

# Publications

grouped by categories

## 1 Journal Articles

- [1] H.-D. Ehrich, D. Bieger, and O. Wassermann. Ein ALGOL-Programm zur rechnerischen Trennung nahe benachbarter Ionisationskonstanten nach Britton. *Arzneim. Forsch. (Drug Res.)*, 18:373–377, 1968.
- [2] H.-D. Ehrich. A note on state minimization of a special class of incomplete sequential machines. *IEEE Transactions on Computers*, C-21:500–502, 1972.
- [3] H.-D. Ehrich. Minimale und m-minimale Variablenmengen für partielle Boolesche Funktionen. *Acta Informatica*, 2:172–179, 1973.
- [4] H.-D. Ehrich. Grundlagen einer Theorie der Datenstrukturen und Zugriffssysteme. Teil I: Datenstrukturen und Schemata. *Acta Informatica*, 4:201–211, 1975.
- [5] H.-D. Ehrich. Grundlagen einer Theorie der Datenstrukturen und Zugriffssysteme. Teil II: Zugriffssysteme. *Acta Informatica*, 4:299–310, 1975.
- [6] H.-D. Ehrich. Zur Theorie abstrakter Datentypen. *Wiss. Z. Techn. Univ. Dresden*, 29,2:344–346, 1980.
- [7] H.-D. Ehrich. On the theory of specification, implementation, and parametrization of abstract data types. *Journal of the ACM*, 29:206–277, 1982.
- [8] G. Engels, U. Pletat, and H.-D. Ehrich. An operational semantics for specification of abstract data types with error handling. *Acta Informatica*, 19:235–253, 1983.
- [9] H.-D. Ehrich and U. Lipeck. Algebraic domain equations. *Theoretical Computer Science*, 27:167–196, 1983.
- [10] M. Gogolla, K. Drosten, U. Lipeck, and H.-D. Ehrich. Algebraic and operational semantics of specifications allowing exceptions and errors. *Theoretical Computer Science*, 34:289–313, 1984.
- [11] I. Ramm and H.-D. Ehrich. Einführung in das Projekt: Entwurf einer Benutzerschnittstelle für eine graphisch-alphanumerische Datenbank. *Nachrichten aus dem Karten- und Vermessungswesen, Institut für Angewandte Geodäsie, Frankfurt, Reihe I, Heft 95*:115–124, 1985.
- [12] H.-D. Ehrich, A. Sernadas, and C. Sernadas. From data types to object types. *J. Inf. Process. Cybern. EIK*, 26(1-2):33–48, 1990.

- [13] G. Engels, M. Gogolla, U. Hohenstein, K. Hülsmann, P. Löhr-Richter, G. Saake, and H.-D. Ehrich. Conceptual modelling of database applications using an extended ER model. *Data & Knowledge Engineering, North-Holland*, 9(2):157–204, 1992.
- [14] H.-D. Ehrich. Fundamentals of Object-Oriented Information Systems Specification and Design: The OBLOG/TROLL Approach. *Nuclear Instruments and Methods in Physics Research A*, pages 375–378, 1994.
- [15] P. Hartel, G. Denker, M. Kowsari, M. Krone, and H.-D. Ehrich. Information systems modelling with TROLL formal methods at work. *Information Systems*, 22(2-3):79–99, 1997.
- [16] H.-D. Ehrich. Konzeptionelle Modellierung von Informationssystemen. *Jahrbuch 1997 der Braunschweigischen Wissenschaftlichen Gesellschaft*, 48:43–54, 1998. Eine Kurzfassung erscheint 1999 in den *Carolo-Wilhelmina Mitteilungen*, Band 34 (Schwerpunktheft Informatik), 16–19.
- [17] H.-D. Ehrich and C. Caleiro. Specifying communication in distributed information systems. *Acta Informatica*, 36(Fasc. 8):591–616, 2000.
- [18] H.-D. Ehrich. Überprüfung von Softwareskizzen und -entwürfen. In *Jahrbuch 2000 der Braunschweigischen Wissenschaftlichen Gesellschaft*, pages 69–72. J. Cramer Verlag, Braunschweig, 2001.
- [19] H.-D. Ehrich, M. Kollmann, and R. Pinger. Checking Object System Designs Incrementally. *Journal of Universal Computer Science*, 9(2):106–119, February 2003.
- [20] Hans-Dieter Ehrich. Harmonizing intra- and inter-object specification and verification: a multi-object logics approach. *ACM SIGSOFT Software Engineering Notes*, 30(4):1, 2005.
- [21] Hans-Dieter Ehrich, Silke Eckstein, Brigitte Mathiak, Andreas Kupfer, and Claudia Täubner. *Bioinformatik: Erkenntnisse aus der Datenflut?*, volume LVII of *Abhandlungen der Braunschweigischen Wissenschaftlichen Gesellschaft*, pages 9–34. J. Cramer Verlag, Braunschweig, 2007.

