

**CTIT**

**Scientific Results 1997-1998**

# **1 Information Technology**

## **1.1 Language, speech and information engineering**

### *Dissertations*

#### **1998**

Jong, H. de (1998, June 05). Computer-supported Analysis of Scientific Measurements, 242 pp. ISBN 90-365-1143-7.

#### **1997**

Pos, A. (1997, June 20). Automated Redesign of Engineering Models, 169 pp., ISBN 90-365-0960-2.

Borst, W.N. (1997, September 05). Construction of Engineering Ontologies for Knowledge Sharing and Reuse, 231 pp., ISBN 90-365-0988-2.

Tempelman, F. (1997, December 03). Structured Representations in Case-based Reasoning. University of Twente, 125 pp., ISBN 90-365-1072-4.

### *Books*

#### **1998**

Hiemstra, D., Jong, F.M.G. de & Netter, K. Language Technology in Multimedia Information Retrieval. Twente Workshop on Language Technology 14. Enschede: University of Twente, 194 pp.

Bakel, B.J. van., & Boon, R.T. Principle-based Structured Condorcet Generation: a Contribution to Knowledge-based Document Indexing. Computational Linguistics in the Netherlands 1997 (pp. 171-186). Amsterdam: Rodop. ISBN 90-420-0504-1.

### *Journals*

#### **1998**

Schouten, B., & Hessen, A.J. van. Response Distribution in Intensity Resolution and Speech Discrimination. Journal of the Acoustical Society of America, 104 (Nr: 5), (pp. 2980-2990). ISSN 0001-4966.

Stal, W.G. ter., Beijert, J.H., Bruin, G. de., Gent, J. van., Jong, F.M.G. de., Kraaij, W., Netter, K., & Smart, G. Twente-One: Cross Language Disclosure and Retrieval of Multimedia Documents on Sustainable Development. *Computer Networks and ISDN Systems*, 30 (Nr: 13), (pp. 1237-1248). ISSN 0169-7552.

Vet, P.E. van der., & Mars, N.J.I. Bottom-up Construction of Ontologies. *R & D Management*, 10 (Nr: 4), (pp. 513-526). ISSN 0033-6807.

### **1997**

Bakel, B.J. van. & Postma, G.J. Challenges for Chemical Information Extraction and Text Retrieval. *Trends in Analytical Chemistry*, 1997 (Nr: 16), (pp. 63-67). ISSN 0165-9936.

Borst, W.N. Akkermans, J.M. & Top, J.L. Engineering Ontologies. *International Journal of Human-Computer Studies*, (Nr: 46), (pp. 365-406). ISSN 1071-5819.

### *Conference papers*

### **1998**

Bakel, B.J. van. Modern Classical Document Indexing: a Linguistic Contribution to Knowledge-based IR Proceedings of 21st Annual ACM-SIGIR Conference on Research and Development in Information Retrieval. (pp. 333-334). Melbourne, Australia. ISBN 1-58113-015-5.

Bakel, B.J. van., Boon, R.T., Mars, N.J.I., Nijhuis, J.G.J., Oltmans, J.A., & Vet, P.E. van der. The Condorcet Project: Indexing Scientific Documents. *Proceedings Informatiewetenschap 1998*. (pp. 77-87). Antwerp, Belgium.

Bouwma, G., & Hulstijn, J. Dialogue Strategy Redesign with Reliability Measures. *Proceedings of the First International Conference on Language Resources and Evaluation*, (pp. 191-198). Granada, Spain.

Doest, H. ter. A Corpus-based Probabilistic Unification Grammar. *Proceedings of the ESSLLI-98 Conference*. (pp. 25-32). Saarbrücken, Germany.

Hiemstra, D. A Linguistically Motivated Probabilistic Model of Information Retrieval Proceedings of the second European Conference on Research and Advanced Technology for Digital Libraries (ECDL'98). (pp. 569-584). Heraklion, Greece. ISBN 3-540-65101-2, ISSN 0302-9743.

Hiemstra, D., & Jong, F.M.G. de. Cross-Language Retrieval in Twenty-One: Using One, Some, or All Possible Translations? *Proceedings Language Technology Multimedia Information Retrieval (TWLT14)*. (pp. 19-26). University of Twente, Enschede. ISSN 0929-0672.

Hiemstra, D. Multilingual Domain Modeling in Twenty-One: Automatic Creation of a Bidirectional Translation Lexicon from a Parallel Corpus Proceedings Computational Linguistics in the Netherlands. (pp. 41-57). Nijmegen. ISBN 90-420-0504-1.

Hulstijn, J. Conformation in Transaction Dialogues. Proceedings Conference Workshop. (pp. 1-12). Granada, Spain.

Hulstijn, J. Goals and Structured Information. Proceedings Accolade'97. (pp. 32-49). Dutch Graduate School in Logic, University of Amsterdam. ISBN 90-74795-96-x.

Hulstijn, J., & Hessen, A.J. van. Utterance Generation for Transaction Dialogues. Proceedings 5th International Conf. Spoken Language Processing (ICSLP). (pp. 1143-1146). Sidney, Australia.

