



Universiteit  
Leiden  
The Netherlands

## Aspects of Record Linkage

Schraagen, M.P.

### Citation

Schraagen, M. P. (2014, November 11). *Aspects of Record Linkage*. Retrieved from <https://hdl.handle.net/1887/29716>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/29716>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/29716> holds various files of this Leiden University dissertation.

**Author:** Schraagen, Marijn Paul

**Title:** Aspects of record linkage

**Issue Date:** 2014-11-11

# Bibliography

- [1] Redmer Alma. Thesauri of standardized personal names in Drenthe. Personal communication. Data set supplied by Drents Archief, <http://www.drentsarchief.nl>, 2011.
- [2] Carlos Álvarez, Manuel Carreiras, and Manuel Perea. Are syllables phonological units in visual word recognition? *Language and Cognitive Processes*, 19(3):427–452, 2004.
- [3] Rohit Ananthakrishna, Surajit Chaudhuri, and Venkatesh Ganti. Eliminating fuzzy duplicates in data warehouses. In *Proceedings of the 28th international conference on Very Large Data Bases*, pages 586–597, 2002.
- [4] Sally Andrews. Morphological influences on lexical access: Lexical or nonlexical effects? *Journal Of Memory and Language*, 25:726–740, 1986.
- [5] Max Arellano and Donald Simborg. A probabilistic approach to the patient identification problem. In *Proceedings of the Annual Symposium on Computer Application in Medical Care*, page 852. American Medical Informatics Association, 1981.
- [6] Madeleine Ball. python-gedcom: Python module for parsing, analyzing, and manipulating GEDCOM files. <https://github.com/madprime/python-gedcom/>, 2012.
- [7] Susan Bartlett, Grzegorz Kondrak, and Colin Cherry. Automatic syllabification with structured SVMs for letter-to-phoneme conversion. In *Proceedings of ACL-08: HLT*, pages 568–576. ACL, 2008.
- [8] Rohan Baxter, Peter Christen, and Tim Churches. A comparison of fast blocking methods for record linkage. In *Proceedings of the KDD03 Workshop on Data*

- Cleaning, Record Linkage and Object Consolidation, KDD 2003*, pages 25–27. ACM SIGKDD, 2003.
- [9] Robert Bayer and Edward McCreight. Organisation and maintenance of large ordered indexes. *Acta Informatica*, 1:173–189, 1972.
  - [10] Indrajit Bhattacharya and Lise Getoor. Collective entity resolution in relational data. *ACM Transactions on Knowledge Discovery from Data*, 1(1):Article 5, 2007.
  - [11] Mikhail Bilenko and Raymond Mooney. Adaptive duplicate detection using learnable string similarity measures. In *Proceedings of the Ninth International Conference on Knowledge Discovery and Data mining*, pages 39–48. ACM, 2003.
  - [12] Mikhail Bilenko, Raymond Mooney, William Cohen, Pradeep Ravikumar, and Stephen Fienberg. Adaptive name matching in information integration. *Intelligent Systems*, 18(5):16–23, 2003.
  - [13] Maximilian Bisani and Hermann Ney. Joint-sequence models for grapheme-to-phoneme conversion. *Speech Communication*, 50(5):434–451, 2008.
  - [14] Gerrit Bloothooft. Corpus-based name standardization. *History and Computing*, 6(3):153–167, 1994.
  - [15] Gerrit Bloothooft and Marijn Schraagen. Learning name variants from true person resolution. In *Proceedings of the International Workhop on Population Reconstruction*. International Institute of Social History, 2014.
  - [16] Onno Boonstra and Anton Schuurman (eds). *Tijd en ruimte: nieuwe toepassingen van GIS in de alfawetenschappen*. Matrijs, 2009.
  - [17] Antal van den Bosch, Bertjan Busser, Sander Canisius, and Walter Daelemans. An efficient memory-based morpho-syntactic tagger and parser for Dutch. *Computational Linguistics in the Netherlands: Selected Papers from the Seventeenth CLIN Meeting*, pages 99–114, 2007.
  - [18] Gérard Bouchard. Current issues and new prospects for computerized record linkage in the province of Québec. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 25(2):67–73, 1992.
  - [19] Gérard Bouchard and Christian Pouyez. Name variations and computerized record linkage. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 13(2):119–125, 1980.

- [20] Gosse Bouma. Finite state methods for hyphenation. *Natural Language Engineering*, 9(01):5–20, 2003.
- [21] Loes Braun. Information retrieval from Dutch historical corpora. Master’s thesis, Maastricht University, 2002.
- [22] Leo Breiman, Jerome Friedman, Charles Stone, and Richard Olshen. *Classification and regression trees*. The Wadsworth and Brooks-Cole statistics-probability series. Chapman & Hall, 1984.
- [23] Christopher Carrino. *A Study of Repeat Collaboration in Social Affiliation Networks*. PhD thesis, Pennsylvania State University, 2006.
- [24] Surajit Chaudhuri, Kris Ganjam, Venkatesh Ganti, and Rajeev Motwani. Robust and efficient fuzzy match for online data cleaning. In *Proceedings of the 2003 ACM SIGMOD International Conference on Management of Data*, pages 313–324. ACM, 2003.
- [25] Peter Christen. A comparison of personal name matching: Techniques and practical issues. In *Proceedings of the Sixth IEEE International Conference on Data Mining — Workshops*, pages 290–294. IEEE, 2006.
- [26] Peter Christen. Automatic record linkage using seeded nearest neighbor and support vector machine classification. In *Proceedings of the 14th ACM SIGKDD international conference on Knowledge discovery and data mining*, pages 151–159. ACM, 2008.
- [27] Peter Christen. Febrl: an open source data cleaning, deduplication and record linkage system with a graphical user interface. In *Proceedings of the 14th ACM SIGKDD international conference on Knowledge discovery and data mining*, pages 1065–1068. ACM, 2008.
- [28] Peter Christen. *Data Matching: Concepts and Techniques for Record Linkage, Entity Resolution, and Duplicate Detection*. Springer, 2012.
- [29] Peter Christen. A survey of indexing techniques for scalable record linkage and deduplication. *Transactions on Knowledge and Data Engineering*, 24:1537–1555, 2012.
- [30] Peter Christen, Tim Churches, and Justin Zhu. Probabilistic name and address cleaning and standardisation. In *AUSDM02: Proceedings of the Australasian Data Mining Conference*, pages 99–108. Springer-Verlag, Lecture Notes in Computer Science, 2002.

