

October 2, 2014

CURRICULUM VITAE FOR THOMAS TROELS HILDEBRANDT

Date of birth: Oct. 7th, 1972. *Nationality:* Danish.
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Education and Training Research Management Course at CBS (to be completed Nov 2014), PhD in Computer Science, University of Aarhus (Feb., 2000), MSc in Computer Science, University of Aarhus (May 1997). SHL course in Personal Management of Leadership (2002).

Positions

- 2012 – present: Independent consultant and employed as facilitator of VidenDanmark industry knowledge group on digitalization and process-orientation, www.videndanmark.dk/
- 2002 – present: Associate Professor, ITU, Theoretical CS Section
- Aug. – Oct. 2006, May – July 2010: Paternal leaves
- Oct. 2000 – 2002: Assistant Professor, ITU.
- Oct. 1999 – Oct. 2000: Post Doc (Resource Constrained Embedded Systems), ITU.
- Aug. 1995 – Aug. 1999: PhD Scholarship (Danish National Research Foundation), BRICS, Aarhus University.

Management positions

- Oct. 2012 – present: Member of the Management Committee and head of WG4 (Tools and applications) of EU, ICT COST Action IC1201 *Behavioural Types for Reliable Large-Scale Software Systems* (BETTY)
- Mar. 2012 – present: Head of Process and System Models Group, ITU. www.itu.dk/research/models
- Oct. 2012 – present: Board Member at ITU

- 2010 – present : Initiator and facilitator of national interest group for *Processes and IT* within the InfinIT (www.infinitt.dk) innovation network, having 248 members by Oct 31, 2012.
- 2002 – present: Member of Programming, Logic and Semantics Group
- 2004 – 2011: Director of the International Research School on Foundations for Innovative Research Based Software Technologies (FIRST, www.itu.dk/first).
- 2000-2003: Head of Master of Science and Masters study programme in Internet and Software Technology, ITU.

Research Grants

- 2014 – 2017: Co-investigator on the *Computational Artifacts: Towards a design-oriented theory of computational artifacts in cooperative work practices* (CompArt, compart.ku.dk/) project, joint with Copenhagen University (PI) and Copenhagen Business School. Funded by The Velux Foundation (5.8MDKK)
- 2012 – 2014: Supervisor on the *Technologies for Flexible Cross-organizational Case Management Systems* (FLEXCMS) industrial PhD project, supported by the Danish Research Agency and Exformatics A/S (industrial partner).
- 2009 – 2013: Co-investigator on the *Services in Context: Jingling Genies (Genie)* project, joint with Peking University, Beijing, China. The Danish Council for Strategic Research (8.4MDKK, grant no.: 2106-080046)
- 2008 – 2012: Principal investigator on the *Trustworthy Pervasive Healthcare Processes* (TrustCare) project, supported by The Danish Council for Strategic Research (8.4MDKK, grant no.: 2106-07-0019), ITU and Resultmaker A/S (industrial partner).
- 2007 – 2011: Principal investigator on the *Computer Supported Mobile Adaptive Business Processes* (CosmoBiz) project, supported by The Danish Council for Independent Research, Technology and Production Sciences (5.2MDKK, grant no.: 274-06-0415), ITU and Microsoft Development Center Copenhagen (industrial partner).
- 2006 – 2008: Co-investigator on the *Calculi for Mobile Security* project, funded by the Danish Research Agency (grant no.: 272-05-0258).
- Jan. 2004 – 2008: Co-investigator on the *Biographical Programming Languages (BPL)* project supported by The Danish Council for Strategic Research (5.6MDKK, grant no.: 2059-03-0031) and ITU.

Longer Research Visits

- Feb. 1998 – Jun. 1998: Laboratory for Foundations of Computer Science (LFCS), University of Edinburgh. (Hosts: Gordon Plotkin and Samson Abramsky).
- Sep. 1998: School of Computer Science, McGill University, Montreal (Host: Prakash Panangaden).

Scientific fields and key results

My research falls in three fields, covering *foundations, tools and applications* of

1. *Meta models for process modelling languages* (1996-1999, 2004-2013 supported by BRICS, the BPL, CosmoBiz and Genie research projects)
2. *Higher-order mobile computing processes* (1999-2011, supported by ITU),
3. *Model-based engineering of computer-supported adaptive, reliable and flexible business processes* (2007-2014, supported by CosmoBiz, TrustCare, Genie, FLExCMS, CompArt).