Jong, H. de., Mars, N.J.I., & Vet, P.E. van der. Computer-supported Analysis of Experiments in Materials Science. Proceedings van de International Congress on Discovery and Creativity. (pp. 57-58). Ghent, Belgium.

Jong, H. de., Wit, V., Mars, N.J.I., & Vet, P.E. van der. Model-based Identification of Systematic Errors in Measurements. Proceedings van de 12th International workshop on Qualitative Reasoning. (pp. 32-41). California, USA. ISBN 1-57735-054-5.

Jong, F. de. Twenty-One: a Baseline for Multilingual Multimedia Retrieval. Proceedings Language Technology in Multimedia Information Retrieval. (pp. 189-194). University of Twente, Enschede, The Netherlands. ISSN 0929-0672.

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Netter, K., & Jong, F. de. OLIVE: Speech-based Video Retrieval. Proceedings Language Technology in Multimedia Information Retrieval. (pp. 187-188). University of Twente, Enschede. ISSN 0929-0672.

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## **1997**

Borst, W.N. Top, J.L. & Akkermans, J.M. The ThermLib Library of Generic Thermodynamic Model Components. Proceedings International Conference on Bond Graph Modeling and Simulation ICDGM'97 (pp. 247-252). Phoenix, Arizona, USA. ISBN 1-56555-103-6.

Borst, W.N. & Akkermans, J.M. An Ontology Approach to Product Disassembly. Proceedings EKAW '97 (pp. 33-48). Sant Feliu Quixols, Spain. ISBN 3-540-63592-0.

Hiemstra, D. Jong, F.M.G. de. & Kraaij, W. A Domain Specific Lexicon Acquisition Tool for Cross-language Information Retrieval. Proceedings RIAO'97 Conference: Computer-Assisted (pp. 255-268). Montreal, Canada.

Jong, H. de. & Raalte, F. van. Comparative Analysis of Structurally Different Dynamical Systems. Proceedings of the 15th. International Joint Conference on Artificial Intelligence, IJCAI-97 (pp. 486-491). Nagoya, Japan. ISBN 1-55860-480-4.

Pos, A. & Akkermans, J.M. Requirement Specification for Engineering Modeling. Proceedings 10th Florida Artificial Intelligence Research Symposium FLAIRS'97 (pp. 101-105). Daytona Beach, Florida, USA. ISBN 0-9620-1739-6.

Ygge, F. & Akkermans, J.M. Making a Case for Multi-Agent Systems. Proceedings European Conference on Modelling Autonomous Agents in a Multi-Agent World MAAMAW'97 (pp. 156-176). Ronneby, Sweden. ISBN 3-540-63077.

## *Reports*

## **1998**

Bakel, B.J. van., Boon, R.T., Mars, N.J.I., Nijhuis, J.G.J., Oltmans, J.A., & Vet, P.E. van der.(1998). Condorcet Annual Raport. CTIT Technical Reports Series, (Nr: 98-24), 36 pp. ISSN 1381-3625.

Jong, H. de. Implementatie van KIMA. (Technisch rapport). Enschede: University of Twente, Netherland, 28 pp.

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Akkermans, J.M. & Ygge, F. Homebots: Intelligent Decentralized Services for Energy Management. CTIT Technical Reports Series, 97 (Nr: 04), 17 pp. ISSN 1381-3625.

Akkermans, J.M. & Ygge, F. Smart Software as Customer Assistant in Large-Scale Distributed Load Management. CTIT Technical Reports Series (Nr: 97-26), 14 pp. ISSN 1381-3625.

Bakel, B.J. van. Boon, R.T. Mars, N.J.I. Nijhuis, J.G.J. Oltmans, J.A. & Vet, P.E. van der. Condorcet Annual Report. CTIT Technical Reports Series (Nr: 97-30), 57 pp. ISSN 1381-3625.

Jong, H. de. & Raalte, F. van. Comparative Envisionment Construction: a General Method for the Comparative Analysis of Dynamical Systems. CTIT Technical Reports Series (Nr: 06), (pp. 1-53). ISSN 1381-3625

Jong, H. de. & Rip, A. The Computer Revolution in Science: Steps towards the Realization of Computer-supported Discovery Environments. Artificial Intelligence, 91 (pp. 225-256). ISSN 0004-3702.

Pos, A. Akkermans, J.M. & Top, J.L. Automatic Revision of Simulation Models. CTIT Technical Reports Series (Nr: 97-23), 37 pp. ISSN 1381-3625.

Ygge, F. & Akkermans, J.M. Power Load Management as a Computational Market. CTIT Technical Reports Series (Nr: 97-05), 14 (pp. ISSN 1381-3625.

### *Presentations*

#### **1998**

Hessen, A.J. van., & Jong, F.M.G. de. DRUID - Multimedia Indexing and Retrieval on the Basis of Image Processing and Language and Speech Technology. Zeist, Presentation TI-Programmaraad.

Jong, F.M.G. de. DRUID - Multimedia Indexing and Retrieval. Erez, Belgium.

Jong, F.M.G. de. Multimedia Indexing & Retrieval using Human Language Technology. Enschede, Presentation Openingsdag Telematica Instituut.

Jong, F.M.G. de. Multimedia content retrieval met behulp van taal- en spraaktechnologie. Almere, Presentation Instituut voor Information Engineering.