## 2 Refereed Conference Contributions or Equivalent

- [22] H.-D. Ehrich. Über eine Reduktionsmöglichkeit gewisser Überdeckungsprobleme. In J. Dörr and G. Hotz, editors, *Automatentheorie und Formale Sprachen, MFO 3*, pages 477–492, Mannheim, 1970. Bibliographisches Institut.
- [23] H.-D. Ehrich. Datenstrukturen und Q-Systeme - eine mathematische Studie. In *Proc. 3. Jahrestagung der GI, LNCS 1*, pages 363–371, Berlin, 1973. Springer-Verlag.
- [24] H.-D. Ehrich. Theory of direct-access storage functions. In *Proc. IFIP'74*, pages 647–651, Amsterdam, 1974. North-Holland.

- [25] H.-D. Ehrich. Ein axiomatischer Ansatz für eine Algebra strukturierter Objekte. In K. Pape, editor, *Graphensprachen und Algorithmen auf Graphen, Appl. Comp. Sc. 1*, pages 143–161, München, 1976. Hanser-Verlag.
- [26] H.-D. Ehrich and W. Lipski Jr. On the storage space requirement of consecutive retrieval with redundancy. *Inf. Proc. Letters*, 4:101–104, 1976.
- [27] H.-D. Ehrich. Outline of an algebraic theory of structured objects. In S. Michelson and R. Milner, editors, *Proc. 3rd ICALP*, pages 508–530, Edinburgh, 1976. Edinburgh University Press.
- [28] H.-D. Ehrich. An axiomatic approach to information structures. In A. Mazurkiewicz, editor, *Proc. 5th MFCS, LNCS 45*, pages 277–283, Berlin, 1976. Springer-Verlag.
- [29] H.-D. Ehrich. Eine mathematische Semantik für die Beschreibung von Datenstrukturen. In H. Noltemeier, editor, *Graphen, Algorithmen, Datenstrukturen, Appl. Comp. Sc. 4*, pages 53–64, München, 1976. Hanser-Verlag.
- [30] H.-D. Ehrich. Algebraic semantics of type definitions and structured variables. In M. Karpinski, editor, *Proc. FCT'77, LNCS 56*, pages 84–97, Berlin, 1977. Springer-Verlag.
- [31] H.-D. Ehrich. Algebraische Spezifikation von Datenstrukturen. In J. Mühlbacher, editor, *Graphen, Algorithmen, Appl. Comp. Sc. 8*, pages 48–61, München, 1978. Hanser-Verlag.
- [32] H.-D. Ehrich. Extensions and implementations of abstract data type specifications. In J. Winkowski, editor, *Proc. 7th MFCS, LNCS 64*, pages 155–164, Berlin, 1978. Springer-Verlag.
- [33] H.-D. Ehrich and V. G. Lohberger. Constructing specifications of abstract data types by replacements. In V. Claus, H. Ehrig, and G. Rozenberg, editors, *Proc. Int. Colloquium on Graph Grammars, LNCS 73*, pages 180–191, Berlin, 1978. Springer-Verlag.
- [34] H.-D. Ehrich and V. G. Lohberger. Parametric specification of abstract data types, parameter substitution, and graph replacements. In M. Nagl and H.-J. Schneider, editors, *Graphs, Data Structures, Algorithms, Appl. Comp. Sc. 13*, pages 169–182, München, 1979. Hanser-Verlag.
- [35] H.-D. Ehrich and U. Lipeck. Proving implementations correct – two alternative approaches. In S. H. Lavington, editor, *Proc. IFIP'80*, pages 83–88, Amsterdam, 1980. North-Holland.
- [36] H.-D. Ehrich. Specifying algebraic data types by domain equations. In F. Gecseg, editor, *Proc. FCT'81, LNCS 117*, pages 120–129, Berlin, 1981. Springer-Verlag.
- [37] H.-D. Ehrich. On realization and implementation. In J. Gruska and M. Chytil, editors, *Proc. MFCS'81, LNCS 118*, pages 271–280, Berlin, 1981. Springer-Verlag.