1) Meta models for process modelling languages: This field is the most theoretical work, covering two areas, my early PhD work (1996-'99) on categorical semantics for concurrency initiated by Winskel, Nielsen and Sassone, notably the *denotational* meta model for communicating concurrent processes based on presheaf categories, and the later work (2004-2013) in the BPL, CosmoBiz and Genie projects on the *syntactic and operational* Bigraphical Reactive Systems (BRS) meta-model introduced by Milner in 2000 for the design of formal process languages for concurrent and mobile processes.

The highlights of my PhD thesis [B1*] are the extension of the categorical approach to i) take account of infinite computations and fairness [J3*] and ii) non-deterministic data-flow networks [J4*] jointly with Panangaden and Winskel, closing a long-standing open problem by providing a relational model of non-deterministic data-flow networks.

The first highlight of my work on the BRS meta-model is the development of a general theory of sorting for BRS [C8*,C11*] jointly with Birkedal and Debois, allowing to represent restrictions in the grammars of processes. This has been instrumental for subsequent work on applications of the BRS meta-model to provide semantics to e.g. Petri Nets, models in Systems biology. and context aware and pervasive computing [C6*], which is the second highlight. Finally, the work led to the development of a model-checking tool [J11*] and an eclipse-based, extensible editing tool [J12*]. The tools are instrumental for speeding up the learning curve of BRS, and has been used subsequently by researchers and students at Peking university. An overview of the work on BRS can be found at <https://bigraph.github.io/>.

2) Higher-order mobile computing processes: Higher-order mobile computing processes can exchange sub processes, and have become standard in modern operating systems based on application stores and dynamic upgrades.

The highlight of the work in this field is a new fundamental process calculus called Homer, for Higher-order Mobile Embedded Resources equipped with a labelled bisimulation congruence, proven by a non-trivial extension of the well-known proof technique referred to as Howe's method to this setting. [C5*,M18*]. Interestingly, we showed that the model could express name passing calculi [J5*] purely by using mobile processes. An overview of the work can also be found at <http://www.itu.dk/research/theory/CoMo/homer.html>.

3) Model-based engineering of computer-supported adaptive, reliable and flexible business processes: Workflow and business process management systems are examples of process-oriented IT systems supporting digitalization of workflows and business processes within and across enterprises and public organizations.

A highlight of the TrustCare project is the new declarative, event-based process-language called Dynamic Condition Response Graphs (DCR Graphs) [J10*] generalizing the classical model of event structures and formalizing the process language employed by the industrial partner Resultmaker. Another highlight is the demonstration of its applicability to healthcare workflows [C17*,W5*]. DCR Graphs was subsequently adopted by another company, Exformatics. After a case study founded by a knowledge voucher from the research agency [C18] and a successful application for an industrial PhD grant, Exformatics employed one of my former MSc students, Tijs Slaats, to do an industrial PhD under my supervision. Jointly with Tijs and my PostDoc, Sren Debois, I have developed extensions of DCR Graphs, which have been presented at the leading conference for Business Process Management [C23*,C25*], and most recently, a tutorial on BPM 2014 of a web-based, collaborative editing and simulation tool, `DCRgraphs.net`, developed by Exformatics and Tijs Slaats. The tool has subsequently been used to give a tutorial within the knowledge network Viden-Danmark and will replace an older tool on my successful, research based course IT and Business Process Modelling. As for BRS, such tool development is absolutely instrumental for the subsequent adoption of the technology, and it has been fantastic to see the company developing the tool based on the theory developed in the industrial PhD project.

Present Postdocs and PhD students Håkon Normann (PhD, ITU, CompArt project), Søren Debois (PostDoc, ITU, CompArt project), and Tijs Slaats (Industrial PhD, Exformatics).

Past PostDocs and PhDs Gian Perrone (PhD, ITU, Genie project), Geoffrey Washburn (PostDoc, ITU, TrustCare project), and Magnus Nilsson (PostDoc, ITU, CosmoBiz project). Hugo A. Lopez (PhD, ITU and Resultmaker), Espen Højsgaard (PhD, ITU, CosmoBiz project), Raghava Rao Mukkamala

(PhD, ITU, TrustCare project), Mikkel Bundgaard (PostDoc, PhD, ITU). Lasse Nielsen (PhD co-supervised with Fritz Henglein, DIKU, TrustCare project), Karen Marie Lyng (PhD co-supervised with Finn Kensing, DIKU, Resultmaker), Søren Debois (PhD co-supervised with Lars Birkedal, ITU, BPL project), Wang Wusheng (Visiting PhD student, Peking University), Francesco Zanitti (PhD co-supervised with Arne Glenstrup, ITU, Genie project).