Jong, F.M.G. de. Taalwetenschap en Taaltechnologie. Utrecht, Presentation CKI, University of Utrecht.

Jong, F.M.G. de. Twenty-One - Development of a Multimedia Information Transaction and Dissemination Tool. Lissabon, Portugal, Presentation EXPO'98.

#### **1997**

Bakel, B.J. van. NLE in IR: Generating Structured Index Concepts. Nijmegen, Lecture presented at CLIN'97 Meeting (Computational Linguistics in the Netherlands).

## 1.2 Software Engineering

### *Books*

#### **1997**

Aksit, M. & Matsuoka, S. ECOOP'97 - Object-Oriented Programming. Berlin, Germany: 555 pp. ISBN 3-540-63089-9.

### *Bookchapters*

#### **1998**

Aksit, M., & Tekinerdogan, B. Aspect-Oriented Programming using Composition Filters. Object-Oriented Technology, ECOOP98 Workshop Reader (pp. 435-436). Berlin, Germany: Springer-Verlag. ISBN 3-540-65460-7.

Aksit, M., & Tekinerdogan, B. Automating the Object-Oriented Software Development Process: Workshop Report. Object-Oriented Technology, ECOOP'98 Workshop Reader (pp. 474-477). Berlin, Germany: Springer-Verlag. ISBN 3-540- 65460-7.

Tekinerdogan, B., & Aksit, M. Deriving Design Aspects from Conceptual Models. Object-Oriented Technology ECOOP'98 Workshop Reader (pp. 410-414). Berlin, Germany: Springer-Verlag. ISBN 3-540-65460-7.

Tekinerdogan, B., & Aksit, M. Providing Automatic Support for Heuristic Rules of Methods. Object-Oriented Technology ECOOP'98 Workshop Reader (pp. 496-499). Berlin, Germany: Springer-Verlag. ISBN 3540654607.

#### **1997**

Aksit, M. Tekinerdogan, B. & Bergmans, L.M.J. Achieving Adaptability through Separation and Composition of Concerns. Special Issues in Object-Oriented Programming, M. Mühlhuser (ed.), (pp. 12-24). Heidelberg, Germany: dpunkt-Verlag. ISBN 3-920993-67-5.

Bergmans, L.M.J. & Cointe, P. Composability Issues in Object-Orientation. CIOO 96 Workshop Report. Special Issues in Object-Oriented Programming, M. Mühlhuser (Ed.), (pp. 55-62). Heidelberg, Germany: dpunkt-Verlag. ISBN 3-920993-67-5.

Bergmans, L.M.J. Composability: What, Why and How. Special Issues in Object-Oriented Programming, (pp. 75-80). Heidelberg, Germany: dpunkt-Verlag. ISBN 3-920993-67-5.

Tekinerdogan, B. & Aksit, M. Adaptability in Object-Oriented Software Development. Workshop Report. Special Issues in Object-Oriented Programming, M. Mühlhuser (Ed.), (pp. 7-12). Heidelberg, Germany: dpunkt-Verlag. ISBN 3-920993-67-5.

## *Conference papers*

### **1998**

Aksit, M., & Tekinerdogan, B. Deriving Frameworks from Knowledge based Architecture Specifications (op internet: <http://www.sei.cmu.edu/plp/oopsla>). [OOPSLA Workshop 18: Object-Technology Architecture and Domain Analysis Experiences in making the Connection. Vancouver, Canada.

Aksit, M., & Bergmans, L.M.J. Examples of Reusing Synchronization Code in Aspect-Oriented Programming using Composition Filters. [5th Magrebian Conference on Software Engineering and Artificial Intelligence. 15 pp. Tunis. ISBN 9973-831-00-4.

Aksit, M. How to find Domains, Aspects and Patterns. [20th International Conference on Software Engineering Vol. 2. (pp. 20-20). Kyoto, Jaqan. ISBN 4-931474-00-4.

Berg, K.G. van den. Software Quality in the Objectory Software Development Process. [Object-Oriented Technology (ECOOP'98 Workshop Reader). (pp. 483-485). Brussel, Belgium. ISBN 3-540-65460-7.

### **1997**

Aksit, M. Marcelloni, F. Tekinerdogan, B. Berg, K.G. van den. & Broek, P.M. van den. Active Software Artifacts. [ECOOP'97 Workshop Reader, LNCS 1357. J. Bosch & S. Mitchell (Eds.) (pp. 307-310). Jyvskyl, Finland. ISBN 3-540-64039-8.

Aksit, M. & Bergmans, L.M.J. Composing Multiple-Client-Multiple-Server Synchronizations. Proceedings of the IEEE International Workshop on Parallel and Distributed Real-time Systems (pp. 269-282). Geneva, Switzerland. ISBN 0-8186-8096-2.

Berg, K.G. van den. Modeling Software Processes and Artifacts. Introduction to ECOOP'97 Workshop 10. [ECOOP'97 Workshop Reader, LNCS 1357. J. Bosch & S. Mitchell (Eds.) (pp. 285-288). Jyvskyl, Finland. ISBN 3-540-64039-8.