- [38] M. Gogolla, K. Drosten, U. Lipeck, and H.-D. Ehrich. Algebraic and operational semantics of exceptions and errors. In A. B. Cremers and H.-P. Kriegel, editors, *Proc. 6. GI-Fachtagung für Theoretische Informatik, LNCS 145*, pages 141–151, Berlin, 1983. Springer-Verlag.
- [39] H.-D. Ehrich, U. W. Lipeck, and M. Gogolla. Specification, semantics and enforcement of dynamic database constraints. In *Proc. 10th Int. Conf. on Very Large Data Bases, VLDB'84*, pages 301–308, Singapore, 1984.
- [40] U. W. Lipeck, H.-D. Ehrich, and M. Gogolla. Specifying admissibility of dynamic database behaviour using temporal logic. In A. Sernadas et al, editor, *Proc. IFIP Working Conf. on Theoretical and Formal Aspects of Information Systems*, pages 145–157, Amsterdam, 1985. North Holland.
- [41] H.-D. Ehrich. Algebraic (?) specification of conceptual database schemata (extended abstract). In H.-J. Kreowski, editor, *Recent Trends in Data Type Specification, Informatik-Fachberichte 116*, Berlin, 1985. Springer-Verlag.
- [42] H.-D. Ehrich. Spezifikation konzeptioneller Schemata mit abstrakten Datentypen und Versionen. In H. C. Mayr and B. E. Meyer, editors, *Proc. Fachgespräch "Entwurf von Informationssystemen – Methoden und Modelle"*, pages 1–19, Tutzing, 1985. Evangelische Akademie.
- [43] H.-D. Ehrich. Key extensions of abstract data types, final algebras, and database semantics. In D. Pitt et al, editor, *Proc. Workshop on Category Theory and Computer Programming, LNCS 240*, pages 412–433, Berlin, 1986. Springer-Verlag.
- [44] M. Drawin, K. Neumann, and H.-D. Ehrich. Regelorientierte Erzeugung von Karten-Entwürfen auf geowissenschaftlichen Datenbanken. In H.-J. Schek and G. Schlageter, editors, *Proc. Fachtagung über Datenbanksysteme in Büro, Technik und Wissenschaft, BTW'87, Informatik-Fachbericht 136*, pages 231–246, Berlin, 1987. Springer-Verlag.
- [45] U. Hohenstein, L. Neugebauer, G. Saake, and H.-D. Ehrich. Three-level specification of databases using an extended entity-relationship model. In R. R. Wagner, R. Traunmüller, and H. C. Mayr, editors, *Proc. GI-Fachtagung "Informations-Bedarfsermittlung und -analyse für den Entwurf von Informationssystemen"*, *Informatik-Fachbericht 143*, pages 58–88, Berlin, 1987. Springer-Verlag.
- [46] A. Sernadas, C. Sernadas, and H.-D. Ehrich. Object-oriented specification of databases: An algebraic approach. In P. Hammerslay, editor, *Proc. 13th Int. Conf. on Very Large Databases, VLDB'87*, pages 107–116, Brighton, 1987. Morgan-Kaufmann, Palo Alto, 1987.
- [47] H.-D. Ehrich, K. Drosten, and M. Gogolla. Towards an algebraic semantics for database specification. In R. A. Meersmann and A. Sernadas, editors, *Proc. 2nd IFIP WG 2.6 Working Conf. on Database Semantics, DS-2*, pages 119–135, Albufeira (Portugal), 1988. North-Holland, Amsterdam.

- [48] H.-D. Ehrich, F. Lohmann, K. Neumann, and I. Ramm. A database language for scientific map data. In R. Vinken, editor, *Proc. Int. Coll. on Construction and Display of Geoscientific Maps Derived from Databases*, pages 139–152, Hannover, 1988. Geologisches Jahrbuch A 104.
- [49] G. Engels, U. Hohenstein, L. Neugebauer, G. Saake, and H.-D. Ehrich. Konzeption einer integrierten Datenbank-Entwurfsumgebung. In *Proc. DBTA/SI Conf. "Data Dictionaries und Entwicklungswerkzeuge für Datenbankanwendungen"*, pages 151–157. Verlag der Fachvereine an den Schweiz. Hochschulen und Techniken, Zürich, 1988.
- [50] G. Engels, U. Hohenstein, G. Saake, and H.-D. Ehrich. Auf dem Weg zu einer integrierten Datenbank-Entwurfsumgebung. In G. Snelting, editor, *Proc. GI-Workshop "Sprachspezifische Programmierumgebungen"*, pages 38–51, TH Darmstadt, 1988.
- [51] H.-D. Ehrich, A. Sernadas, and C. Sernadas. Abstract object types for databases. In K. R. Dittrich, editor, *Advances in Object-Oriented Database Systems, LNCS 334*, pages 144–149, Berlin, 1988. Springer-Verlag.
- [52] A. Sernadas, J. Fiadeiro, C. Sernadas, and H.-D. Ehrich. Abstract object types: A temporal perspective. In B. Banieqbal, H. Barringer, and A. Pnueli, editors, *Proc. Colloq. on Temporal Logic in Specification, LNCS 398*, pages 324–350, Berlin, 1989. Springer-Verlag.
- [53] H.-D. Ehrich, A. Sernadas, and C. Sernadas. Objects, object types, and object identification. In H. Ehrig, H. Herrlich, H.-J. Kreowski, and G. Preuß, editors, *Categorical Methods in Computer Science, LNCS 393*, pages 142–156, Berlin, 1989. Springer.
- [54] F. Lohmann, K. Neumann, and H.-D. Ehrich. Entwurf eines Datenbank-Prototyps für geowissenschaftliche Anwendungen. In T. Härder, editor, *Proc. GI/SI-Fachtagung "Datenbanksysteme in Büro, Technik und Wissenschaft", BTW'89*, pages 43–57, Berlin, 1989. Springer-Verlag.
- [55] A. Sernadas, J. Fiadeiro, C. Sernadas, and H.-D. Ehrich. The basic building blocks of information systems. In E. Falkenberg and P. Lindgreen, editors, *Proc. IFIP 8.1 Working Conf. "Information System Concepts: An In-Depth Analysis"*, pages 225–246, Amsterdam, 1989. North-Holland.
- [56] H.-D. Ehrich and A. Sernadas. Algebraic implementation of objects over objects. In deBakker, J. W., deRoever, W.-P., and Rozenberg, G., editors, *Proc. REX Workshop "Stepwise Refinement of Distributed Systems: Models, Formalisms, Correctness"*, LNCS 430, pages 239–266, Berlin, 1990. Springer.
- [57] G. Engels, U. Hohenstein, K. Hülsmann, P. Löhr-Richter, and H.-D. Ehrich. Caddy: Computer-aided design of non-standard databases. In H. Weber, editor, *Proc. 1st Int. Conf. on System Development Environments and Factories*, London, 1990. Pitman.
- [58] A. Sernadas, H.-D. Ehrich, and J.-F. Costa. From processes to objects. *The INESC Journal of Research and Development 1:1*, pages 7–27, 1990.