Selected Invited Research Presentations:

- *Session Types for Trustworthy Pervasive Healthcare Services*, Invited Talk at Sixth Workshop on Formal Languages and Analysis of Contract-Oriented Software, Bertinoro, Italy, 19 September 2012
- *Contracts as Dynamic Condition Response Graphs*, Invited Talk at Fifth Workshop on Formal Languages and Analysis of Contract-Oriented Software, Malaga, Spain, Sep, 2011
- *SOAMED-Vorlesung: Trustworthy Pervasive Healthcare Services*, Invited talk at the PhD school on service-oriented Architectures for the Integration of Software-based Processes, exemplified by Health Care Systems and Medical Technology (SOAMED), Berlin, Germany, May, 2011
- *Sorting out Higher-order Contexts by playing Games with the Int-construction*, Computer Science Seminars, University of Leicester, UK, Feb, 2009
- *Polarized and Higher-order Bigraphs from Geometry of Interaction*, CHOCO project meeting, Lyon, France, June, 2008
- *Bigraphs and Distributed Reactive XML - an XML-centric model of computation?*, Computer Science Seminar, University of Brighton, UK, 2005
- *A Bigraphical Programming Environment - contributing to the UK grand challenge on Science for Global Ubiquitous Computing*, Departmental talk, Dept. of Computer Science, University of Birmingham, UK, 2005
- *Higher-Order Mobile Embedded Resources*, Dagstuhl seminar 04241, Germany, 2004.

Grant and PhD thesis evaluation

- External evaluator on national research grant applications in Canada (NSERC), France and Netherlands.
- In committees for PhD thesis evaluation in Paris l'Ecole Polytechnique, University of Cambridge, Aarhus, Aalborg and ITU Copenhagen.

Program Chairs, Committees and Refereeing

- Program co-chair of WS-FM:FASOCC'14 (11th International Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing), chair and organizer of MEMO 2014 (1st International Workshop on Meta Models for Process Languages), co-chair of EXPRESS'07 and EXPRESS'08 (International Workshop on Expressiveness in Concurrency).
- PC member of international conferences and symposia: BPM 2012-2015, ICTAC 2015, ICTH 2014, FHIES 2011, MFPS 2010, CONCUR 2009 & 2015, COORDINATION 2009, TGC 2008, and several workshops including PLACES 2013-2014, MeMo2014, DAB'13-'14, Bigraph 2013, FOCLASA 2012, WS-FM 2011, PNSE'10,'12-'14, DMC 2009, ORGMOD 2009, ICE'08-'10, CPN '06-'09, ICECCS 2009, International Workshop on Combining Theory and Systems Building in Pervasive Computing, EXPRESS'05,'07,'08,'10 3rd EATCS Workshop in the Foundations of Global Computing (2004), and Categorical Methods for Concurrency, Interaction and Mobility (2002-2004).

Research Organisational Work

- Organiser of FIRST PhD Autumn School and Workshop on Theory and Practice of Business Process Execution and Service Orientation, ITU, October, 2007
- Organiser of the 10th International Conference and affiliated PhD summer school on Category Theory and Computer Science
- Organiser and co-chair of International Workshops on Categorical Methods for Concurrency, Interaction and Mobility, affiliated with CONCUR 2003 (Marseille) and CTCS 2004 (Copenhagen).
- Organiser of EEF Summer School in Semantics of Computation, Aarhus University, 1999.
- 2002-2003: Organiser and PC-member of workshops on Categorical Methods for Concurrency, Interaction and Mobility, affiliated with CONCUR 2002, CONCUR 2003 and CTCS 2004.
- Member of national competence group on XML
- 2003/2004: Organiser of the 10th International Conference on Category Theory and Computer Science (CTCS), August 2004.
- Refereeing for Journal of MSCS, TCS, Information and Computation, TOPLAS, The Computer Journal (Oxford University Press), Journal of Logic and Computation, Journal of ACM, Logical Methods in Computer Science, International Journal of Computer Mathematics, CONCUR, LICS,

POPL, FST&TCS, BPM, ICALP, FOSSACS, MFCS, MFPS, ICFL, CTCS,
CALCO, RTA, CAV, PADO-II, ESOP, TAMC, and several workshops.