Marcelloni, F. & Aksit, M. Applying Fuzzy Logic Techniques in Object-Oriented Software Development. [ECOOP'97 Workshop Reader, LNCS 1357. J. Bosch & S. Mitchell (Eds.) (pp. 295-298). Jyvskyl, Finland. ISBN 3-540-64039-8.

Mens, K. Lopes, C. Tekinerdogan, B. & Kiczales, G. Aspect-Oriented Programming. [ECOOP'97 Workshop Reader, LNCS 1357. J. Bosch & S. Mitchell (Eds.) (pp. 483-496). Jyvskyl, Finland. ISBN 3-540-64039-8.



## *Reports*

Berg, K.G. van den. Bibliotheekgebruik in het Objectgeoriënteerd Programmeeronderwijs. Tinfon: tijdschrift voor informatica-onderwijs, 6 (Nr: 2), (pp. 83-84). ISSN 0927-8982.

## **1.3 Database technology and Distributed databases**

### *Dissertations*

#### **1998**

Velthausz, Dr.ir. D.D. (1998, August 20). Cost-effective Network-based Multimedia Information Retrieval, 225 pp., ISBN 90-75176-16-3.

#### **1997**

Harmsen, A.F. (1997, January 31). Situational Method Engineering, 309 pp., ISBN 90-75498-10-1.

Keulen, M. van (1997, November 07). Formal Operation Definition in Object-Oriented Databases, 269 pp., ISBN 90-3651031-7.

Skowronek, J. (1997, December 04). Distributed Optimization of Nested Queries, 222 pp, ISBN 90-36510686.

Veenhof, H.M. (1997, October 09). Processing Multi-Way Spatial Joins, 162 pp., ISBN 90-365-1002-3.

Vermeer, W.W.M. (1997, October 03). Semantic Interoperability for Legacy Databases, 156 pp., ISBN 90-3650964-5.

### *Books*

#### **1997**

Apers, P.M.G. Blanken, H.M. & Houtsma, M.A.W. Multimedia Databases in Perspective. London: 371 pp. ISBN 3-540-76109-8.

Bentley, R. Busbach, U. Kerr, D. & Sikkel, N. Groupware and the World Wide Web. Dordrecht: 148 pp. ISBN 0-7923-4534-7.

Sikkel, N. Parsing Schemata - a framework for specification and analysis of parsing algorithms. Berlin: 365 pp. ISBN 3-540-61650-0.

### *Bookchapters*

Apers, P.M.G. Searching Distributed Hypermedia. *Multimedia Databases in Perspective*, (pp. 85-98). London: Springer. ISBN 3-540-76109-8.

By, R.A. de. Klas, W. & Veijalainen, J. Entry for Transcoop book. *Transaction Management Support for Cooperative Applications*, 220 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Even, S.J. Tesch, T. & Veijalainen, J. Chapter 9: Conclusions. *Transaction Management Support for Cooperative Applications*, 7 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Faase, F.J. Even, S.J. & By, R.A. de. Chapter 6: The Transcoop Specification Environment. *Transaction Management Support for Cooperative Applications*, 34 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Grefen, P.W.P.J. Active Database Support for Office Procedures. *Readings in CSCW*, (pp. 55-78). Enschede: CTIT, University of Twente. ISSN 1381-3625.

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Klas, W. Vries, A.P. de. & Breiteneder, C. Current and Emerging Applications in Multimedia Databases in Perspective. *Multimedia Databases in Perspective*, (pp. 13-30). London: Springer Verlag. ISBN 3-540-76109-8.

Klingemann, J. & Even, S.J. Chapter 8: The TransCoop Demonstrator System. *Transaction Management Support for Cooperative Applications*, 20 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Lehtola, A. By, R.A. de. Tirri, H. & Wasch, J. Chapter 5: The Transcoop Architecture. *Transaction Management Support for Cooperative Applications*, 21 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Pistor, P. & Blanken, H.M. The SQL3 Server Interface. *Multimedia Databases in Perspective*, (pp. 100-116). London: Springer. ISBN 3-540-76109-8.

Tesch, T. Verkoulen, P.A.C. Lehtola, A. Veijalainen, J. Pihlajamaa, O. & Sladek, A. Chapter 4: Applications Requirements. *Transaction Management Support for Cooperative Applications*, 33 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Veijalainen, J. By, R.A. de. & Aberer, K. Chapter 2: The TransCoop Paradigm. Transaction Management Support for Cooperative Applications, 15 pp. Kluwer Academic Publishers. ISBN 0-7923-8100-9.

Verkoulou, P.A.C. & Blanken, H.M. The SGML/HyTime Server Interface. Multimedia Databases in Perspective, (pp. 117-144). London: Springer. ISBN 3-540-76109-8.

### *Journals*

#### **1998**

Grefen, P.W.P.J., & Remmerts De Vries, R. A Reference Architecture for Workflow Management Systems. Data and Knowledge Engineering, 27 (Nr: 1), (pp. 31-57). ISSN 0169-023X.

Vermeer, W.W.M., & Apers, P.M.G. Specifying Global Behaviour in Database Federations. Information systems, 23 (Nr: 3-4), (pp. 217-233). ISSN 0306-4379.