- [59] H.-D. Ehrich, J. A. Goguen, and A. Sernadas. A categorial theory of objects as observed processes. In J. W. deBakker, W. P. deRoever, and G. Rozenberg, editors, *Proc. REX/FOOL Workshop, LNCS 489*, pages 203–228, Berlin, 1991. Springer.
- [60] A. Sernadas and H.-D. Ehrich. What is an object, after all? In R. Meersman, W. Kent, and S. Khosla, editors, *Proc. 4th IFIP WG 2.6 Working Conference DS-4 "Object-Oriented Databases: Analysis, Design and Construction", Windermere 1990*, pages 39–70, Amsterdam, 1991. North-Holland.
- [61] M. Gogolla and H.-D. Ehrich. Contributions to: *Algebraic System Specification and Development*, Bidoit, M., Kreowski, H.-J., Lescanne, P., Orejas, F. and Sannella, D., editors. Springer, Berlin, LNCS 501, 1991.
- [62] H.-D. Ehrich, G. Saake, and A. Sernadas. Concepts of object-orientation. In *Proc. of the 2nd Workshop of "Informationssysteme und Künstliche Intelligenz: Modellierung", Informatik-Fachberichte 303*, pages 1–19, Berlin, 1992. Springer-Verlag.
- [63] G. Saake, R. Jungclaus, and H.-D. Ehrich. Object-oriented specification and stepwise refinement. In J. de Meer, V. Heymer, and R. Roth, editors, *IFIP Transactions C: Communication Systems, Vol. 1: Proc. Open Distributed Processing, Berlin 1991*, pages 99–121. North-Holland, 1992.
- [64] K. Neumann, F. Lohmann, and H.-D. Ehrich. An Experimental Geoscientific Database System. In *Proc. Int. Coll. on Digital Maps in Geosciences, Würzburg 1989*, pages 91–100. Geologisches Jahrbuch A122, Hannover, 1992.
- [65] H.-D. Ehrich, M. Gogolla, and A. Sernadas. Objects and their specification. In M. Bidoit and C. Choppy, editors, *Proc. 8th Workshop on Abstract Data Types, Dourdan 1991, LNCS 655*, pages 40–66, Berlin, 1992. Springer-Verlag.
- [66] J.-F. Costa, A. Sernadas, C. Sernadas, and H.-D. Ehrich. Object Interaction. In I. Havel and V. Koubek, editors, *Mathematical Foundations of Computer Science (MFCS'92)*, pages 200–208. Springer Verlag, 1992.
- [67] Th. Hartmann, R. Jungclaus, G. Saake, and H.-D. Ehrich. Spezifikation von Objektsystemen. In R. Bayer, Th. Härder, and P. C. Lockemann, editors, *Objektbanken für Experten, Reihe Informatik aktuell*, pages 220–242, Berlin, 1992. Springer-Verlag.
- [68] H.-D. Ehrich, G. Denker, and A. Sernadas. Constructing Systems as Object Communities. In M.-C. Gaudel and J.-P. Jouannaud, editors, *Proc. Theory and Practice of Software Development (TAPSOFT'93)*, pages 453–467. Springer, Berlin, LNCS 668, 1993.
- [69] S. Conrad, G. Denker, M. Gogolla, R. Herzig, N. Vlachantonis, and H.-D. Ehrich. Zur Entwicklung zuverlässiger Informationssysteme in KorSo. In H. Reichel, editor, *Informatik — Wirtschaft — Gesellschaft, Proc. 23. GI-Jahrestagung (GI'93)*, pages 464–469. Springer, Informatik aktuell, 1993.