List of publications indicating scientific highlights (with *)

More than 50 peer-reviewed publications and 900 citations, (H Index: 19 and i10-index: 31) according to Google Scholar, Oct 1st, 2014.

Prefaces and Editorials:

- [P5] Gian Luca Cattani, Thomas T. Hildebrandt, Daniele Varacca: *Preface to special issue: Models of Interaction: Essays in Honour of Glynn Winskel*. Theor. Comput. Sci. 546: 1-2 (2014)
- [P4] Thomas T. Hildebrandt, Daniele Gorla: *Preface to special issue: Expressiveness in Concurrency 2008*. Mathematical Structures in Computer Science 20(1): 1-2 (2010)
- [P3] Thomas T. Hildebrandt, Daniele Gorla: *Preface to Proceedings of the 15th Workshop on Expressiveness in Concurrency (EXPRESS 2008)*, Toronto, Canada. Electr. Notes Theor. Comput. Sci. 242(1): 1-2 (2009)
- [P2] Roberto M. Amadio, Thomas T. Hildebrandt: *Preface to Proceedings of the 14th International Workshop on Expressiveness in Concurrency (EXPRESS 2007)*. Electr. Notes Theor. Comput. Sci. 194(2): 1 (2008)
- [P1] Thomas T. Hildebrandt, Alexander Kurz: *Preface to CMCIM and GETCO 2003* Electr. Notes Theor. Comput. Sci. 100: 3 (2004)

Journals and E-Journals with peer-review:

- [J12*] Alexander John Faithfull, Gian Perrone, Thomas T. Hildebrandt: *Big Red: A Development Environment for Bigraphs*. ECEASST 61 (2013)
- [J11*] Gian Perrone, Søren Debois, Thomas T. Hildebrandt: *A verification environment for bigraphs*. ISSE 9(2): 95-104 (2013)
- [J10*] Thomas T. Hildebrandt, Raghava Rao Mukkamala, Tijs Slaats, Francesco Zanitti: *Contracts for cross-organizational workflows as timed Dynamic Condition Response Graphs*. J. Log. Algebr. Program. 82(5-7): 164-185 (2013)
- [J9] Mikkel Bundgaard, Thomas T. Hildebrandt, Jens Chr. Godskesen: *Modelling the Security of Smart Cards by Hard and Soft Types for Higher-Order Mobile Embedded Resources*. Electr. Notes Theor. Comput. Sci. 194(1): 23-38 (2007)
- [J8] Thomas T. Hildebrandt, Henning Niss, Martin Olsen, Jacob W. Winther: *Distributed Reactive XML*. Electr. Notes Theor. Comput. Sci. 150(1): 61-80 (2006)
- [J7] Mikkel Bundgaard, Thomas T. Hildebrandt: *Biographical Semantics of Higher-Order Mobile Embedded Resources with Local Names*. Electr. Notes Theor. Comput. Sci. 154(2): 7-29 (2006)
- [J6*] Mikkel Bundgaard, Thomas T. Hildebrandt, Jens Chr. Godskesen: *A CPS encoding of name-passing in Higher-order mobile embedded resources*. Theor. Comput. Sci. 356(3): 422-439 (2006)
- [J5*] Mikkel Bundgaard, Thomas T. Hildebrandt, Jens Chr. Godskesen: *A CPS Encoding of Name-Passing in Higher-Order Mobile Embedded Resources*. Electr. Notes Theor. Comput. Sci. 128(2): 131-150 (2005)

- [J4*] Thomas T. Hildebrandt, Prakash Panangaden, Glynn Winskel: *A relational model of non-deterministic dataflow*. Mathematical Structures in Computer Science 14(5): 613-649 (2004)
- [J3*] Thomas T. Hildebrandt: *Towards categorical models for fairness: fully abstract presheaf semantics of SCCS with finite delay*. Theor. Comput. Sci. 294(1/2): 151-181 (2003)
- [J2] Thomas T. Hildebrandt: *Categorical Models for Fairness: Completion vs Delay*. Electr. Notes Theor. Comput. Sci. 40: 188 (2000)
- [J1] Thomas T. Hildebrandt: *A Fully abstract presheaf semantics for SCCS with finite delay*. Electr. Notes Theor. Comput. Sci. 29: 102-126 (1999)

