines**.
Dagstuhl Seminar *SYNCHRON 2009*, organized by Albert Benveniste (IRISA/INRIA Rennes, F), Stephen A. Edwards (Columbia University, US), Edward Lee (Univ. California - Berkeley, US), Klaus Schneider (TU Kaiserslautern, D), Reinhard von Hanxleden (Universität Kiel, D), Dagstuhl, 22.11. - 27.11.2009

386. **Coupling Design and Verification in Software Product Lines**.
Informatikkolloquium TU München, 1.12.2009

387. **Refinement of distributed ASMs**.
ETH Zürich 19.1.2010

388. **Modeling Mobile Ambients by Ambient ASMs**.
Politecnico di Milano, D'ASAP Project Meeting 17.-18.2.2010

389. **Synchronous Message Passing and Semaphores: An Equivalence Proof**.
ABZ2010 Conference, Orford, Canada, 22.-26.2.2010

390. **Execution Semantics for BPMN Modeling Concepts**.// ETH Zürich 2.3.2010

391. **Coupling Design and Verification in Software Product Lines**.// Informatik Kolloquium ETH Zürich 22.3.2010

392. **Ambient Abstract State Machines**.

    - ETH Zürich 27.4.2010
    - Lecture at Amir Pnueli Memorial Symposium, Courant Institute, NYU, New York, 7.-9.5.2010

393. **Stepwise Refinements in System Design and Conservative Extensions for Property Verification**.
Institut für Informatik und angewandte Mathematik, Universität Bern 20.5.2010

394. **A Runtime-Based Verification Method for Stepwise Refined Concurrent Programs**.
Research Seminar of: Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg, 27.5.2010

395. **Modeling Business Processes viewed through the OMG BPMN standard definition**.
Opening Lecture at AFADL 2010 (10es Journées Francophones Internationales sur les Approches Formelles dans l'Assistance au Développement de Logiciels), Poitiers 9.-11.6.2010 (Abstract in: Y. Ait-Ameur (Ed.): Proc. AFADL 2010, LISI/ENSAMA, p.1)

396. **Applying Incremental Design for the Verification of Software Product Lines**.
University of Passau 15.6.2010

397. **Ambient Abstract State Machines**.
Software Competence Centre Hagenberg (Linz, Austria), 30.8.2010

398. **Ambient Abstract State Machines for modeling an architecture of current WEB applications systems**.
Invited Lecture at the First Conference of the Academia Europaea (AIECS), Graz, 31.8.2010

399. **An execution model for the BPMN 2.0 OMG standard of 2010**.
Karlsruher Institut für Technologie, 4.10.2010

400. **BPMN Core Modeling Concepts in the OMG 2010 Standard**.
Hochschule Bonn-Rhein-Sieg, Informatikkolloquium, 8.10.2010

# 3 Talks 2011 – 2024 (ASM Modeling Method)

1. **Ein ASM Modell fuer PASS**.
   KIT, Karlsruhe (Germany), 14.-16.2.2011

2. **Design for Change: Das revidierte PASS-Modell als Fallstudie**.
   KIT, Karlsruhe (Germany), 1.3.2011

3. **Wiederverwendung von ASMs am Beispiel des revidierten PASS Modells**.
   Metasonic, Ingolstadt (Germany), 3.3.2011

4. **Abstrakte Zustandsmaschinen mit Umgebungsbegriff**.
   Universität Augsburg (Germany), 4.3.2011

5. **A Subject-Oriented Interpreter Model for S-BPM**.
   Universität Linz (Austria), 1.4.2011

6. **Course on the ASM Method for Software Engineers**.
   FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 28.3.-15.4.2011

7. **The Abstract State Machines Method for Modeling and Analysis of Software-Based Systems. A Survey of its Mathematical Foundation and of Characteristic Industrial Applications**.
   RISC Institute, Hagenberg bei Linz (Austria), 13.4.2011

8. **Einführung in die ASM-Methode**.
   Course delivered at TU Braunschweig (Germany), Computer Science Department, May 2011