- [70] N. Vlachantonis, R. Herzig, M. Gogolla, G. Denker, S. Conrad, and H.-D. Ehrich. Towards Reliable Information Systems: The KORSO Approach. In C. Rolland, F. Bodart, and C. Cauvet, editors, *Proc. 5th Int. Conf. on Advanced Information Systems Engineering (CAiSE'93)*, pages 463–482. Springer, Berlin, LNCS 685, 1993.
- [71] H.-D. Ehrich, R. Jungclaus, G. Denker, and A. Sernadas. Object-Oriented Design of Information Systems: Theoretical Foundations. In J. Paredaens and L. Tenenbaum, editors, *Advances in Database Systems, Implementations and Applications*, pages 201–218. Springer Verlag, Wien, CISM Courses and Lectures no. 347, 1994.
- [72] G. Saake, T. Hartmann, R. Jungclaus, and H.-D. Ehrich. Object-Oriented Design of Information Systems: TROLL Language Features. In J. Paredaens and L. Tenenbaum, editors, *Advances in Database Systems, Implementations and Applications*, pages 219–245. Springer Verlag, Wien, CISM Courses and Lectures no. 347, 1994.
- [73] H.-D. Ehrich and A. Sernadas. Local Specification of Distributed Families of Sequential Objects. In E. Astesiano, G. Reggio, and A. Tarlecki, editors, *Recent Trends in Data Types Specification, Proc. 10th Workshop on Specification of Abstract Data Types joint with the 5th COMPASS Workshop, S.Margherita, Italy, May/June 1994, Selected papers*, pages 218–235. Springer, Berlin, LNCS 906, 1995.
- [74] G. Denker and H.-D. Ehrich. Action Reification In Object Oriented Specification. In R. J. Wieringa and R. B. Feenstra, editors, *Information Systems - Correctness and Reusability, Selected Papers from the IS-CORE Workshop*, pages 103–118. World Scientific, 1995.
- [75] M. Gogolla, S. Conrad, G. Denker, R. Herzig, N. Vlachantonis, and Ehrich H.-D. TROLL *light* — The Language and its Development Environment. In M. Broy and S. Jähnichen, editors, *KORSO: Methods, Languages, and Tools for the Construction of Correct Software, Final Report*, pages 205–220. Springer, 1995. LNCS 1009.
- [76] H.-D. Ehrich. KORSO Reference Languages — Concepts and Application Domains. In M. Broy and S. Jähnichen, editors, *KORSO: Methods, Languages, and Tools for the Construction of Correct Software, Final Report*, pages 150–172. Springer, 1995. LNCS 1009.
- [77] H.-D. Ehrich and P. Hartel. Temporal Specification of Information Systems. In A. Pnueli and H. Lin, editors, *Logic and Software Engineering, Proc. Int. Workshop in Honor of C.S. Tang, Beijing, 14-15 August 1995*, pages 43–71. World Scientific, 1996.
- [78] M. Krone, M. Kowsari, P. Hartel, G. Denker, and H.-D. Ehrich. Developing an Information System Using TROLL: an Application Field Study. In P. Constantopoulos, J. Mylopoulos, and Y. Vassiliou, editors, *Proc. 8th Int. Conf. on Advanced Information Systems Engineering (CAiSE'96)*, pages 136–159. Springer, Berlin, LNCS 1080, 1996.
- [79] G. Denker and H.-D. Ehrich. Specifying Distributed Information Systems: Fundamentals of an Object-Oriented Approach Using Distributed Temporal Logic. In H. Bowman and J. Derrick, editors, *Formal Methods for Open Object-Based Distributed Systems*

(*FMOODS'97*), Volume 2, *IFIP TC6 WG6.1 Intern. Workshop, 21-23 July, Canterbury, Kent, UK*, pages 89–104. Chapman & Hall, 1997.