Conferences and Symposia with peer-review:

- [C25*] Søren Debois, Thomas T. Hildebrandt, Tijs Slaats: *Hierarchical Declarative Modelling with Refinement and Sub-processes*. BPM 2014: 18-33
- [C24] Søren Debois, Thomas T. Hildebrandt, Tijs Slaats, Nobuko Yoshida: *Type Checking Liveness for Collaborative Processes with Bounded and Unbounded Recursion*. FORTE 2014: 1-16
- [C23*] Tijs Slaats, Raghava Rao Mukkamala, Thomas T. Hildebrandt, Morten Marquard: *Exformatics Declarative Case Management Workflows as DCR Graphs*. BPM 2013: 339-354
- [C22] Raghava Rao Mukkamala, Thomas T. Hildebrandt, Tijs Slaats: *Towards Trustworthy Adaptive Case Management with Dynamic Condition Response Graphs*. EDOC 2013: 127-136
- [C21] Marco Carbone, Anders Skovbo Christensen, Flemming Nielson, Hanne Riis Nielson, Thomas T. Hildebrandt, Martin Sølvkjær: *ICT-powered Health Care Processes - (Position Paper)*. FHIES 2013: 59-68
- [C20] Anders S. Henriksen, Lasse Nielsen, Thomas T. Hildebrandt, Nobuko Yoshida, Fritz Henglein: *Trustworthy Pervasive Healthcare Services via Multi-party Session Types*. FHIES 2012: 124-141
- [C19*] Gian Perrone, Søren Debois, Thomas T. Hildebrandt: *A model checker for Bigraphs*. SAC 2012: 1320-1325
- [C18] Thomas T. Hildebrandt, Raghava Rao Mukkamala, Tijs Slaats: *Designing a Cross-Organizational Case Management System Using Dynamic Condition Response Graphs*. EDOC 2011: 161-170
- [C17*] Thomas T. Hildebrandt, Raghava Rao Mukkamala, Tijs Slaats: *Declarative Modelling and Safe Distribution of Healthcare Workflows*. FHIES 2011: 39-56
- [C16] Thomas T. Hildebrandt, Raghava Rao Mukkamala, Tijs Slaats: *Nested Dynamic Condition Response Graphs*. FSEN 2011: 343-350
- [C15*] Thomas T. Hildebrandt, Raghava Rao Mukkamala, Tijs Slaats: *Safe Distribution of Declarative Processes*. SEFM 2011: 237-252
- [C14] Tim Hallwyl, Fritz Henglein, Thomas T. Hildebrandt: *A standard-driven implementation of WS-BPEL 2.0*. SAC 2010: 2472-2476
- [C13] Raghava Rao Mukkamala, Thomas T. Hildebrandt: *From Dynamic Condition Response Structures to Büchi Automata*. TASE 2010: 187-190

- [C12] Thomas T. Hildebrandt, Hugo A. Lopez: *Types for Secure Pattern Matching with Local Knowledge in Universal Concurrent Constraint Programming*. ICLP 2009: 417-431
- [C11*] Lars Birkedal, Søren Debois, Thomas T. Hildebrandt: *On the Construction of Sorted Reactive Systems*. CONCUR 2008: 218-232
- [C10] Mikkel Bundgaard, Arne J. Glenstrup, Thomas T. Hildebrandt, Espen Højsgaard, Henning Niss: *Formalizing Higher-Order Mobile Embedded Business Processes with Binding Bigraphs*. COORDINATION 2008: 83-99
- [C9] Ebbe Elsberg, Thomas T. Hildebrandt, Davide Sangiorgi: *Type Systems for Bigraphs*. TGC 2008: 126-140
- [C8*] Lars Birkedal, Søren Debois, Thomas T. Hildebrandt: *Sortings for Reactive Systems*. CONCUR 2006: 248-262
- [C7] Thomas T. Hildebrandt, Henning Niss, Martin Olsen: *Formalising Business Process Execution with Bigraphs and Reactive XML*. COORDINATION 2006: 113-129
- [C6*] Lars Birkedal, Søren Debois, Ebbe Elsberg, Thomas T. Hildebrandt, Henning Niss: *Bigraphical Models of Context-Aware Systems*. FoSSaCS 2006: 187-201
- [C5*] Jens Chr. Godskesen, Thomas T. Hildebrandt: *Extending Howe's Method to Early Bisimulations for Typed Mobile Embedded Resources with Local Names*. FSTTCS 2005: 140-151
- [C4] Jens Chr. Godskesen, Thomas T. Hildebrandt, Vladimiro Sassone: *A Calculus of Mobile Resources*. CONCUR 2002: 272-287
- [C3] Sibylle B. Fröschle, Thomas T. Hildebrandt: *On Plain and Hereditary History-Preserving Bisimulation*. MFCS 1999: 354-365
- [C2] Thomas T. Hildebrandt, Prakash Panangaden, Glynn Winskel: *A Relational Model of Non-deterministic Dataflow*. CONCUR 1998: 613-628
- [C1] Thomas T. Hildebrandt, Vladimiro Sassone: *Comparing Transition Systems with Independence and Asynchronous Transition Systems*. CONCUR 1996: 84-97