9. **Ambient ASMs: Agents, Patterns, Mobility**.
   TU Braunschweig 6.6.2011

10. **Comparing S-BPM with BPMN, Workflow Patterns and YAWL**.
    KIT, Karlsruhe (Germany), 10.6.2011

11. **Business Process Modeling: Standards or Accurately Modeled Tools?**
    CS Kolloquium, TU Braunschweig (Germany) 20.6.2011

12. **How Business Process Modeling can be made Reliable using Methods from Logic**.
    CS Kolloquium, RWTH Aachen (Germany) 21.6.2011

13. **Business Process Modeling: Analyzing Standards and Tools using Abstract State Machines**
    CS Kolloquium, U Halle (Germany) 24.6.2011

14. **The Problem of Semantics for Business Processes**.
    Invited lecture to 5th International Workshop on Semantics in Data and Knowledge Bases (SDKB 2011 at ICALP 2011), Zürich (CH) 4.7.2011

15. **Using ASMs for modeling and analysis of web services**.
    ESF-Workshop at SCCH and RISC Hagenberg (Austria), 26.-28.9.2011

16. **Coupling Design and Verification in Software Product Lines**.
    EPFL, Lausanne (CH) 30.11.2011

17. **Business Process Modeling. A Case Study: BPMN, YAWL, S-BPM**.
    Universität Innsbruck (Austria), 12.3.2012

18. **Course on the ASM Method for Software Engineers**.
    FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 13.-30.3.2012

19. **Business Process Modeling: Analyzing Standards and Tools**.
    Universität Passau (Germany), 19.3.2012

20. **The Abstract State Machines Method for Modeling and Analysis of Software-Based Systems**.
    Collegium Logicum, Kurt Gödel Society Lecture, TU Wien (Austria), 2.4.2012

21. **S-BPM and the Abstract State Machines Method**.
    Keynote at S-BPM-One Workshop 2012, TU Wien (Austria), 4.4.2012

22. **Business Process Modeling: A Critical Analysis of BPMN 2.0 and of the Workflow Pattern Initiative**.
    SAP Research, Darmstadt (Germany) 30.5.2012

23. **Rigorous Analysis of Web Application Frameworks**.
    Opening Keynote at Joint iFM and ABZ 2012 Conference, Pisa 19.6.2012

24. **Accurate Models for Web Application Frameworks as a Prerequisite for Rigorous Analysis**.
Dagstuhl Seminar *Web Application Security*, organized by Lieven Desmet, Martin Johns, Benjamin Livshits, Andrei Sabelfeld, Dagstuhl 30.9.-5.10.2012

25. **Accurate Models for Web Application Frameworks**.
8.10.2012, Université du Luxembourg

26. **Business Process Modeling: Weaknesses of BPMN and Workflow Patterns**.
9.10.2012, Universität Ulm (Germany)

27. **Business Process Modeling: Criticism of BPMN and Workflow Patterns and an Interpreter for Subject-Oriented BPM**.
10.10.2012, FORTISS, München (Germany)

28. **Course on the ASM Method for Software Engineers**.
FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 5.3.-21.3.2013

29. **Accurate Models for Web Application Frameworks**.
11.3.2013, Universität Passau (Germany)

30. **Why Use the Abstract State Machines Method for Design and Analysis of Business Processes?**
Institute for Software Technology and Interactive Systems, TU Wien (Austria) 18.3.2013

31. **The Abstract State Machines Method for Modular Design and Analysis of Programming Languages: A Survey**.
Invited lecture at the workshop on *Scalable Language Specification* (SLS 2013), Microsoft Research Cambridge, 25.6. - 27.6.2013

32. **A proposal for including communication into Abstract State Machines**.
Dagstuhl Seminar *Integration of Tools for Rigorous Software Construction and Analysis*, organized by U. Glässer, S. Hallerstede, M. Leuschel, E. Riccobene, Dagstuhl 8.9. - 13.9.2013. http://drops.dagstuhl.de/opus/volltexte/2014/4358/

33. **Defining ASMs as Event-B Machines and vice-versa** (Joint with Laurent Voisin).
Dagstuhl Seminar *Integration of Tools for Rigorous Software Construction and Analysis*, organized by U. Glässer, S. Hallerstede, M. Leuschel, E. Riccobene, Dagstuhl 8.9. - 13.9.2013. http://drops.dagstuhl.de/opus/volltexte/2014/4358/

34. **How to guide PhD candidates**.
Software Competence Center Hagenberg, 17.10.2013

35. **Closing the Gap between Business Process Models and their Implementation. Towards Certified BPMs**.
Wirtschaftsinformatik, Hochschule Bonn-Rhein-Sieg, 21.10.2013.