Vries, A.P. de., Veer, G.C. van der., & Blanken, H.M. Let's Talk about it: Dialogues with Multimedia Databases. Database Support for Human Activity. Displays, 18 (Nr: 4), (pp. 215-220). ISSN 0141-9382.

#### **1997**

Grefen, P.W.P.J. & Widom, J. Protocols for Integrity Constraint Checking in Federated Database. Distributed and Parallel Databases, 5 (Nr: 4), (pp. 327-355). ISSN 0926-8782.

Vermeer, W.W.M. & Apers, P.M.G. Modifying Queries on Complex Objects in Database Federations. International Journal of Cooperative Information Systems, 6 (Nr: 384), (pp. 219-240). ISSN 0218-8430.

### *Conference papers*

#### **1998**

Apers, P.M.G., & Kersten, M.L. Content-based Retrieval in Multimedia Based on Feature Models. Proceedings 1st International Conference on Advanced Multimedia Content Processing (pp. 122-133). Osaka, Japan.

Boertjes, E.M., Grefen, P.W.P.J., Vonk, J., & Apers, P.M.G. An Architecture for Nested Transaction Support on Standard Database Systems. [9th. International Conference on Database and Expert System Applications (DEXA'98), (pp. 448-459). Vienna, Austria. ISBN 3-540-64950-6.

Boncz, P., Wilschut, A.N., & Kersten, M.L. Flattening an Object Algebra to provide Performance. Proceedings International Conference on Data Engineering '98, (pp. 568-577). Orlando, USA. ISBN 0-8186-8289-2.

Chan, D.K.C., Vonk, J., Sanchez, G., Grefen, P.W.P.J., & Apers, P.M.G. A Specification Language for the WIDE Workflow Model. [ACM Symposium on Applied Computing. (pp. 197-199). Atlanta, U.S.A. ISBN 0-89791-969-6.

Choenni, R. On the Suitability of Genetic-Based Algorithms for Data Mining. Proceedings DWDM98 International Workshop on Data Warehousing and Data Mining. (pp. 55-67). Singapore.

Derks, W., & Jonker, W. Practical Experiences with Materialized Views in a Very Large Data Store for Telecommunications Service Management. Proceedings DEXA 98. 6 pp. Vienna, Austria. ISBN 3-540-64950-6.

Faase, F.J., Even, S.J., By, R.A. de., & Apers, P.M.G. Integrating Organisational and Transactional Aspects of Cooperative Activities. Proceedings 6th Workshop on Database Programming Languages (DBPL) 1998, (pp. 336-354). Estes Park, Co, USA. ISBN 3-540-64823-2.

Grefen, P.W.P.J., & Wieringa, R.J. Subsystem Design Guidelines for Extensible General-Purpose Software. 3rd. International Software Architecture Workshop. (pp. 49-52). Orlando, U.S.A. ISBN 1581130813.

Vries, A.P. de., & Blanken, H.M. Database Technology and the Management of Multimedia Data in Mirror Multimedia Storage and Archiving Systems III, Volume 3527 of Proceedings of SPIE (pp. 443-455). Boston, USA. ISBN 0-8194-2988-0.

Vries, A.P. de., & Blanken, H.M. The Relationship between IR and Multimedia Databases. Proceedings of the 20th BCS IRSG Colloquium: Discovering New Worlds of IR. Grenoble, France. ISBN 1-902505-11-5.

Vries, A.P. de., Eberman, B., & Kovalcin, D.E. The Design and Implementation of an Infrastructure for Multimedia Digital Libraries, Proceedings of the 1998 International Database Engineering & Applications Symposium, (pp. 103-110). Cardiff, UK. ISBN 0-8186-8307-4.

Wilschut, A.N., Zwol, R. van., Brasa, N., & Flokstra, J. Road Collapse in Magnum, Proceedings 6th ACM on GIS (pp. 20-28). Washington DC. ISBN 1-38113-1154.

## **1997**

Ceri, S. Grefen, P.W.P.J. & Sanchez, G. WIDE - A Distributed Architecture for Workflow Management. Proceedings 7th International Workshop on Research Issues in Data Engineering (RIDE) (pp. 76-79). Birmingham, UK. ISBN 0-8186-7849-6.

Ceri, S. Grefen, P.W.P.J. & Sanchez, G. Exception Management by Active Rules in WIDE. Proceedings Symposium on Software Technology (SoST) (pp. 15-18). Buenos Aires, Argentina.

Nijenhuis, W. Jonker, W. & Grefen, P.W.P.J. Supporting Telecom Business Processes by Means of Workflow Management and Federated Databases. Proceedings 3rd AIS Americas Conference on Information Systems (pp. 464-466). Indianapolis, USA.

Vermeer, W.W.M. & Apers, P.M.G. Behaviour Specification in Database Interoperation. Proceedings 9th International Conference on Advanced Information Systems Engineering (CAISE) (pp. 61-74). Barcelona, Spain. ISBN 3-5406-31070.

Vermeer, W.W.M. & Apers, P.M.G. Query Modification in Object-oriented Database Federation. Proceedings 2nd International Conference on Cooperative Information Systems (CoopIS) (pp. 193-202). Charleston, SC, USA. ISBN 0-8186-79468.