- [31] Peter Christen and Ross Gayler. Towards scalable real-time entity resolution using a similarity-aware inverted index approach. In *Seventh Australasian Data Mining Conference (AusDM 2008)*, volume 87, pages 51–60. ACS, 2008.
- [32] Munir Cochinwala, Verghese Kurien, Gail Lalk, and Dennis Shasha. Efficient data reconciliation. *Information Sciences*, 137:1–15, 2001.
- [33] William Cohen and Jacob Richman. Learning to match and cluster large high-dimensional data sets for data integration. In *Proceedings of ACM SIGKDD '02*, pages 475–480. ACM, 2002.
- [34] Fred Damerau. A technique for computer detection and correction of spelling errors. *Communications of the ACM*, 7:171–176, 1964.
- [35] Morris DeGroot and Prem Goel. The matching problem for multivariate normal data. *Sankhyā: The Indian Journal of Statistics, Series B*, pages 14–29, 1976.
- [36] Julia Efremova, Bijan Ranjbar-Sahraei, Frans Oliehoek, Toon Calders, and Karl Tuyls. A baseline method for genealogical entity resolution. In *Proceedings of the International Workshop on Population Reconstruction*. International Institute of Social History, 2014.
- [37] Mohammadreza Ektefa, Fatimah Sidi, Hamidah Ibrahim, Marzanah Jabar, and Sara Memar. A comparative study in classification techniques for unsupervised record linkage model. *Journal of Computer Science*, 7:341–347, 2011.
- [38] Mohamed Elfeky, Vassilios Verykios, and Ahmed Elmagarmid. TAILOR: A record linkage toolbox. In *ICDE'02: Proceedings of the 18th International Conference on Data Engineering*, pages 17–28. IEEE, 2002.
- [39] Christos Faloutsos and King-Ip Lin. FastMap: A fast algorithm for indexing, data-mining and visualization of traditional and multimedia datasets. In *Proceedings of the 1995 ACM SIGMOD international conference on Management of data*, pages 163–174. ACM, 1995.
- [40] Ivan Fellegi and Alan Sunter. A theory for record linkage. *Journal of the American Statistical Association*, 64(328):1183–1210, 1969.
- [41] Edward Fredkin. Trie memory. *Communications of the ACM*, 3:490–499, 1960.
- [42] Carol Friedman and Robert Sideli. Tolerating spelling errors during patient validation. *Computers and Biomedical Research*, 25:486–509, 1992.

- [43] Zhichun Fu, Jun Zhou, Peter Christen, and Mac Boot. Multiple instance learning for group record linkage. In *Advances in Knowledge Discovery and Data Mining*, pages 171–182. Springer, 2012.
- [44] GEDCOM Team. The GEDCOM standard release 5.5. Technical report, Family and Church History Department, The Church of Jesus Christ of Latter-day Saints, Salt Lake City, 1996.
- [45] Lise Getoor and Christopher Diehl. Link mining: a survey. *SIGKDD Explorations Newsletter*, 7:3–12, 2005.
- [46] Aristides Gionis, Piotr Indyk, and Rajeev Motwani. Similarity search in high dimensions via hashing. In *VLDB '99: Proceedings of the 25th International Conference on Very Large Data Bases*, pages 518–529. Morgan Kaufmann Publishers Inc., 1999.
- [47] Ron Goeken, Lap Huynh, T Lynch, and Rebecca Vick. New methods of census record linking. *Historical methods*, 44(1):7–14, 2011.
- [48] Karl Goiser and Peter Christen. Towards automated record linkage. In *Proceedings of the Fifth Australasian Conference on Data Mining and Analytics*, volume 61, pages 23–31. Australian Computer Society, Inc., 2006.
- [49] Pablo Gomez, Roger Ratcliff, and Manuel Perea. The Overlap Model: A model of letter position coding. *Psychological Review*, 115(3):577–600, 2008.
- [50] Jonathan Grainger. Cracking the orthographic code: An introduction. *Language and Cognitive Processes*, 23(1):1–35, 2008.
- [51] John Gumperz. The speech community. In David Sills, editor, *Encyclopedia of the Social Sciences* 9(3), pages 382–386. Macmillan, 1965.
- [52] Douglas Hacker, Carolyn Plumb, Earl Butterfield, Daniel Quathamer, and Edgar Heineken. Text revision: Detection and correction of errors. *Journal of Educational Psychology*, 86(1):65, 1994.
- [53] Richard Hamming. Error detecting and error correcting codes. *The Bell System Technical Journal*, 29(2):147–160, 1950.
- [54] Michael Hammond. Optimality theory and prosody. In *Optimality Theory: An Overview*, pages 33–58. Blackwell Publishers, 1997.

- [55] Thomas Hannagan and Jonathan Grainger. Protein analysis meets visual word recognition: A case for string kernels in the brain. *Cognitive Science*, 36:575–606, 2012.
- [56] Steffen Heinz, Justin Zobel, and Hugh E. Williams. Burst tries: A fast, efficient data structure for string keys. *ACM Transactions on Information Systems*, 20:192–223, 2002.
- [57] Steven Henikoff and Jorja Henikoff. Amino acid substitution matrices from protein blocks. *Proceedings of the National Academy of Sciences*, 89(22):10915–10919, 1992.
- [58] Daniel Hirschberg. A linear space algorithm for computing maximal common subsequences. *Communications of the ACM*, 18:341–343, 1975.
- [59] Daniel Hirschberg. Algorithms for the longest common subsequence problem. *Journal of the ACM*, 24:664–675, 1977.
- [60] Dionysius Huijsmans. IISG-LINKS dataset historische Nederlandse toponiemen spatio-temporeel 1812-2012. <http://www.iisg.nl/hsn/data/place-names.html>, 2013.
- [61] Handbook of the International Phonetic Association: A guide to the use of the International Phonetic Alphabet. Cambridge University Press, 1999.
- [62] Stephen Ivie, Burdette Pixton, and Christophe Giraud-Carrier. Metric-based data mining model for genealogical record linkage. In *Proceedings of the IEEE International Conference on Information Reuse and Integration*, pages 538–543. IEEE, 2007.
- [63] Guy Jacobson and Kiem-Phong Vo. Heaviest increasing/common subsequence problems. In *Combinatorial Pattern Matching*, volume 644 of *Lecture Notes in Computer Science*, pages 52–66. Springer, 1992.
- [64] Matthew Jaro. Advances in record-linkage methodology as applied to matching the 1985 census of Tampa, Florida. *Journal of the American Statistical Association*, 84(406):414–420, 1989.
- [65] Paul Johnson. Gedcom — a module to manipulate Gedcom genealogy files. <http://search.cpan.org/~pjcj/Gedcom-1.18/>, 2013.
- [66] Petteri Jokinen and Esko Ukkonen. Two algorithms for approximate string matching in static texts. In *MFCS'91: Proceedings of the 16th International Symposium on Mathematical Foundations of Computer Science*, pages 240–248, 1991.

- [67] Karen Sparck Jones. A statistical interpretation of term specificity and its application in retrieval. *Journal of Documentation*, 28(1):11–21, 1972.
- [68] Michael Kay. Up-conversion using XSLT 2.0. In *Proceedings of XML: From Syntax to Solutions*. IDEAlliance, 2004.
- [69] Michael Kay. Positional grouping in XQuery. In *Proceedings of the 3rd International Workshop on XQuery Implementation, Experience and Perspectives (XIME-P)*, 2006.
- [70] Emmanuel Keuleers and Marc Brysbaert. Wuggy: A multilingual pseudoword generator. *Behavior Research Methods*, 42(3):627–633, 2010.
- [71] Sachiko Kinoshita. The nature of masked onset priming effects in naming: A review. In *Masked Priming: The State of the Art*, chapter 8, pages 123–132. Psychology Press, 2003.
- [72] Scott Kirkpatrick, Daniel Gelatt, and Mario Vecchi. Optimization by simulated annealing. *Science*, 220(4598):671–680, 1983.
- [73] Marijn Koolen, Frans Adriaans, Jaap Kamps, and Maarten de Rijke. A cross-language approach to historic document retrieval. In *ECIR 2006: Proceedings of the 28th European Conference on IR Research*, pages 407–419. Springer, 2006.
- [74] Ian Korf, Mark Yandell, and Joseph Bedell. *BLAST: an essential guide to the Basic Local Alignment Search Tool*. O'Reilly, 2003.
- [75] Kiran Kumar and Pandu Rangan. A linear space algorithm for the LCS problem. *Acta Informatica*, 24:353–362, 1987.
- [76] Tak-Wah Lam, Wing-Kin Sung, and Swee-Seong Wong. Improved approximate string matching using compressed suffix data structures. *Algorithmica*, 51:298–314, 2008.
- [77] Pascale Larigauderie, Daniel Gaonac'h, and Natasha Lacroix. Working memory and error detection in texts: What are the roles of the central executive and the phonological loop? *Applied Cognitive Psychology*, 12(5):505–527, 1998.
- [78] Antoine Laurent, Sylvain Meignier, and Paul Deléglise. Improving recognition of proper nouns in asr through generating and filtering phonetic transcriptions. *Computer Speech & Language*, 2014.