Workshops with peer-review:

- [W17] Søren Debois, Thomas Hildebrandt, Morten Marquard and Tijs Slaats *A Case for Declarative Process Modelling: Agile Development of a Grant Application System*, to appear in proceedings of AdaptiveCM 2014 3rd International Workshop on Adaptive Case Management and other non-workflow approaches to BPM, 2014.
- [W16] Thomas T. Hildebrandt, Raghava Rao Mukkamala, Tijs Slaats, Francesco Zanitti: *Modular context-sensitive and aspect-oriented processes with dynamic condition response graphs*. FOAL 2013: 19-24
- [W14] Thomas T. Hildebrandt, Morten Marquard, Raghava Rao Mukkamala, Tijs Slaats: *Dynamic Condition Response Graphs for Trustworthy Adaptive Case Management*. OTM Workshops 2013: 166-171
- [W13] Mario Bravetti, Marco Carbone, Thomas T. Hildebrandt, Ivan Lanese, Jacopo Mauro, Jorge A. Perez, Gianluigi Zavattaro: *Towards Global and Local*

- Types for Adaptation. SEFM Workshops 2013: 3-14
- [W12] Wusheng Wang, Thomas T. Hildebrandt: Dynamic Ontologies and Semantic Web Rules as Bigraphical Reactive Systems. WS-FM 2013: 127-146
- [W11] Thomas T. Hildebrandt, Francesco Zanitti: A process-oriented event-based programming language. DEBS 2012: 377-378
- [W10] Marco Carbone, Thomas T. Hildebrandt, Gian Perrone, Andrzej Wasowski: Refinement for Transition Systems with Responses. FIT 2012: 48-55
- [W9] Gian Perrone, Søren Debois, Thomas T. Hildebrandt: Bigraphical Refinement. Refine 2011: 20-36
- [W8] David Raymond Christiansen, Marco Carbone, Thomas T. Hildebrandt: Formal Semantics and Implementation of BPMN 2.0 Inclusive Gateways. WS-FM 2010: 146-160
- [W7] Marco Carbone, Davide Grohmann, Thomas T. Hildebrandt, Hugo A. Lopez: A Logic for Choreographies. PLACES 2010: 29-43
- [W6] Thomas T. Hildebrandt, Raghava Rao Mukkamala: Declarative Event-Based Workflow as Distributed Dynamic Condition Response Graphs. PLACES 2010: 59-73
- [W5*] Karen Marie Lyng, Thomas T. Hildebrandt, Raghava Rao Mukkamala: From Paper Based Clinical Practice Guidelines to Declarative Workflow Management. Business Process Management Workshops 2008: 336-347
- [W4] Karen Marie Lyng, Thomas T. Hildebrandt, Raghava Rao Mukkamala: From Paper Based Clinical Practice Guidelines to Declarative Workflow Management. Business Process Management Workshops 2008: 336-347
- [W3] Raghava Rao Mukkamala, Thomas T. Hildebrandt, Janus Boris Tøth: The Resultmaker Online Consultant: From Declarative Workflow Management in Practice to LTL. EDOCW 2008: 135-142
- [W2] Thomas Hildebrandt, Henning Niss, Martin Olsen and Jacob W. Winther. *Distributed Reactive XML*, 1st International Workshop on Methods and Tools for Coordinating Concurrent, Distributed and Mobile Systems, Namur, Belgium, April, 2005. ENTCS
- [W1] Thomas T. Hildebrandt and Vladimiro Sassone. *Transition Systems with Independence and Multi-arcs*. In Proceedings of POMIV'96, DIMACS vol. 29, pp. 273-288, 1996.