Weg, R.L.W. van de. Engmann, R.G.R. Hoef, R. van de. & Thij, V. ten. An Environment for Object-oriented Real-time System Design. 8th. Conference on Software Engineering Environments (pp. 23-33). Cottbus, Germany. ISBN 0-8186-8019-9.

### *Reports*

#### **1998**

Balsters, H. De ODMG standaard. Handboek Database Systemen, 32 pp. Alphen a.d. Rijn: Array Publications bv. ISBN 9074562019.

Boertjes, E.M., Grefen, P.W.P.J., Vonk, J., & Apers, P.M.G. An Architecture for Nested Transaction Support on Standard Database Systems. CTIT Technical Reports Series. (Nr: 6), 22 pp. ISSN 1381-3625.

Even, S.J., & Spelt, D. Verification of Compensation Requirements for the SEPIA Cooperative Authoring System. CTIT Technical Reports Series, (Nr: 25), 15 pp. ISSN 1381-3625.

Grefen, P.W.P.J., Vonk, J., Boertjes, E.M., & Apers, P.M.G. Global Transaction Support: Formal Specification and Practical Application. CTIT Technical Reports Series, 1998 (Nr: 10), 25 pp. ISSN 1381-3625.

Grefen, P.W.P.J., Sikkel, N., & Wieringa, R.J. Two Case Studies of Subsystem Design for Extensible General-Purpose Software. CTIT Technical Reports Series, 1998 (Nr: 14), 16 pp. ISSN 1381-3625.

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Spelt, D., & Even, S.J. A Theorem Prover-based Analysis Tool for Object-oriented Databases. CTIT Technical Reports Series, (Nr: 22), 16 pp. ISSN 1381-3625.

Spelt, D., & Even, S.J. An Engineering Approach to Atomic Transaction Verification: Use of a Simple Object Model to Achieve Semantics-based Reasoning at Compile-time. CTIT Technical Reports Series, (Nr: 17), 16 pp. ISSN 1381-3625.

Spelt, D., & Even, S.J. Theorem Prover-based Analysis of Transactions on Object-Oriented Databases (Extended Abstract). CTIT Technical Reports Series, (Nr: 13), 17 pp. ISSN 1381-3625.

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- Moonen, J.C.M.M. Teleleren: Een verkenning. I.N. van der Kamp & C.L.M. Pouw (Eds.), *Teleleren aan de universiteit Twente* (pp. 7-10). Enschede.

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Veen, J.T. van der. Collis, B.A. Diepen, N.M. van. & Andernach, T. Implementing Project-based Tele-learning. LL.K. Bowers (Ed.), Changing Practices and Technologies: Decisions Now for the Future: Proceedings of the 14th ICTE International Conference on Technology and Education, vol. 1 (pp. 164-167). Arlington, TX, USA. ISBN 0-965957-1-8.

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Verwijs, C.A., Dijkstra, J., Heeren, E., & Wit, D. de. Kennismaken met kennismanagement. Enschede: Telematica Instituut, 69 pp.

Wende, M.C. van der., Beerkens, H.J.J.G., Collis, B.A., Moonen, J.C.M.M., & Leemkuil, H.H (1999). The Use of Information and Communication Technology in Higher Education. An International Orientation on Trends and Issues. Enschede: CHEPS, 94 pp.

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tions. Brussels: Scientific and Technology Options Assessment Programme of the European Parliament, 40 pp.

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Haan, D.M. de. & Fisser, P.H.G. ICT-gebruik in hoger onderwijs: Inventariserend onderzoek. Heerlen: Open Universiteit.

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Veen, J.T. van der. & Collis, B.A. Tele-projects and the Web: Is this for your classroom? gastbijdrage in Netdays, een WWW activiteit and Website gesponsored door de Europese Commissie .

Volman, C.J.A.M. Jones, V.M. Sinderen, M.J. van. Widya, I.A. & Michiels, E.F. Tele-education Process Modeling supported by the ODP Wiewpoint Enterprise Language. (CTIT Technical Report Series, no. 97-24). Enschede: University of Twente, 11 pp. ISBN 1381-3625.

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### *Inaugural lecture*

#### **1998**

Collis, B.A. Teleware: Instrumentation for Tele-Learning. Enschede: University of Twente.

### *Presentations*

Collis, B.A. An Action Research Plan for TeLeTOP. Enschede [Presentation at ORD '98, the yearly Dutch-Belgium conference for Educational Research.

Collis, B.A., Peters, O., Remmers, E., Verheij, G.J., Strijker, A., & Boer, W.F. de Demonstration sessions to various groups or visitors. Enschede.

Collis, B.A. Distance and Education: New Perspectives. Milton Keynes.

Collis, B.A. Extending the Role of the Trainer: Continuous Learning with Telematics Applicatons. Enschede.

Collis, B.A. Guest lecture, "On-line Learning" for the course ITDE Trends. Fort Lauderdale [Course in the doctoral programme at Southwest Nova University.

Collis, B.A. Het verlangen van de drempel van ICT gebruik voor de docent. Velp

Collis, B.A., & Verheij, G.J. ICT and Tele-learning Use in Higher Education: A Demonstration. Enschede.