- [79] Jure Leskovec, Jon Kleinberg, and Christos Faloutsos. Graphs over time: densification laws, shrinking diameters and possible explanations. In *KDD '05: Proceedings of the eleventh ACM SIGKDD international conference on Knowledge discovery in data mining*, pages 177–187. ACM, 2005.
- [80] Vladimir Levenshtein. Binary codes capable of correcting deletions, insertions, and reversals. *Soviet Physics Doklady*, 10(8):707–710, 1966.
- [81] David Liben-Nowell and Jon Kleinberg. The link-prediction problem for social networks. *Journal of the American Society for Information Science and Technology*, 58:1019–1031, 2007.
- [82] Susan Lima and Alexander Pollatsek. Lexical access via an orthographic code? The basic orthographic syllabic structure (BOSS) reconsidered. *Journal Of Verbal Learning and Verbal Behavior*, 22:310–332, 1983.
- [83] Paul Longley, Richard Webber, and Daryl Lloyd. The quantitative analysis of family names: Historic migration and the present day neighborhood structure of Middlesbrough, United Kingdom. *Annals of the Association of American Geographers*, 97(1):31–48, 2007.
- [84] Robert Luce. *Response Times: Their Role in Inferring Elementary Mental Organization*, volume 8. Oxford University Press, 1986.
- [85] Jayant Madhavan, Philip Bernstein, AnHai Doan, and Alon Halevy. Corpus-based schema matching. In *Proceedings of the 21st IEEE International Conference on Data Engineering*, pages 57–68, 2005.
- [86] Andrew McCallum, Kamal Nigam, and Lyle Ungar. Efficient clustering of high-dimensional data sets with application to reference matching. In *Proceedings of the Sixth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, KDD '00, pages 169–178. ACM, 2000.
- [87] Howard Morgan. Spelling correction in systems programs. *Communications of the ACM*, 13(2):90–94, 1970.
- [88] Gonzalo Navarro. A guided tour to approximate string matching. *ACM Computing Surveys*, 33:31–88, 2001.
- [89] Gonzalo Navarro and Ricardo Baeza-Yates. A new indexing method for approximate string matching. In *CPM '99: Proceedings of the 10th Annual Symposium on Combinatorial Pattern Matching*, pages 163–185. Springer-Verlag, 1999.

- [90] Gonzalo Navarro, Erkki Sutinen, and Jorma Tarhio. Indexing text with approximate q-grams. *Journal of Discrete Algorithms*, 3:157–175, 2005.
- [91] Joshua O’Madadhain, Jon Hutchins, and Padhraic Smyth. Prediction and ranking algorithms for event-based network data. *SIGKDD Explorations Newsletter*, 7:23–30, 2005.
- [92] Jose Oncina and Marc Sebban. Learning stochastic edit distance: Application in handwritten character recognition. *Pattern Recognition*, 39(9):1575–1587, 2006.
- [93] Maarten Oosten. *Verleden namen, Familieverbanden uit Genlias–data*. Master thesis, Universiteit Leiden, 2008.
- [94] Evan Palmer, Todd Horowitz, Antonio Torralba, and Jeremy Wolfe. What are the shapes of response time distributions in visual search? *Journal of Experimental Psychology: Human Perception and Performance*, 37(1):58–71, 2011.
- [95] Ulrich Pfeifer, Thomas Poersch, and Norbert Fuhr. Retrieval effectiveness of proper name search methods. *Information Processing & Management*, 32:667–679, 1996.
- [96] Maura Pilotti, Martin Chodorow, Ian Agpawa, Marta Krajnick, and Salif Mahamane. Proofreading for word errors. *Perceptual and Motor Skills*, 114(2):641–664, 2012.
- [97] Jakub Piskorski, Marcin Sydow, and Anna Kupśc. Lemmatization of Polish person names. In *Proceedings of the Workshop on Balto-Slavonic Natural Language Processing: Information Extraction and Enabling Technologies*, pages 27–34. Association for Computational Linguistics, 2007.
- [98] Burdette Pixton and Christophe Giraud-Carrier. MAL4:6 - using data mining for record linkage. In *Proceedings of the 5th Annual Workshop on Technology for Family History and Genealogical Research*. FamilySearch, 2005.
- [99] Joseph Pollock and Antonio Zamora. Automatic spelling correction in scientific and scholarly text. *Communications of the ACM*, 27:358–368, 1984.
- [100] Martin Porter. An algorithm for suffix stripping. *Program*, 14(3):130–137, 1980.
- [101] Bruno Pouliquen, Ralf Steinberger, Camelia Ignat, Irina Temnikova, Anna Widiger, Wajdi Zaghouani, and Jan Žížka. Multilingual person name recognition and transliteration. *CORELA-COgnition, REpresentation, LAnguage, Poitiers, France: CERLICO*, 3(3), 2005.

- [102] Dallan Quass and Paul Starkey. Record linkage for genealogical databases. In *KDD-2003 Workshop on Data Cleaning, Record Linkage, and Object Consolidation*, pages 40–42, 2003.
- [103] Kathleen Rastle, Matthew Davis, and Boris New. The broth in my brothers brothel: Morpho-orthographic segmentation in visual word recognition. *Psychonomic Bulletin & Review*, 11(6):1090–1098, 2004.
- [104] Roger Ratcliff. Methods for dealing with reaction time outliers. *Psychological Bulletin*, 114(3):510–532, 1993.
- [105] Eric Sven Ristad and Peter Yianilos. Learning string-edit distance. *Transactions on Pattern Analysis and Machine Intelligence*, 20(5):522–532, 1998.
- [106] C.C. Robusto. The cosine-haversine formula. *The American Mathematical Monthly*, 64(1):38–40, 1957.
- [107] Robert Russell. Index. US Patent 1261167, 1918.
- [108] Sunita Sarawagi and Anuradha Bhamidipaty. Interactive deduplication using active learning. In *Proceedings of the Eighth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pages 269–278. ACM, 2002.
- [109] Johannes van der Schaar and Doreen Gerritzen (ed). *Prisma voornamen*. Het Spectrum, 2000.
- [110] Theresa Scharl and Friedrich Leisch. The stochastic QT-Clust algorithm: Evaluation of stability and variance on timecourse microarray data. In *Compstat 2006: Proceedings in Computational Statistics 17th Symposium*, pages 1015–1022. Physica-Verlag, 2006.
- [111] Helmut Schmid. Probabilistic part-of-speech tagging using decision trees. In *Proceedings of the International Conference on New Methods in Language Processing*, pages 44–49, 1994.
- [112] Patrick Schone, Chris Cummings, Stuart Davey, Michael Jones, Barry Nay, and Mark Ward. Comprehensive evaluation of name matching across historic and linguistic boundaries. In *Proceedings of the 12th Annual Family History Technology Workshop*. FamilySearch, 2012.
- [113] Marijn Schraagen. Complete coverage for approximate string matching in record linkage using bit vectors. In *23rd IEEE International Conference on Tools with Artificial Intelligence*, pages 740–747. IEEE, 2011.