Books and PhD thesis

- [B1*] Thomas Troels Hildebrandt. *Categorical Models for Concurrency: Independence, Fairness and Dataflow*. Ph.D. Dissertation, Department of Computer Science, University of Aarhus, Denmark, October, 1999.

Technical Reports, etc.

- [M24] Thomas Troels Hildebrandt and Vladimiro Sassone. *Transition systems with independence and multi-arcs*. BRICS Report RS-97-10, Daimi, University of Aarhus, 1997. Full version of paper in proceedings of POMIV'96, DIMACS vol. 29, pp. 273-288.

- [M23] Thomas Troels Hildebrandt. *Extensions of independence models*. Progress report (Masters Thesis), May 1997.
- [M22] Thomas Troels Hildebrandt, Prakash Panangaden, and Glynn Winskel. *Relational semantics of non-deterministic dataflow*. BRICS Report RS-97-36, Department of Computer Science, University of Aarhus, December 1997. 21 pp.
- [M21] Thomas Troels Hildebrandt and Sibylle Fröschle. *On plain and hereditary history-preserving bisimulation*. BRICS Report, RS-99-04, 1999.
- [M20] Jens Chr. Godskesen, Thomas Hildebrandt and Søren Eduard Jacobsen, *An Implementation of the MR calculus*, ITU-TR-2002-14, 2002
- [M19] Jens Chr. Godskesen, Thomas Hildebrandt and Vladimiro Sassone, *A calculus of mobile resources*, ITU-TR-2002-16, 2002.
- [M18*] Thomas Hildebrandt, Jens Chr. Godskesen, Mikkel Bundgaard, *Bisimulation Congruences for Homer - a Calculus of Higher Order Mobile Embedded Resources*, ITU-TR-2004-52, 2004
- [M17] Thomas Hildebrandt and Jacob W. Winther, *Bigraphs and (Reactive) XML - an XML-centric model of computation*, ITU-TR-2005-56, 2005
- [M16] Thomas Hildebrandt, Henning Niss, Martin Olsen and Jacob W. Winther, *Distributed Reactive XML: an XML-centric coordination middleware*, ITU-TR-2005-62, 2005
- [M15] Martin Olsen, Jacob W. Winther, Henning Niss and Thomas Hildebrandt, *Reactive XML - a peer-to-peer middleware for mobile context-dependent coordination*, poster at 7th International Conference on Coordination Models and Languages (COORDINATION), 2005.
Available at www.itu.dk/people/hilde/Papers/ReactiveXMLCOORD05.pdf
- [M14] Mikkel Bundgaard and Thomas Hildebrandt, *Biographical Semantics of Higher-Order Mobile Embedded Resources with Local Names*, ITU-TR-2005-70, 2005
- [M13] Lars Birkedal, Søren Debois, Ebbe Elsborg, Thomas Hildebrandt, Henning Niss, *Biographical Models of Context-aware Systems*, ITU-TR-2005-74, 2005
- [M12] L. Birkedal, S. Debois, T. Hildebrandt *Sortings for Reactive Systems*. ITU-TR-2006-84, 2006.
- [M11] Thomas Hildebrandt, Henning Niss and Martin Olsen, *Business Process Execution with Bigraphs and Reactive XML*, ITU-TR-2006-85, 2006.
- [M10] Thomas Hildebrandt, Henning Niss, Mikkel Bundgaard, Kjeld Schmidt and Thomas Jensen (MDC), *Computer Supported Mobile Adaptive Business Processes: Position paper on the CosmoBiz research project (2007-2010)*, 1st Informal Workshop on Formal Models for Business Process Execution, Service Oriented Computing and CSCW, ITU, October, 2007.
- [M9] Mikkel Bundgaard, Thomas Hildebrandt, and Jens Chr. Godskesen. *Typing Linear and Non-Linear Higher-Order Mobile Embedded Resources with Local Names*. Technical report TR-2007-97, IT University of Copenhagen, May 2007.
- [M8] Roberto Amadio, Thomas Hildebrandt (eds). *Preliminary Proceedings of 14th International Workshop on Expressiveness in Concurrency (EXPRESS'07)*, TR-2007-100, IT University of Copenhagen, 2007.
- [M7] Mikkel Bundgaard, Arne John Glenstrup, Thomas Hildebrandt, Espen Hjsgaard, and Henning Niss. *Formalizing WS-BPEL and Higher Order Mobile*