- [80] H.-D. Ehrich, C. Caleiro, A. Sernadas, and G. Denker. Logics for Specifying Concurrent Information Systems. In J. Chomicki and G. Saake, editors, *Logics for Databases and Information Systems*, pages 167–198. Kluwer Academic Publishers, 1998.
- [81] A. Grau, J. Küster Filipe, M. Kowsari, S. Eckstein, R. Pinger, and H.-D. Ehrich. The TROLL Approach to Conceptual Modelling: Syntax, Semantics and Tools. In T.W. Ling, S. Ram, and M.L. Lee, editors, *Proc. of the 17th Int. Conference on Conceptual Modeling (ER'98), Singapore*, pages 277–290. Springer, LNCS 1507, November 1998.
- [82] H.-D. Ehrich. Object specification. In E. Astesiano, H.-J. Kreowski, and B. Krieg-Brückner, editors, *Algebraic Foundations of Systems Specification*, chapter 12, pages 435–465. Springer, 1999.
- [83] J. Loeckx, H.-D. Ehrich, and M. Wolf. Algebraic specification of abstract data types. In S. Abramski, D.M. Gabbay, and T.S.E. Maibaum, editors, *Handbook of Logic in Computer Science, Volume 5*, pages 217–316. Oxford Science Publications, 2000.
- [84] H.-D. Ehrich and R. Pinger. Checking object systems via multiple observers. In *International ICSC Congress on Intelligent Systems & Applications (ISA'2000)*, volume 1, pages 242–248. University of Wollongong, Australia, International Computer Science Conventions (ICSC), Canada, 2000.
- [85] R. Pinger and H.-D. Ehrich. Compositional Checking of Communication among Observers. In H. Hussmann, editor, *Fundamental Approaches to Software Engineering (FASE), Part of the Joint European Conferences on Theory and Practice of Software (ETAPS 2001), Genova*, volume 2029 of *Lecture Notes in Computer Science*, pages 32–44, 2001.
- [86] H.-D. Ehrich. Abstract Data Types. In Alexander K. Mikhalev and Günter F. Pilz, editors, *The Concise Handbook of Algebra*, chapter G.10, pages 486–490. Kluwer Academic Publishers, 2002.
- [87] H.-D. Ehrich, M. Kollmann, and R. Pinger. Distributed Model Checking. In D. Haneberg, G. Schellhorn, and W. Reif, editors, *Proc. FM-TOOLS 2002*, pages 53–58, Augsburg, 2002.
- [88] Hans-Dieter Ehrich, Silke Eckstein, Brigitte Mathiak, Andreas Kupfer, and Claudia Täubner. Bioinformatik: Erkenntnisse aus der Datenflut? In Stefan Braß and Alexander Hinneburg, editors, *Proc. 18. Workshop Grundlagen von Datenbanken, Wittenberg*, pages 13–23, interner Bericht, Juni 2006. Universität Halle.
- [89] Yuen Man Hon, Jan-Tecker Gayen, and Hans-Dieter Ehrich. OOLH: A formal framework for specifying system requirements. In Wolfgang Hesse and Andreas Oberweis, editors, *SIGSAND-EUROPE 2008 Proceedings of the Third AIS SIGSAND European Symposium on Analysis, Design, Use and Societal Impact of Information Systems*, volume 129, pages 75–77, Berlin, 2008. Springer LNI.



- [90] Olivera Pavlović and Hans-Dieter Ehrich. Model checking PLC software written in Function Block Diagram. In *Proc. 2010 Third International Conference on Software Testing, Verification and Validation*. IEEE, 2010.
- [91] Hans-Dieter Ehrich. My ADT Shrine, invited lecture. In Till Mossakowski and Hans-Jörg Kreowski, editors, *Selected Papers from WADT 2010*, pages 13–24. Springer LNCS 7137, 2012.

### 3 Monographs and Volume Editions

- [92] H.-D. Ehrich. Zur Theorie und Anwendung endlicher Minimalüberdeckungen. Dissertation, Technische Universität Hannover, 1970.
- [93] H.-D. Ehrich, editor. *Proceedings GI – 14. Jahrestagung, Informatik-Fachberichte Nr. 88*, Berlin, 1984. Springer-Verlag.
- [94] H.-D. Ehrich, editor. *Proceedings Fachgespräche auf der 14. Jahrestagung, Informatik-Fachberichte Nr. 89*, Berlin, 1984. Springer-Verlag.
- [95] H.-D. Ehrich, M. Gogolla, and U. W. Lipeck. *Algebraische Spezifikation Abstrakter Datentypen*. Teubner, Stuttgart, 1989.
- [96] J. Loeckx, H.-D. Ehrich, and M. Wolf. *Specification of abstract data types*. J. Wiley & Sons and B.G. Teubner Publishers, 1996.
- [97] Huimin Lin and Hans-Dieter Ehrich, editors. *Proceedings QSIC 2003*, Los Alamitos, CA, 2003. IEEE CS Press.
- [98] Mark D. Ryan, John-Jules Chr. Meyer, and Hans-Dieter Ehrich, editors. *Objects, Agents, and Features*, Berlin, 2004. Springer LNCS 2975.
- [99] Hans-Dieter Ehrich and Klaus-Dieter Schewe, editors. *Proceedings QSIC 2004*, Los Alamitos, CA, 2004. IEEE CS Press.
- [100] Huimin Lin, H.-D. Ehrich, and T.H. Tse, editors. *Special Issue QSIC 2003: Information and Software Technology, Vol 46, Issue 15*, Amsterdam, 2004. Elsevier B.V.
- [101] H.-D. Ehrich, K.-D. Schewe, and T.H. Tse, editors. *Special Issue QSIC 2004: Journal of Systems and Software*, Amsterdam, 2005. Elsevier B.V.
- [102] Hans-Dieter Ehrich, Klaus Alber, Günther Stiege, Roland Vollmar, and Dietmar Wätjen, editors. *40 Jahre Informatik an der Technischen Universität Braunschweig, 1972 - 2012, Zum Workshop auf der GI-Jahrestagung 2012 in Braunschweig*, volume T-6 of *LNI*. GI, 2012.
- [103] Günther Stiege, Hans-Dieter Ehrich, and Wolf-Tilo Balke. Datenbanken und Informationssysteme. In *40 Jahre Informatik an der Technischen Universität Braunschweig, 1972 - 2012, Zum Workshop auf der GI-Jahrestagung 2012 in Braunschweig*, volume T-6 of *LNI*, pages 84–91. GI, 2012.