- [114] Marijn Schraagen and Hendrik Jan Hoogenboom. Predicting record linkage potential in a family reconstruction graph. In *Proceedings of the 23rd Benelux Conference on Artificial Intelligence*, pages 199–206, 2011.
- [115] Marijn Schraagen and Dionysius Huijsmans. Comparison between historical population archives and decentralized databases. In *7th Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities*, pages 20–28. ACL, 2013.
- [116] Marijn Schraagen and Walter Kosters. Data-driven name reduction for record linkage. In *Second International Conference on Innovative Computing Technology*, pages 311–316. IEEE, 2012.
- [117] Marijn Schraagen and Walter Kosters. Record linkage using graph consistency. In *10th International Conference on Machine Learning and Data Mining*, 2014.
- [118] Marijn Schraagen and Niels O. Schiller. Lexical decision for proper names. *In preparation*, 2014.
- [119] Carlo Semenza. Naming with proper names: The left temporal pole theory. *Behavioural Neurology*, 24:277–284, 2011.
- [120] Burr Settles. Active learning literature survey. Computer Sciences Technical Report 1648, University of Wisconsin–Madison, 2009.
- [121] Gilberto Silva and Claudia Oliveira. A lexicon-based stemming procedure. In *Computational Processing of the Portuguese Language*, pages 159–166. Springer, 2003.
- [122] Mark Skolnick, Luca Cavalli-Sforza, Antonio Moroni, and Enzo Siri. A preliminary analysis of the genealogy of Parma Valley, Italy. *Journal of Human Evolution*, 5(1):95–115, 1976.
- [123] Matthew Smith and Christophe Giraud-Carrier. Genealogical implicit affinity network. In *Proceedings of the 6th Annual Family History Technology Workshop*. FamilySearch, 2006.
- [124] Chakkrit Snae. A comparison and analysis of name matching algorithms. *International Journal of Applied Science. Engineering and Technology*, 4(1):252–257, 2007.

- [125] Cary Sweet, Tansel Özyer, and Reda Alhajj. Enhanced graph based genealogical record linkage. In *ADMA '07: Proceedings of the 3rd International Conference on Advanced Data Mining and Applications*, pages 476–487. Springer-Verlag, 2007.
- [126] Marcus Taft. Lexical access via an orthographic code: The basic orthographic syllabic structure (BOSS). *Journal Of Verbal Learning and Verbal Behavior*, 18:21–39, 1979.
- [127] Cyprien Tanguay. *Dictionnaire généalogique des familles canadiennes depuis la fondation de la colonie jusqu'à nos jours*. E. Senécal, 1871.
- [128] Peter Verthez. The Gedcom parser library. <http://gedcom-parse.sourceforge.net/>, 2004.
- [129] Timothy de Vries, Hui Ke, Sanjay Chawla, and Peter Christen. Robust record linkage blocking using suffix arrays. In *CIKM '09: Proceedings of the 18th ACM Conference on Information and Knowledge Management*, pages 305–314. ACM, 2009.
- [130] Tor Wager, K. Luan Phan, Israel Liberzon, and Stephan Taylor. Valence, gender, and lateralization of functional brain anatomy in emotion: a meta-analysis of findings from neuroimaging. *NeuroImage*, 19:513–531, 2003.
- [131] Robert Wagner and Michael Fischer. The string-to-string correction problem. *Journal of the ACM*, 21:168–173, 1974.
- [132] Holger Wandt and Vincent van Hunnik. High precision matching at the heart of master data management. Whitepaper, Human Inference, 2013.
- [133] D. Randall Wilson. Graph-based remerging of genealogical databases. In *Proceedings of the 1st Annual Family History Technology Workshop*. FamilySearch, 2001.
- [134] D. Randall Wilson. Genealogical record linkage: Features for automated person matching. In *Proceedings of RootsTech 2011*, pages 331–340. FamilySearch, 2011.
- [135] Ian Winchester. The linkage of historical records by man and computer: Techniques and problems. *The Journal of Interdisciplinary History*, 1(1):107–124, 1970.

- 
- [136] William Winkler. String comparator metrics and enhanced decision rules in the Felligi-Sunter model of record linkage. In *Proceedings of the Section on Survey Research Methods*, pages 354–359. American Statistical Association, 1990.
  - [137] William Winkler. Overview of record linkage and current research directions. Technical report, U.S. Census Bureau, 2006.
  - [138] Jacqueline Wood. Social cognition and the prefrontal cortex. *Behavioral and Cognitive Neuroscience Reviews*, 2(2):97–114, 2003.
  - [139] Scott Woodfield. Effective sharing of family history information. In *Proceedings of the 12th Annual Family History Technology Workshop*. FamilySearch, 2012.
  - [140] Sun Wu and Udi Manber. A fast algorithm for multi-pattern searching. Technical report, Department of Computer Science, University of Arizona, 1994.
  - [141] Stéphane Zampelli, Yves Deville, and Pierre Dupont. Declarative approximate graph matching using a constraint approach. In *Proceedings of the Second International Workshop on Constraint Propagation and Implementation*, pages 109–124, 2005.
  - [142] Ivo Zandhuis. Towards a genealogical ontology for the semantic web. In *Humanities, Computers and Cultural Heritage: Proceedings of the XVI international conference of the Association for History and Computing*, pages 296–300, 2005.
  - [143] Vivienne Zhu, Marc Overhage, James Egg, Stephen Downs, and Shaun Graninis. An empiric modification to the probabilistic record linkage algorithm using frequency-based weight scaling. *Journal of the American Medical Informatics Association*, 16(5):738–745, 2009.
  - [144] Justin Zobel and Philip Dart. Phonetic string matching: Lessons from information retrieval. In *Proceedings of the 19th annual international ACM SIGIR conference on Research and development in information retrieval*, pages 166–172. ACM, 1996.

## Appendix A

# List of stimuli used in the Lexical Decision experiment

This Appendix contains the set of stimuli used in the cognitive experiment described in Chapter 9.

<i>prime</i>		<i>target</i>	
common suffix	uncommon suffix	name	frequency
High frequency names			
Hohuizen	Horieven	Homan	2105
Dijker	Dijkam	Dijkstra	14492
Spoelhuis	Spoelries	Spoelstra	1166
Nije	Nijo	Nijhof	3322
Maashout	Maaskaan	Maassen	2023
Barnestra	Barnesco	Barneveld	2281
Deurhof	Deurtis	Deursen	2017
Bruger	Brugam	Brugge	1518
Pijpsen	Pijpket	Pijper	1603
Damen	Damis	Damme	1797
Bleekveld	Bleeksert	Bleeker	2048
Moerma	Moerko	Moerland	760
Veenhout	Veenkaan	Veenhuizen	578
Hengeen	Hengeis	Hengeveld	1391
Lindland	Lindgars	Lindhout	682