36. **How Business Processes can be Certified**.
Informatik, Universität Düsseldorf, 22.10.2013

37. **How to Model and Verify Software Product Lines**.
Informatik, Universität Magdeburg, 23.10.2013

38. **System modeling with variable sharing or communication-based data exchange?**.
SAP Research Karlsruhe, 25.10.2013

39. **S-BPM: Über den praktischen Gewinn einer wissenschaftlichen Fundierung**.
Invited Lecture to *AIK-Symposium*, Universität Karlsruhe, 25.10.2013

40. **Proving serializability for concurrent programs running under an abstract transaction operator**.
Università di Pisa, 11.3.2014

41. **How to Achieve Reliability for Business Process Models and their Implementation**. University of Swansea, 13.3.2014

42. **BPMN, YAWL, Workflow Patterns, Petri Nets: A Critical Analysis of some Business Process Standards and Tools**.
University of Southampton, 18.3.2014

43. **Modeling and proving correctness of transaction control. A challenge for theorem provers**.
University of Southampton, 18.3.2014

44. **Course on the ASM Method for Software Engineers**.
FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 25.3.-10.4.2014

45. **An Abstract Transaction Operator for Concurrent Programs**.
Universität Passau, 28.3.2014

46. **Well-founded certification of industrial business process models: the role of "ground models"**.
Technische Universität Dortmund, 29.4.2014

47. **Validating and Verifying Business Process Models and their Implementation**.
RWTH Aachen, 12.5.2014

48. **Eine kritische Analyse von BPMN, Workflow Pattern und YAWL**.
Universität Duisburg, 20.5.2014

49. **S-BPM: Eine mathematisch fundierte Methode zur zertifizierbar korrekten Modellierung von Geschaeftsprozessen**.
Universität Heidelberg 22.5.2014

50. **Specifying Proven to Be Correct Transaction Control for Serializable Concurrent Program Executions**.
ABZ'2014 Conference, Toulouse 2.-6.6.2014

51. **Remarks on the Steam-Boiler and Landing Gear Case Studies.**
ABZ'2014 Conference, Landing Gear Case Study Track, Toulouse 2.-6.6.2014

52. **Modeling with Abstract State Machines**.
Invited Tutorial at Second BIOMICS Summer Workshop, 18.6. - 20.6.2014, University of St Andrews, Scotland

53. **Der subjektorientierte Ansatz zur Modellierung von Geschäftsprozessen**.
Kolloquium der Informatik, Hochschule Bonn-Rhein-Sieg, 23.6.2014

54. **A Transaction Operator for Distributed Pseudo-Code**.

    - Kolloquium der Informatik, Universität Bonn, 14.7.2014
    - Universität Oldenburg, 7.10.2014

55. **Ein Transaktionsoperator für nebenläufige Programme**.
Universität Freiburg, 17.7.2014

56. **The Role of Logic in Computing or On the Practical Advantage of a Scientific Foundation**.
Universität Kiel, 9.10.2014

57. **Methodik zur Modellierung von Geschäftsprozessen**
Berufsakademie der Wirtschaftsakademie Schleswig-Holstein, 10.10.2014

58. **Closing the Gap between Business Process Models and their Implementation**.
KIT Karlsruhe, 15.10.2014

59. **Abstract State Machine Nets. Closing the Gap between Business Process Models and their Implementation** .
Key Note, S-BPM ONE Conference, Kiel 23.-24.4.2015

60. **Modeling for Change via Component-Based Decomposition and ASM Refinement**.
S-BPM ONE Conference, Kiel 23.-24.4.2015

61. **Concurrent Abstract State Machines**.
Universität Ulm, 30.4.2015

62. **Course on the ASM Method for Software Engineers**.
FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 5.-22.5.2015