Collis, B.A. Managed change in education with the WWW at the University of Twente. Delft [Invited presentation at the Studiedag ICT, Technical University of Delft.

Collis, B.A., & Sinderen, M.J. Mobile Telematics and the Educational Sector. Enschede.

Collis, B.A. Multimedia and Distance Learning. Groningen, Invited featured presentation at the Summer Workshop '98: KPN Training.

Collis, B.A. New Approaches to Teaching and Learning at the University of Twente. Amsterdam Invited guest speaker at the Opening of the ICT Educational Centre, Vrije University.

Collis, B.A. Pedagogical Change with the WWW at the Faculteit Toegepaste Onderwijskunde (TO). Delft, The Netherlands Presentation t.g.v. de Dido studiedag 'De digitale leeromgeving' aan de TU Delft.

Collis, B.A. Staff-development Sessions and Public Demonstrations of the Interactieve Classroom and the TeLeTOP Method of WWW-based Course Support. Enschede, Sessions voor het TeLeTOP Project in de Interactive Classroom.

Collis, B.A. TeLeTOP. Enschede Demonstration TeLeTOP.

Collis, B.A. TeLeTOP method. Enschede Demonstrations TeLeTOP.

Collis, B.A. Teaching with the WWW: From the Instructor's Perspective. Hogskolan Karlstad

Collis, B.A. Tele-Learning: More than technology. Enschede.

Collis, B.A. Tele-Learning: What is the Added Value?. Washington, DC Demonstration Laboratory for Interactive Information Technologies, Academy for Educational Development.

Collis, B.A. Tele-educatie: de doorbraak van ICT in het onderwijs?. Nijkerk, Invited speaker at ICT: Schudden voor gebruik, National SURF Congress 1998.



Collis, B.A. Tele-learning in a Digital World. Utrecht Presentation available in R. van de Pas (Ed.), Living in a BIK world.

Collis, B.A. Tele-learning: An Integrated Perspective. Enschede, Presentation at ORD '98, the yearly Dutch-Belgian conference for Educational Research.

Collis, B.A., & Winnips, K. Telematica as a Tool for Scaffolding in “academische vorming”. Enschede [Presentation at ORD '98, the yearly Dutch-Belgium conference for Educational Research.

Collis, B.A., & Strijker, A. The TeLeTOP system. Utrecht.

Collis, B.A., & Pals, N. Validation of the 3-G Model. Enschede.

Collis, B.A. What do we want to Accomplish? Enschede, Presentation at the Conference “Van illusie naar idylle: Effecten van teleleren in het hoger onderwijs”.

Collis, B.A.) What's New? What's the Same in Curriculum-based CMC Projects? Copenhagen, Keynote presentation.

Koua, E. A Collaborative Learning System: Integrating Information and Communication Technologies for Distributed Learning in Higher Education. Accra.

Veen, J.T. van der. Applying Workflow in Web-Supported Projects. Göteborg, Sweden Paper presentation at the Computer Aided Learning in Science and Engineering, CALISCE'98.

Veen, J.T. van der. Het gebruik van workflow-tools bij projectonderwijs. University of Twente, Enschede, Presentation op IDYLLE conference “Van Illusie naar idylle”.

Veen, J.T. van der. Samenwerken, samen studeren. Enschede, Presentation on IDYLLE workshop with online preparations by group of experts.

Veen, J.T. van der. Workflow Applied to Projects in Higher Education. Paris, France, ECASP (Educational Case Studies in Protocols) workshop as part of the FORTE/PSTV '98 Conference.

Veen, J.T. van der. World Wide Web Learning Support, Evaluatiemethodes. Presentation for SURF-Educatief.

## **3.5 Business**

### **1998**

#### *Conference papers*

Faber, E.C.C. and Wognum, P.M. The Development of Collaboration within Dispersed NPD Teams: a Structurationist Perspective. The R&D Management Conference on Technology Strategy and Strategic Alliances (7 pp.), Avila, Spain.

Goossenaerts, J.B.M., Ranta, M.L., Ranke, A.A.M., Wognum, P.M., Gibbons, W.M., Büchner, A.G., Kersens-Drongelen, I.C. van, Thoben, K.D. and Pels, H.J. Product-related Data and Knowledge Management in the Intelligent Enterprise. Proceedings of the First International Workshop on Intelligent Manufacturing Systems, IMS-Europe 1998, 15-17 April 1998 (pp. 429-445), EPFL Lausanne, Switzerland.

Wognum, P.M. A Model for Analysing Virtual Organizations. Preprints of the First International Symposium on Concurrent Engineering ISoCE '98, Cooperation towards Competitiveness, 4-6 June 1998 (pp. 35-44), Sinaia, Romania.

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Wognum, P.M., De Weerd-Nederlof, P.C. and Boer, H. Understanding Product Development as a Basis for Concurrent Engineering. Case Studies using a Process Model of Organizations. Proceedings of the 11th International Conference on Engineering Design, Vol. 3, Riitahuhta, A. Ed., 19-21 August (pp. 767-772), Tampere, Finland. ISBN 951-722-788-4.