<i>prime</i>		<i>target</i>	
common suffix	uncommon suffix	name	frequency
Berender	Berendam	Berendsen	3374
Schoutstra	Schoutscho	Schouten	11137
Hofhuis	Hofries	Hofland	1066
Lieshuizen	Liesrieven	Lieshout	3669
Scma	Scko	Schout	980
Westerveld	Westersert	Westerhof	2406
Dijkma	Dijkko	Dijkhuizen	1557
Kerkhout	Kerkkaan	Kerkhof	4561
Klundman	Klundbor	Klunder	1389
Tuinland	Tuingars	Tuinstra	1050
Hoeksestra	Hoeksесcho	Hoeksema	1435
Rutveld	Rutsert	Rutten	4810
Veldhof	Veldtis	Veldman	3841
Beekman	Beekbor	Beekhuizen	417
Wijnman	Wijnbor	Wijnen	4443
Joostma	Joostko	Joosten	5160
Rietland	Rietgars	Rietveld	4046
Beekhof	Beektis	Beekman	3132
Korthuis	Kortries	Korte	1886
Broeker	Broekam	Broekhuizen	2310
Zandhout	Zandkaan	Zande	1668
Velte	Velto	Velthuizen	708
Langehout	Langekaan	Langeveld	1023
Janssen	Jansket	Jansen	54540
Kooijhuizen	Kooijrieven	Kooijman	3527
Oosterhuis	Oosterries	Oosterhof	2024
Boersman	Boersbor	Boersma	4347
Zantland	Zantgars	Zanten	3754
Endstra	Endscho	Ende	2711
Hofveld	Hofsert	Hofstra	1421
Nijland	Nijgars	Nijhuis	3837
Kleinsen	Kleincket	Kleine	1356
Oosterhuis	Oosterries	Oosterveld	1324
Zijlhuizen	Zijlrieven	Zijlstra	4614
Blokstra	Blokscho	Blokland	1778
Nieuwenhof	Nieuwentis	Nieuwenhuizen	2224
Kolkhout	Kolkkaan	Kolkman	1930
Buitenhout	Buitenkaan	Buitenhuis	1767
Nieuwveld	Nieuwsert	Nieuwland	1560

<i>prime</i>		<i>target</i>	
common suffix	uncommon suffix	name	frequency
Wiersveld	Wierssert	Wiersma	3476
Nijen	Nijjis	Nijland	4709
Brandshuis	Brandsries	Brandsma	1340
Bultma	Bultko	Bulthuis	1169
Berker	Berkam	Berkhof	865
Kuijphof	Kuijptis	Kuijper	3573
Jansen	Jansis	Jansma	1662
Terpman	Terpbör	Terpstra	3159
Veensen	Veenket	Veenstra	7706
Zuideland	Zuidegars	Zuidema	2760
Drieshuizen	Driesrieven	Driessen	6234
Veldveld	Veldsert	Veldhuizen	3754
Zonnee	Zonneo	Zonneveld	1621
Grootstra	Grootscho	Groothuis	1624
Voortman	Voortbor	Voorthuizen	538
Damhout	Damkaan	Damen	3470
Bakhuis	Bakries	Bakker	45817
Stegee	Stegeo	Stegeman	2923
Dijken	Dijkis	Dijkhuis	1495
Kruitma	Kruitko	Kruithof	1571
Olten	Oltis	Olthof	2171
Janshuis	Jansries	Janssen	39535
Harme	Harmo	Harmsen	4196
Dijkland	Dijkgars	Dijke	1393
Hooger	Hoogam	Hoogland	2566
Miedeer	Miedeam	Miedema	2093
Oosterer	Oosteram	Oosterhout	1788
Gerriten	Gerritis	Gerritsen	9467
Meijhuizen	Meijrieven	Meijer	26607
Cornelisveld	Cornelissert	Cornelissen	5073
Woltman	Woltbor	Wolthuis	1628
Westerhof	Westertis	Westerveld	1951
Woudhof	Woudtis	Woudstra	1525
Broekhuizen	Broekrieven	Broekhuis	1772
Brinken	Brinkis	Brinkman	4122
Slingersen	Slingerket	Slingerland	1154
Hulssen	Hulsket	Hulshof	1720
Hoper	Hopam	Hopman	1927
Posthusen	Posthuket	Posthuma	1158

<i>prime</i>		<i>target</i>	
common suffix	uncommon suffix	name	frequency
Groenesen	Groeneket	Groeneveld	5738
Mulden	Muldis	Mulder	28864
Korvhof	Kortvitis	Korver	1906
Elsstra	Elsscho	Elshout	845
Veldma	Veldko	Velde	9330
Velde	Veldo	Veldhuis	4255
Stipe	Stipo	Stiphout	1248
Oosthuis	Oostries	Oosten	3612
Loenveld	Loensert	Loenhout	682
Holhuizen	Holrieven	Holland	857
Boekman	Boekbor	Boekhout	632
Low frequency names			
Arnsman	Arnsbor	Arnshuis	1
Panderma	Panderko	Panderen	1
Lindeer	Lindeam	Lindehout	1
Gilland	Gilgars	Gillstra	1
Zuikersen	Zuikerket	Zuikerland	1
Kruisstra	Kruisscho	Kruisma	1
Rietzere	Rietzero	Rietzerveld	1
Grooser	Groosam	Grooshuizen	1
Srenhuis	Srenries	Srensen	-1
Marzelisland	Marzelisgars	Marzelissen	1
Kuikeer	Kuikeam	Kuikestra	1
Buetstra	Buetscho	Buetveld	1
Hogehuizen	Hogerieveen	Hogehout	1
Akkersveld	Akkerssert	Akkershuis	1
Cije	Cijo	Cijhof	1
Schuurhuizen	Schuurrieven	Schuurma	1
Soomerhout	Soomerkaan	Soomerveld	1
Staverland	Stavergars	Stavere	1
Stijgsen	Stijgket	Stijgstra	1
Othof	Ottis	Othuis	1
Huningstra	Huningscho	Huninge	1
Capteinman	Capteinbor	Capteinnen	1
Brondhuis	Brondries	Brondveld	1
Peltsen	Peltket	Pelthuizen	1
Zaalhuizen	Zaalrieven	Zaalhof	1
Sanden	Sandis	Sandhuizen	1
Randsen	Randket	Randhout	1

<i>prime</i>		<i>target</i>	
common suffix	uncommon suffix	name	frequency
Thesselman	Thesselbor	Thesselhof	1
Cighuis	Cigries	Ciggen	1
Rodenma	Rodenko	Rodenhuizen	1
Vaalte	Vaalto	Vaalthuis	1
Zouten	Zoutis	Zouthout	1
Kwinkelhof	Kwinkeltis	Kwinkelen	1
Ietszeen	Ietszeis	Ietszema	1
Beunisstra	Beunisscho	Beunissen	1
Jagerland	Jagergars	Jagere	1
Weuseveld	Weusesert	Weuseman	1
Laakveld	Laaksert	Laakhuizen	1
Wagtland	Wagtgars	Wagtveld	1
Reynehof	Reynetis	Reyneveld	1
Coenderer	Coenderam	Coenderman	1
Deine	Deino	Deinman	1
Rysstra	Rysscho	Rysman	1
Klikveld	Kliksert	Klikland	1
Pichelhout	Pichelkaan	Pichelen	1
Gulen	Gulis	Gulland	1
Kijlshout	Kijlskaan	Kijlsma	1
Bunslsen	Bunsket	Bunsler	1
Hoftstra	Hoftscho	Hofter	1
Wolveld	Wolsert	Wolstra	1
Manninkland	Manninkgars	Manninkhof	1
Tileer	Tileam	Tilema	1
Engenhout	Engenkaan	Engenhof	1
Toveerikhout	Toveerikkaan	Toveeriksen	1
Lenie	Lenio	Lenisen	1
Krijger	Krijgam	Krijghuis	1
Dunschutman	Dunschutbor	Dunschutte	1
Weckstra	Weckscho	Weckhout	1
Biestsen	Biestket	Biesthuis	1
Mijlma	Mijlko	Mijlhof	1
Nichtsen	Nichtket	Nichte	1
Boerland	Boergars	Boerhuizen	1
Haanderland	Haandergars	Haanderen	1
Menkeland	Menkegars	Menkeman	1
Boersteke	Boersteko	Boersteker	1
Sjeddesen	Sjeddeket	Sjeddema	1