63. **The Abstract State Machines Method for the Design and Analysis of Software-Intensive Systems**.
Charles University of Prague, 18.5.2015

64. **How to avoid Petri net ideosyncrasies when modeling computational systems**. Invited Lecture, BIOMICS Workshop, Universität Passau, 8.-10.2.2016

65. **The ASM Method for Model Based System Engineering**. Invited Lecture to SysML Workshop, SCCH Hagenberg, 3.3.2016

66. **Modellieren und Analyse verteilter Algorithmen mit nebenläufigen Abstract State Machines**.
Universität Kaiserslautern, 11.4.2016

67. **Kritischer Vergleich von ASMs und Petrinetzen zur Modellierung verteilter Algorithmen**. Hochschule Bonn-Rhein-Sieg, 13.4.2016

68. **Modeling distributed algorithms by Abstract State Machines compared to Petri Nets**. Invited Lecture, ABZ 2016 Conference, Linz (Austria), May 23-27, 2016.

69. **A compact encoding of sequential ASMs in Event-B**. ABZ 2016 Conference, Linz (Austria), May 23-27, 2016 (presented by M. Leuschel)

70. **Modeling distributed algorithms with ASMs: A comparison with Petri nets**.
31.5.2016, Universität Saarbrücken

71. **Entwurf verteilter Algorithmen mit nebenläufigen abstrakten Zustandsmachinen**.
30.6.2016, Universität Stuttgart

72. **Using ASMs for System Engineering**.
Sardex, Cagliari 30.8.2016.

73. **Why the ASM Method is not a Formal but a Practical Method for Model Based System Engineering**.
26.-27.9.2016, Universität Ulm

74. **Modellierung verteilter Algorithmen: ASMs versus Petri Netze**.
RWTH Aachen, 28.9.2016

75. **ASM Kurs fuer Softwareentwickler**.
FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 24 lectures, 21.3.-7.4.2017.

76. **One-day tutorial on the ASM method**.
Sardex, Cagliari, 9.6.2017.

77. **Modeling AODV by ASMs**.
CS Department, U of Ulm, 2.3.2018

78. **Modeling the Business Logic of a Mutual Credit System**.
Universität Passau, 1.4.2019

79. **Modellieren und Analyse verteilter Algorithmen mit nebenlaeufigen Abstract State Machines. (Ein Vergleich mit Petrinetzen)**.
TU Wien 8.4.2019

80. **The ASM Modeling Method**

    - Course in the Software Engineering Program at FH Oberösterreich, Fakultät für Informatik, Kommunikation und Medien, Hagenberg bei Linz (Austria), 24.4.-8.5.2018 and 26.3.-11.4.2019
    - Course for Master and Graduate Program of Universität Halle (Germany), October 14–November 8, 2019.
    - Course in the PhD Program, Università di Pisa, 18.-29.6.2018 and February 2021

81. **The Abstract State Machines Method for High Level System Design and Analysis**.
Informatikkolloquium Universitäten Leipzig und Dresden, Leipzig 15.10.2019

82. **The Role of Modeling for Reliable System Development**.
Informatikkolloquium Universität Halle, 24.10.2019

83. **A characterization of Gurevich's partial order runs of distributed ASMs.**
IFIP WG 1.3 Meeting, Massa Marittima, 14.1.-16.1.2020

84. **Partial-order distributed ASM runs and recursion: The Foundational Context.**
8th International Conference on Rigorous State Based Methods (ABZ 2021), Ulm 9.-11.6.2021

85. **The ASM Method Integrates Validation and Verification at Different Abstraction Levels along the ASM Refinements**.
Invited talk at IVOIRE Workshop at iFM 2022, Lugano (Switzerland) 7.5.2022

86. **In the beginning was PROLOG and it became typed and dwelt among us.**
Festkolloquium for Christoph Beierle, Fernuniversität Hagen (Germany) 24.8.2022

87. **The meaning of self-modifying programs for sequential machines.**
10th International Conference on Rigorous State Based Methods (ABZ 2024), 27.6.2024, U of Bergamo (Italy)