#### *Specialist Publications*

### **1998**

Thiry, M.B., Wognum, P.M. and De Weerd-Nederlof, P.C. Kennismanagement in adviesbureaus en productontwikkeling. Bedrijfskundig vakblad, 10 (Nr. 5) (pp. 23-32). ISSN 1383-9047.

### **1997**

Wognum, P.M., De Weerd-Nederlof, P.C. and Boer, H. Challenges in Organizaing and Managing Integrated Product Development Processes, T&M Research Report 97W-001/T&O-001, 56 pp. ISBN 90-365-1109-7.

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Wognum, P.M. and Faber, E.C.C. First release of the FREE Model, ESPRIT project 23286 FREE Fast Reactive Extended Enterprise, 26 pp.

Wognum, P.M. and Faber, E.C.C. The FREE organizational Model (FREE Deliverable 122-2, ESPRIT project 23286 FREE Fast Reactive Extended Enterprise, 88 pp.

Wognum, P.M. and Gerritsen Mulkes, E. Concert nieuwsbrief, Nieuwsbrief Concurrent Engineering Research Twente, 13 pp.

## **4 Methods, Techniques and Tools**

### **4.1 Design methods and concepts**

#### *Dissertations*

##### **1998**

Hofte, H. ter (1998, June 04). Working apart Together: Foundations for Component Groupware. 279 pp. ISBN 90-75176-14-7.

Quartel, D.A.C. (1998, February 19). Action Relations. Basic Design Concepts for Behaviour Modelling and Refinement, 396 pp. ISBN 90-365-1071-6.

Weger, M.K. de (1998, January 22). Structuring of Business Processes. An Architectural Approach to Distributed Systems Development and its Application to Business Processes, 256 pp. ISBN 90-365-1052-X.

#### *Bookchapters*

##### **1998**

Sinderen, M.J., & Pires, L.F. The application of TINA in the MESH project. Interactive Distributed Multimedia Systems and Telecommunication Services (IDMS'98), Lecture Notes in Computer Science 1483 (pp. 77-82). Berlin, Germany: Springer. ISBN 3-540-64955-7.

#### *Journals*

##### **1998**

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##### **1997**

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### *Conference papers*

#### **1998**

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Guareis de Farias, C.R., & Souza, W.L. de. Especificacao Formal e Validaco de um Kernel Paralelo Tempo Real. 16th Proceedings of Simpsio Brasileiro de Redes de Computadores. (pp. 258-277). Rio de Janeiro, Brazil.

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Vries, R.G. de. Ferreira Pires, L. Moelaert, F. Jones, V.M. Reijs, V. Sinderen, M.J. van. Verhoosel, J. & Widya, I.A. Relevant Standards to MESH. (Project MESH Final Deliverable MESH/T0.2/N003/V07). Enschede: University of Twente, 55 pp.

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Sinderen, M.J. van. & Ferreira Pires, L. Netwerkarchitecturen - architectuurconcepten en hun toepassing. Handboek Telematica, Deel II, Sectie 4005, (pp. 3-15). Samsom Bedrijfsinformatie. ISBN 90-6500-759-8.

Sinderen, M.J. van. Telematica: integratie van telecommunicatie en informatieverwerking. E.T.S.V. Scintilla Jaarboek '97, (pp. 95-112). Enschede: University of Twente. ISBN 90-800721-0-9.

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#### **1998**

Sinderen, M.J., & Pires, L.F. Architectural Concepts for Distributed Systems Specification. Minicourse ITC, Enschede.

Sinderen, M.J 1998, AMIDST - Application of middleware in services for telematics. Ensched, Presentation CTIT Board Meeting.

Sinderen, M.J 1998, AMIDST: background. Amersfoort, Presentation AMIDST kick-off workshop.

Sinderen, M.J 1998, CTIT Middleware Research. Enschede, Presentation to the Board of the University.

Sinderen, M.J 1998, Centre for Telematics and Information Technology (CTIT): Mission and Research Programme. Enschede, Presentation visit Jim Clark / Netscape.

Sinderen, M.J 1998, Middleware Support for Distributed Object Computing. Enschede Presentation visit representatives Telecom Sector South Africa.

Sinderen, M.J., & Collis, B.A 1998, Mobile Telematics and the Educational Sector. Enschede , Presentation meeting CTIT-Ericsson.

Sinderen, M.J 1998, The AMIDST Project. Enschede, Presentation CTIT Evaluation Committee.

## **4.2 Performance and reliability analysis**

### *Dissertations*

#### **1998**

Scheinhardt, Dr.ir. W.R.W. (1998, December 04). Markov-modulated and Feedback Fluid Queues, 155 pp. Promotor: Prof. dr. ir. J.H.A. de Smit. ISBN 90-3651248-4.

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Adan, I.J.B.F., Doorn, E.A. van., Resing, J.A.C., & Scheinhardt, W.R.W. Analysis of a Single-server Queue Interacting with a Fluid Reservoir. *Queuing Systems*, 1998 (Nr: 29), (pp. 313-336). ISSN 0257-0130.

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Garvels, M.J.J., & Kroese, D. A comparison of RESTART implementations. *CTIT Technical Reports Series*, (Nr: 98-09), 27 pp. ISSN 1381-3625.

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