<i>prime</i>		<i>target</i>	
common suffix	uncommon suffix	name	frequency
Ovene	Oveno	Ovenveld	1
Neyshuis	Neysries	Neyssen	1
Overhout	Overkaan	Overre	1
Werdhuizen	Werdrieven	Werder	1
Heijderman	Heijderbor	Heijderveld	1
Vouwhuis	Vouwries	Vouwland	1
Louwerisma	Louwerisko	Louwerissen	1
Coema	Coeko	Coehuis	1
Wilema	Wileko	Wilesen	1
Droshof	Drostis	Droshout	1
Nugerhuizen	Nugerrieven	Nugerman	1
Eizeren	Eizerket	Eizeren	1
Ribbenen	Ribbenis	Ribbenhuis	1
Pipelinghuis	Pipelingries	Pipelinghuizen	1
Tielma	Tielko	Tielland	1
Oldehane	Oldehano	Oldehanen	1
Eenuhuistout	Eenuhiskaan	Eenuhuisstra	1
Feidshuis	Feidsries	Feidsma	1
Seusveld	Seussert	Seusser	1
Schelderhof	Scheldertis	Schelderman	1
Wertstra	Wertscho	Wertland	1
Jalveld	Jalsert	Jalma	1
Banma	Banko	Banhout	1
Steenihout	Steenikaan	Steeniman	1
Dithout	Ditkaan	Dithuizen	1
Raeshuizen	Raesrieven	Raesland	1
Veerland	Veergars	Veerhof	1
Kloedhuizen	Kloedrieven	Kloedstra	1
Eekman	Eekbor	Eekstra	1
Cijkman	Cijkbor	Cijkhout	1
Graffeier	Graffeiam	Graffeiland	1
Senzen	Senzis	Senzer	1
Fodman	Fodbor	Fodde	1
Neizhof	Neitzis	Neizer	1
Mettinstra	Mettinscho	Mettinhof	1
Capilma	Capilkko	Capille	1
Grauwen	Grauwis	Grauwstra	1
Riefhuis	Riefries	Rieffer	1

## Appendix B

# IPA Dissertation Series

### Titles in the IPA Dissertation Series since 2008

**W. Pieters.** *La Volonté Machinale: Understanding the Electronic Voting Controversy.* Faculty of Science, Mathematics and Computer Science, RU. 2008-01

**A.L. de Groot.** *Practical Automation Proofs in PVS.* Faculty of Science, Mathematics and Computer Science, RU. 2008-02

**M. Bruntink.** *Renovation of Idiomatic Crosscutting Concerns in Embedded Systems.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2008-03

**A.M. Marin.** *An Integrated System to Manage Crosscutting Concerns in Source Code.* Faculty of Electrical Engineer-

ing, Mathematics, and Computer Science, TUD. 2008-04

**N.C.W.M. Braspenning.** *Model-based Integration and Testing of High-tech Multi-disciplinary Systems.* Faculty of Mechanical Engineering, TU/e. 2008-05

**M. Bravenboer.** *Exercises in Free Syntax: Syntax Definition, Parsing, and Assimilation of Language Conglomerates.* Faculty of Science, UU. 2008-06

**M. Torabi Dashti.** *Keeping Fairness Alive: Design and Formal Verification of Optimistic Fair Exchange Protocols.* Faculty of Sciences, Division of Mathematics and Computer Science, VUA. 2008-07

**I.S.M. de Jong.** *Integration and Test Strategies for Complex Manufacturing Machines.* Faculty of Mechanical Engineering, TU/e. 2008-08

**I. Hasuo.** *Tracing Anonymity with Coalgebras.* Faculty of Science, Mathematics and Computer Science, RU. 2008-09

**L.G.W.A. Cleophas.** *Tree Algorithms: Two Taxonomies and a Toolkit.* Faculty of Mathematics and Computer Science, TU/e. 2008-10

**I.S. Zapreev.** *Model Checking Markov Chains: Techniques and Tools.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-11

**M. Farshi.** *A Theoretical and Experimental Study of Geometric Networks.* Faculty of Mathematics and Computer Science, TU/e. 2008-12

**G. Gulesir.** *Evolvable Behavior Specifications Using Context-Sensitive Wildcards.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-13

**F.D. Garcia.** *Formal and Computational Cryptography: Protocols, Hashes and Commitments.* Faculty of Science, Mathematics and Computer Science, RU. 2008-14

**P. E. A. Dürr.** *Resource-based Verification for Robust Composition of Aspects.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-15

**E.M. Bortnik.** *Formal Methods in Support of SMC Design.* Faculty of Mechanical Engineering, TU/e. 2008-16

**R.H. Mak.** *Design and Performance Analysis of Data-Independent Stream Processing Systems.* Faculty of Mathematics and Computer Science, TU/e. 2008-17

**M. van der Horst.** *Scalable Block Processing Algorithms.* Faculty of Mathematics and Computer Science, TU/e. 2008-18

**C.M. Gray.** *Algorithms for Fat Objects: Decompositions and Applications.* Faculty of Mathematics and Computer Science, TU/e. 2008-19

**J.R. Calamé.** *Testing Reactive Systems with Data - Enumerative Methods and Constraint Solving.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-20

**E. Mumford.** *Drawing Graphs for Cartographic Applications.* Faculty of Mathematics and Computer Science, TU/e. 2008-21

**E.H. de Graaf.** *Mining Semi-structured Data, Theoretical and Experimental Aspects of Pattern Evaluation.* Faculty of Mathematics and Natural Sciences, UL. 2008-22

**R. Brijder.** *Models of Natural Computation: Gene Assembly and Membrane Systems.* Faculty of Mathematics and Natural Sciences, UL. 2008-23

**A. Koprowski.** *Termination of Rewriting and Its Certification.* Faculty of Mathematics and Computer Science, TU/e. 2008-24

**U. Khadim.** *Process Algebras for Hybrid Systems: Comparison and Development.* Faculty of Mathematics and Computer Science, TU/e. 2008-25

**J. Markovski.** *Real and Stochastic Time in Process Algebras for Performance Evaluation.* Faculty of Mathematics and Computer Science, TU/e. 2008-26

**H. Kastenberg.** *Graph-Based Software Specification and Verification.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-27

**I.R. Buhan.** *Cryptographic Keys from Noisy Data Theory and Applications.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-28

**R.S. Marin-Perianu.** *Wireless Sensor Networks in Motion: Clustering Algorithms for Service Discovery and Provisioning.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2008-29

**M.H.G. Verhoef.** *Modeling and Validating Distributed Embedded Real-Time Control Systems.* Faculty of Science, Mathematics and Computer Science, RU. 2009-01

**M. de Mol.** *Reasoning about Functional Programs: Sparkle, a proof assistant for Clean.* Faculty of Science, Mathematics and Computer Science, RU. 2009-02

**M. Lormans.** *Managing Requirements Evolution.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2009-03

**M.P.W.J. van Osch.** *Automated Model-based Testing of Hybrid Systems.* Faculty of Mathematics and Computer Science, TU/e. 2009-04

**H. Sozer.** *Architecting Fault-Tolerant Software Systems.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2009-05

**M.J. van Weerdenburg.** *Efficient Rewriting Techniques.* Faculty of Mathematics and Computer Science, TU/e. 2009-06

**H.H. Hansen.** *Coalgebraic Modelling: Applications in Automata Theory and Modal Logic.* Faculty of Sciences, Division of Mathematics and Computer Science, VUA. 2009-07