## 4 Reports and Other Unrefereed Papers

- [104] H.-D. Ehrich and V. G. Lohberger. Algebraic specification of database and concurrent access synchronization. Bericht Nr. 58, Abteilung Informatik, Universität Dortmund, 1978.
- [105] H.-D. Ehrich. Abstract data types: Specification, implementation, and parameterization. Proc. 2nd Workshop on Categorical and Algebraic Methods in Computer Science and Systems Theory, 29–34, G. Dittrich and W. Merzenich (eds.), Bericht Nr. 74, Abteilung Informatik, Universität Dortmund, 1978.
- [106] H.-D. Ehrich. Algebras as solutions of domain equations (extended abstract). Proc. 3rd Workshop on Categorical and Algebraic Methods in Computer Science and Systems Theory, 21–26, G. Dittrich and W. Merzenich (eds.), Bericht Nr. 114, Abteilung Informatik, Universität Dortmund, 1981.
- [107] H.-D. Ehrich. Implicit specification by algebraic domain equations. EATCS Bulletin 13, 45–51, 1981.
- [108] U. Pletat, G. Engels, and H.-D. Ehrich. Operational semantics of algebraic specifications with conditional equations. Bericht Nr. 118, Abteilung Informatik, Universität Dortmund, 1981.
- [109] G. Engels, U. Pletat, and H.-D. Ehrich. Handling errors and exceptions in the algebraic specification of data types. Reihe Informatik, Heft 3, Fachbereich Mathematik, Universität Osnabrück, 1981.
- [110] K. Drosten, M. Gogolla, H.-D. Ehrich, and U. Lipeck. A hierarchical approach to an operational semantics for conditional algebraic specifications. Bericht Nr. 144, Abteilung Informatik, Universität Dortmund, 1982.
- [111] R. Durchholz and H.-D. Ehrich, editors. *Proc. Workshop on Information and Data Structure Description. Bericht der GMD Nr. 139*, München, 1983. Oldenbourg Verlag.
- [112] M. Gogolla and H.-D. Ehrich. Algebraic specification with subsorts using declarations. EATCS Bulletin 21, 31–38, 1983.
- [113] K. Drosten and H.-D. Ehrich. Translating algebraic specifications to PROLOG programs. Bericht Nr. 84-08, Inst. f. Informatik, TU Braunschweig, 1984.
- [114] I. Ramm, K. Neumann, U. W. Lipeck, and H.-D. Ehrich. Eine Benutzerschnittstelle für geowissenschaftliche Datenbanken. Informatik-Bericht Nr. 85-08, TU Braunschweig, 1985.
- [115] U. W. Lipeck, G. Saake, and H.-D. Ehrich. Monitoring dynamic database integrity by transition graphs. Informatik-Bericht Nr. 86-08, Technische Universität Braunschweig, 1986.

- [116] H.-D. Ehrich, K. Drosten, M. Gogolla, and U. Lipeck, editors. Abstracts of the 4th Workshop on Specification of Abstract Data Types. Informatik-Bericht Nr. 86-09, Technische Universität Braunschweig, 1986.
- [117] G. Saake, L. Neugebauer, U. Hohenstein, and H.-D. Ehrich. Konzepte und Werkzeuge für eine Datenbank-Entwurfsumgebung. Informatik-Bericht Nr. 87-05, TU Braunschweig, 1987.
- [118] Hans-Dieter Ehrich, Amílcar Sernadas, and Cristina Sernadas. Objects and object types. In H. Ehrig, editor, *Proceedings 6th Workshop on Abstract Data Types, Technical Report*, University of Berlin, Department of Computer Science, 1988.
- [119] H.-D. Ehrich, G. Engels, M. Gogolla, and G. Saake, editors. Abstracts des Workshops "Grundlagen von Datenbanken". Informatik-Bericht Nr. 89-02, Technische Universität Braunschweig, 1989.
- [120] M. Gogolla and H.-D. Ehrich. Contributions to "COMPASS - A Comprehensive Algebraic Approach to System Specification and Development". In B. Krieg-Brückner, editor, *COMPASS - A Comprehensive Algebraic Approach to System Specification and Development*. Universität Bremen, Informatik-Bericht Nr. 6/89, 1989.
- [121] H.-D. Ehrich and A. Sernadas. Fundamental object concepts and constructions. In G. Saake and A. Sernadas, editors, *Information Systems – Correctness and Reusability*, pages 1–24. TU Braunschweig, Informatik-Bericht 91-03, 1991.
- [122] H.-D. Ehrich, J. A. Goguen, and A. Sernadas, editors. Foundations of Information Systems Specification and Design. Dagstuhl Seminar Report Nr. 35, IBFI GmbH, Schloß Dagstuhl, 1992.
- [123] H.-D. Ehrich. Entwicklung zuverlässiger Informationssysteme. *Informatik — Forschung und Entwicklung*, 8(3):160–161, 1993. In: Das BMFT-Verbundprojekt "Korrekte Software (KORSO)", M. Broy, S. Jähnichen.
- [124] H.-D. Ehrich, editor. *Beiträge zu KORSO- und TROLL light- Fallstudien*. Technische Universität Braunschweig, Informatik-Bericht, 93–11, 1993.
- [125] H.-D. Ehrich, R. Jungclaus, and G. Denker. Object Roles and Phases. In U.W. Lipeck and G. Koschorreck, editors, *Proc. Intern. Workshop on Information Systems – Correctness and Reusability IS-CORE '93, Technical Report, University of Hannover No. 01/93*, pages 114–121, 1993.
- [126] S. Conrad and H.-D. Ehrich. An Elementary Logic for Object Specification and Verification. In U. Lipeck and G. Vossen, editors, *Workshop Formale Grundlagen für den Entwurf von Informationssystemen, Tutzing*, pages 197–206. Technical Report Univ. Hannover, No. 03/94, 1994.
- [127] H.-D. Ehrich, A. Sernadas, G. Saake, and C. Sernadas. Distributed Temporal Logic for Concurrent Object Families. In R. Wieringa and R. Feenstra, editors, *Working papers*