**A. Mesbah.** *Analysis and Testing of Ajax-based Single-page Web Applications.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2009-08

**A.L. Rodriguez Yakushev.** *Towards Getting Generic Programming Ready for Prime Time.* Faculty of Science, UU. 2009-9

**K.R. Olmos Joffré.** *Strategies for Context Sensitive Program Transformation.* Faculty of Science, UU. 2009-10

**J.A.G.M. van den Berg.** *Reasoning about Java programs in PVS using JML.* Faculty of Science, Mathematics and Computer Science, RU. 2009-11

**M.G. Khatib.** *MEMS-Based Storage Devices. Integration in Energy-Constrained Mobile Systems.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2009-12

**S.G.M. Cornelissen.** *Evaluating Dynamic Analysis Techniques for Program Comprehension.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2009-13

**D. Bolzoni.** *Revisiting Anomaly-based Network Intrusion Detection Systems.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2009-14

**H.L. Jonker.** *Security Matters: Privacy in Voting and Fairness in Digital Exchange.* Faculty of Mathematics and Computer Science, TU/e. 2009-15

**M.R. Cenko.** *TuLiP - Reshaping Trust Management.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2009-16

**T. Chen.** *Clocks, Dice and Processes.* Faculty of Sciences, Division of Mathematics and Computer Science, VUA. 2009-17

**C. Kaliszyk.** *Correctness and Availability: Building Computer Algebra on top of Proof Assistants and making Proof Assistants available over the Web.* Faculty of Science, Mathematics and Computer Science, RU. 2009-18

**R.S.S. O'Connor.** *Incompleteness & Completeness: Formalizing Logic and Analysis in Type Theory.* Faculty of Science, Mathematics and Computer Science, RU. 2009-19

**B. Ploeger.** *Improved Verification Methods for Concurrent Systems.* Faculty

of Mathematics and Computer Science,  
TU/e. 2009-20

**T. Han.** *Diagnosis, Synthesis and Analysis of Probabilistic Models.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2009-21

**R. Li.** *Mixed-Integer Evolution Strategies for Parameter Optimization and Their Applications to Medical Image Analysis.* Faculty of Mathematics and Natural Sciences, UL. 2009-22

**J.H.P. Kwisthout.** *The Computational Complexity of Probabilistic Networks.* Faculty of Science, UU. 2009-23

**T.K. Cox.** *Algorithmic Tools for Data-Oriented Law Enforcement.* Faculty of Mathematics and Natural Sciences, UL. 2009-24

**A.I. Baars.** *Embedded Compilers.* Faculty of Science, UU. 2009-25

**M.A.C. Dekker.** *Flexible Access Control for Dynamic Collaborative Environments.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2009-26

**J.F.J. Laros.** *Metrics and Visualisation for Crime Analysis and Genomics.* Faculty of Mathematics and Natural Sciences, UL. 2009-27

**C.J. Boogerd.** *Focusing Automatic Code Inspections.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2010-01

**M.R. Neuhäußer.** *Model Checking Non-deterministic and Randomly Timed Systems.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2010-02

**J. Endrullis.** *Termination and Productivity.* Faculty of Sciences, Division of Mathematics and Computer Science, VUA. 2010-03

**T. Staijen.** *Graph-Based Specification and Verification for Aspect-Oriented Languages.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2010-04

**Y. Wang.** *Epistemic Modelling and Protocol Dynamics.* Faculty of Science, UvA. 2010-05

**J.K. Berendsen.** *Abstraction, Prices and Probability in Model Checking Timed Automata.* Faculty of Science, Mathematics and Computer Science, RU. 2010-06

**A. Nugroho.** *The Effects of UML Modeling on the Quality of Software.* Faculty of Mathematics and Natural Sciences, UL. 2010-07

**A. Silva.** *Kleene Coalgebra.* Faculty of Science, Mathematics and Computer Science, RU. 2010-08

**J.S. de Bruin.** *Service-Oriented Discovery of Knowledge - Foundations, Implementations and Applications.* Faculty of Mathematics and Natural Sciences, UL. 2010-09

**D. Costa.** *Formal Models for Component Connectors.* Faculty of Sciences, Division of Mathematics and Computer Science, VUA. 2010-10

**M.M. Jaghoori.** *Time at Your Service: Schedulability Analysis of Real-Time and Distributed Services.* Faculty of Mathematics and Natural Sciences, UL. 2010-11

**R. Bakhshi.** *Gossiping Models: Formal Analysis of Epidemic Protocols.* Faculty of Sciences, Department of Computer Science, VUA. 2011-01

**B.J. Arnoldus.** *An Illumination of the Template Enigma: Software Code Generation with Templates.* Faculty of Mathematics and Computer Science, TU/e. 2011-02

**E. Zambon.** *Towards Optimal IT Availability Planning: Methods and Tools.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2011-03

**L. Astefanoaei.** *An Executable Theory of Multi-Agent Systems Refinement.* Faculty of Mathematics and Natural Sciences, UL. 2011-04

**J. Proen  a.** *Synchronous coordination of distributed components.* Faculty of Mathematics and Natural Sciences, UL. 2011-05

**A. Morali.** *IT Architecture-Based Confidentiality Risk Assessment in Networks of Organizations.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2011-06

**M. van der Bijl.** *On changing models in Model-Based Testing.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2011-07

**C. Krause.** *Reconfigurable Component Connectors.* Faculty of Mathematics and Natural Sciences, UL. 2011-08

**M.E. Andr  s.** *Quantitative Analysis of Information Leakage in Probabilistic and Nondeterministic Systems.* Faculty of Science, Mathematics and Computer Science, RU. 2011-09

**M. Atif.** *Formal Modeling and Verification of Distributed Failure Detectors.* Faculty of Mathematics and Computer Science, TU/e. 2011-10

**P.J.A. van Tilburg.** *From Computability to Executability – A process-theoretic view on automata theory.* Faculty of Mathematics and Computer Science, TU/e. 2011-11

**Z. Protic.** *Configuration management for models: Generic methods for model comparison and model co-evolution.* Faculty of Mathematics and Computer Science, TU/e. 2011-12

**S. Georgievska.** *Probability and Hiding in Concurrent Processes.* Faculty of Mathematics and Computer Science, TU/e. 2011-13

**S. Malakuti.** *Event Composition Model: Achieving Naturalness in Runtime Enforcement.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2011-14

**M. Raffelsieper.** *Cell Libraries and Verification.* Faculty of Mathematics and Computer Science, TU/e. 2011-15

**C.P. Tsiragiannis.** *Analysis of Flow and Visibility on Triangulated Terrains.* Faculty of Mathematics and Computer Science, TU/e. 2011-16

**Y.-J. Moon.** *Stochastic Models for Quality of Service of Component Connectors.* Faculty of Mathematics and Natural Sciences, UL. 2011-17

**R. Middelkoop.** *Capturing and Exploiting Abstract Views of States in OO Verification.* Faculty of Mathematics and Computer Science, TU/e. 2011-18

**M.F. van Amstel.** *Assessing and Improving the Quality of Model Transformations.* Faculty of Mathematics and Computer Science, TU/e. 2011-19

**A.N. Tamalet.** *Towards Correct Programs in Practice.* Faculty of Science, Mathematics and Computer Science, RU. 2011-20

**H.J.S. Basten.** *Ambiguity Detection for Programming Language Grammars.* Faculty of Science, UvA. 2011-21

**M. Izadi.** *Model Checking of Component Connectors.* Faculty of Mathematics and Natural Sciences, UL. 2011-22

**L.C.L. Kats.** *Building Blocks for Language Workbenches.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2011-23

**S. Kemper.** *Modelling and Analysis of Real-Time Coordination Patterns.* Faculty of Mathematics and Natural Sciences, UL. 2011-24

**J. Wang.** *Spiking Neural P Systems.* Faculty of Mathematics and Natural Sciences, UL. 2011-25

**A. Khosravi.** *Optimal Geometric Data Structures.* Faculty of Mathematics and Computer Science, TU/e. 2012-01

**A. Middelkoop.** *Inference of Program Properties with Attribute Grammars, Revisited.* Faculty of Science, UU. 2012-02

**Z. Hemel.** *Methods and Techniques for the Design and Implementation of Domain-Specific Languages.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2012-03

**T. Dimkov.** *Alignment of Organizational Security Policies: Theory and Practice.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2012-04

**S. Sedghi.** *Towards Provably Secure Efficiently Searchable Encryption.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2012-05

**F. Heidarian Dehkordi.** *Studies on Verification of Wireless Sensor Networks and Abstraction Learning for System Inference.* Faculty of Science, Mathematics and Computer Science, RU. 2012-06

**K. Verbeek.** *Algorithms for Cartographic Visualization.* Faculty of Mathematics and Computer Science, TU/e. 2012-07

**D.E. Nadales Agut.** *A Compositional Interchange Format for Hybrid Systems: Design and Implementation.* Faculty of Mechanical Engineering, TU/e. 2012-08

**H. Rahmani.** *Analysis of Protein-Protein Interaction Networks by Means of Annotated Graph Mining Algorithms.* Faculty of Mathematics and Natural Sciences, UL. 2012-09

**S.D. Vermolen.** *Software Language Evolution.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2012-10

**L.J.P. Engelen.** *From Napkin Sketches to Reliable Software.* Faculty of Mathematics and Computer Science, TU/e. 2012-11

**F.P.M. Stappers.** *Bridging Formal Models – An Engineering Perspective.* Faculty of Mathematics and Computer Science, TU/e. 2012-12

**W. Heijstek.** *Software Architecture Design in Global and Model-Centric Software Development.* Faculty of Mathematics and Natural Sciences, UL. 2012-13

**C. Kop.** *Higher Order Termination.* Faculty of Sciences, Department of Computer Science, VUA. 2012-14

**A. Osaiweran.** *Formal Development of Control Software in the Medical Systems Domain.* Faculty of Mathematics and Computer Science, TU/e. 2012-15

**W. Kuijper.** *Compositional Synthesis of Safety Controllers.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2012-16

**H. Beohar.** *Refinement of Communication and States in Models of Embedded Systems.* Faculty of Mathematics and Computer Science, TU/e. 2013-01

**G. Igna.** *Performance Analysis of Real-Time Task Systems using Timed Automata.* Faculty of Science, Mathematics and Computer Science, RU. 2013-02

**E. Zambon.** *Abstract Graph Transformation – Theory and Practice.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2013-03

**B. Lijnse.** *TOP to the Rescue – Task-Oriented Programming for Incident Response Applications.* Faculty of Science, Mathematics and Computer Science, RU. 2013-04

**G.T. de Koning Gans.** *Outsmarting Smart Cards.* Faculty of Science, Mathematics and Computer Science, RU. 2013-05

**M.S. Greiler.** *Test Suite Comprehension for Modular and Dynamic Systems.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2013-06

**L.E. Mamane.** *Interactive mathematical documents: creation and presentation.* Faculty of Science, Mathematics and Computer Science, RU. 2013-07

**M.M.H.P. van den Heuvel.** *Composition and synchronization of real-time components upon one processor.* Faculty of Mathematics and Computer Science, TU/e. 2013-08

**J. Businge.** *Co-evolution of the Eclipse Framework and its Third-party Plug-ins.* Faculty of Mathematics and Computer Science, TU/e. 2013-09

**S. van der Burg.** *A Reference Architecture for Distributed Software Deployment.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2013-10

**J.J.A. Keiren.** *Advanced Reduction Techniques for Model Checking.* Faculty of Mathematics and Computer Science, TU/e. 2013-11

**D.H.P. Gerrits.** *Pushing and Pulling: Computing push plans for disk-shaped*

*robots, and dynamic labelings for moving points.* Faculty of Mathematics and Computer Science, TU/e. 2013-12

**M. Timmer.** *Efficient Modelling, Generation and Analysis of Markov Automata.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2013-13

**M.J.M. Roeloffzen.** *Kinetic Data Structures in the Black-Box Model.* Faculty of Mathematics and Computer Science, TU/e. 2013-14

**L. Lensink.** *Applying Formal Methods in Software Development.* Faculty of Science, Mathematics and Computer Science, RU. 2013-15

**C. Tankink.** *Documentation and Formal Mathematics — Web Technology meets Proof Assistants.* Faculty of Science, Mathematics and Computer Science, RU. 2013-16

**C. de Gouw.** *Combining Monitoring with Run-time Assertion Checking.* Faculty of Mathematics and Natural Sciences, UL. 2013-17

**J. van den Bos.** *Gathering Evidence: Model-Driven Software Engineering in Automated Digital Forensics.* Faculty of Science, UvA. 2014-01

**D. Hadziosmanovic.** *The Process Matters: Cyber Security in Industrial Control Systems.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2014-02

**A.J.P. Jeckmans.** *Cryptographically-Enhanced Privacy for Recommender Systems.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2014-03

**C.-P. Bezemer.** *Performance Optimization of Multi-Tenant Software Systems.* Faculty of Electrical Engineering, Mathematics, and Computer Science, TUD. 2014-04

**T.M. Ngo.** *Qualitative and Quantitative Information Flow Analysis for Multi-threaded Programs.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2014-05

**A.W. Laarman.** *Scalable Multi-Core Model Checking.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2014-06

**J. Winter.** *Coalgebraic Characterizations of Automata-Theoretic Classes.* Faculty of Science, Mathematics and Computer Science, RU. 2014-07

**W. Meulemans.** *Similarity Measures and Algorithms for Cartographic*

*Schematization.* Faculty of Mathematics and Computer Science, TU/e. 2014-08

**A.F.E. Belinfante.** *JTorX: Exploring Model-Based Testing.* Faculty of Electrical Engineering, Mathematics & Computer Science, UT. 2014-09

**A.P. van der Meer.** *Domain Specific Languages and their Type Systems.* Faculty of Mathematics and Computer Science, TU/e. 2014-10

**B.N. Vasilescu.** *Social Aspects of Collaboration in Online Software Communities.* Faculty of Mathematics and Computer Science, TU/e. 2014-11

**F.D. Aarts.** *Tomte: Bridging the Gap between Active Learning and Real-World Systems.* Faculty of Science, Mathematics and Computer Science, RU. 2014-12

**N. Noroozi.** *Improving Input-Output Conformance Testing Theories.* Faculty of Mathematics and Computer Science, TU/e. 2014-13

**M. Helvensteijn.** *Abstract Delta Modeling: Software Product Lines and Beyond.* Faculty of Mathematics and Natural Sciences, UL. 2014-14

**P. Vullers.** *Efficient Implementations of Attribute-based Credentials on Smart Cards.* Faculty of Science, Mathematics and Computer Science, RU. 2014-15

**F.W. Takes.** *Algorithms for Analyzing and Mining Real-World Graphs.* Faculty of Mathematics and Natural Sciences, UL. 2014-16

**M.P. Schraagen.** *Aspects of Record Linkage.* Faculty of Mathematics and Natural Sciences, UL. 2014-17