of the International Workshop on Information Systems - Correctness and Reusability, pages 22–30. Vrije Universiteit Amsterdam, RapportNr. IR-357, 1994.

- [128] H.-D. Ehrich, G. Engels, J. Paradaens, and P. Wegner, editors. Fundamentals of Object-Oriented Languages. Dagstuhl Seminar Report Nr. 95 (9434), IBFI GmbH, Schloß Dagstuhl, 1994.
- [129] M. Gogolla, N. Vlachantonis, R. Herzig, G. Denker, S. Conrad, and H.-D. Ehrich. The KORSO Approach to the Development of Reliable Information Systems. Technical Report 94-06, Technische Universität Braunschweig, 1994.
- [130] S. Conrad, G. Denker, M. Gogolla, R. Herzig, N. Vlachantonis, and H.-D. Ehrich. Entwicklung zuverlässiger Informationssysteme. *EMISA Forum, Mitteilungen der GI-Fachgruppe 2.5.2*, 2:25–33, 1995.
- [131] G. Denker and H.-D. Ehrich. An Event-Based Semantics for Transactions. In G. Bernot and M. Aiguier, editors, *Proc. Intern. Workshop on Information Systems – Correctness and Reusability (IS-CORE'95)*, Technical Report, Evry, Sept. 1995, pages 57–72, Bd des Coquibus, F-91025 Evry Cedex, France, 1995. Universite d'Evry Val d'Essonne, Laboratoire de Mathematiques et d'Informatique.
- [132] H.-D. Ehrich. Object Specification. Informatik-Bericht 96–07, TU Braunschweig, 1996.
- [133] H.-D. Ehrich, Y. Feng, and D. Kung, editors. Object-Oriented Software Development. Dagstuhl Seminar Report 9715, IBFI GmbH, Schloß Dagstuhl, 1997.
- [134] H.-D. Ehrich, U. Goltz, J. Meseguer, and A. Pnueli, editors. Specification of Distributed Information Systems. Dagstuhl Seminar 00081 Report, IBFI GmbH, Schloß Dagstuhl, 2000.
- [135] H.-D. Ehrich. Informationssysteme – Hilfe für Dienstleister aller Art. *Carolo-Wilhelmina Mitteilungen*, Band 35 (Sonderheft “10 Jahre Simultan–Studiengänge”):46–47, 2000.
- [136] Mark Dermot Ryan and John-Jules Ch. Meyer and Hans-Dieter Ehrich. Objects, Agents, and Features. Dagstuhl Seminar 13081 Report, IBFI GmbH, Schloss Dagstuhl, 2003.
- [137] H.-D. Ehrich. Bioinformatik — Modellbildung als Herausforderung für die Informatik. In M. Bohnet, H. Hopf, K. Lompe, and H. Oberbeck, editors, *Innovation jenseits von Fachgrenzen*, pages 37–50, TU Braunschweig, 2004.
- [138] H.-D. Ehrich. BWG-Kommission Das Kulturelle Erbe im Digitalen Zeitalter. In *Jahrbuch 2017 der Braunschweigischen Wissenschaftlichen Gesellschaft*, volume 68, pages 210–212. J. Cramer Verlag, Braunschweig, 2018.
- [139] H.-D. Ehrich and A. Sernadas. Local Specification of Distributed Families of Sequential Objects. In C. Caleiro, F. Dionisio, P. Gouveia, P. Mateus, and J. Rasga, editors, *Logics and Computation, Essays in Honour of Amílcar Sernadas*, pages 1–22. College Publications, London, 2018.

## 5 Poster Sessions

- [140] M. Kowsari, P. Hartel, G. Denker, and H.-D. Ehrich. A Case Study in Information System Design, The CATC System. FME'96: Industrial Benefit and Advances in Formal Methods, Oxford, UK, March 1996, poster session, 1996.
- [141] A. Grau, M. Kowsari, and H.-D. Ehrich. A CASE-Tool Environment for Developing and Validating Conceptual Models. 9th Conference on Advanced Information Systems Engineering (CAISE'97), Barcelona, June 18-20 1997, poster session, 1997.