- Embedded Business Processes in the Bigraphical Programming Languages (BPL) Tool*, TR-2008-103, IT University of Copenhagen, 2008.
- [M6] Mikkel Bundgaard, Jens Chr. Godskesen, and Thomas Hildebrandt. *On Encoding the Pi-calculus in Higher-Order Calculi*, TR-2008-106, IT University of Copenhagen, 2008.
- [M5] Daniele Gorla and Thomas Hildebrandt (eds). *Preliminary Proceedings of the 15th International Workshop on Expressiveness in Concurrency (EXPRESS'08)*, TR-2008-108, IT University of Copenhagen, 2008.
- [M4] Ebbe Elsborg, Thomas T. Hildebrandt, and Davide Sangiorgi. *Type Systems for Bigraphs*. Technical Report TR-2008-110, IT University of Copenhagen, October 2008. ISBN: 9788779491847.
- [M3] Lars Birkedal, Mikkel Bundgaard, Søren Debois, Davide Grohmann, Thomas Hildebrandt. *Higher-order Contexts via Games and the Int-construction*. Technical report TR-2009-117 in IT University Technical Report Series, January 2009.
- [M2] Thomas Hildebrandt, *Review of "Robin Milner. The Space and Motion of Communicating Agents. Cambridge University Press, Uk, 2009, 212pp."*. The Bulletin of Symbolic Logic, 2010
- [M1] *Contracts as Dynamic Condition Response Graphs*, (Abstract of Invited Talk), In proceedings at Fifth Workshop on Formal Languages and Analysis of Contract-Oriented Software, Malaga, Spain, EPTCS 68, Sep, 2011

General Science Communication and Appearances in Press

1. *IT supported process management in healthcare - what should be standardized and what should not?*. Invited speaker at seminar on standardization of the healthcare sector (Standardisering af sundhedsvæsenet), E-sundhedsobservatoriet, DaCHI, Aalborg Universitet, August 25, 2014
2. *Digitalisering: BPM Udfordringer og Lean løsninger*, 25 November, 2013, Deloitte, Copenhagen, (Keynote speaker, in danish)
3. *Fra strategi til handling - hvordan digitaliserer man uforudsigelige processer?*. Inviteret foredrag som konsulent ved Temadag om Digital Forvaltning i et strategisk perspektiv for region Syd, Midt og Nord, Vejle, 26. Oktober 2012
4. *Forbedrede finansielle processer med Business Process Management ? Fra Office Automation via BPM til tvær-organisatorisk Case Management og Citizen Development*, inviteret foredrag ved Get F'IT Seminar om Business Process Management i den finansielle sektor, Finanssektorens hus, København, 25. september 2012.
5. *Fleksible sundhedsprocesser*. Foredrag ved Infinit temadag om sammenhængende patientforløb, sundhedsprocesser og it, København, April, 2012
6. *Fra automatiserede arbejdsgange til it-støttet samarbejde*. Inviteret foredrag ved VidenDanmark seminar om Digitalisering og procesoptimering - Fokus

på digitalisering og procesorientering af videnarbejde og sagsbehandling?, Symbion Science Park, 25. januar, 2012

7. *Sagsbehandlere drukner i computerbøvl*, dr.dk, June 16th, 2011
8. *Sådan vil din GPS forandre din mobil-brug*, Computerworld Online (computerworld.dk), December 28th, 2010.
9. *IT-Universitetet: Objekter er yt, processer er in*, Version2 Online (version2.dk), December 28th, 2009.
10. *Nutidens it er forældet*, NewsMarket Online, December 28th, og Presswire online 23th December, 2009.
11. *Forsker kritiserer forældede it-løsninger*, ComOn Online, December 23th, 2009.
12. *En gang på nettet, altid på nettet*. Interview in chapter of the book: "Den åbne dagbog - unges brug af nettet", ISBN 9788792208897, 2008.
13. *Sæt strøm til rutinerne*. Interview in "Momentum", Microsoft Danmark, September/08.
14. *Pas på Dankortet*, TV2-øst web news, 8pm, April 9th, 2006
15. *Dankort svindel*, TV2-øst. 7:30pm television news, April 9th, 2006.
16. *Karriere som ph.d. i erhvervslivet?*, readIT, February 1st, 2005
17. *Datalogiens store udfordringer: Allestedsnærværende computere*, Harddisken P1, Januar 15th, 2005
18. *Allestedsnærværende computere*, DR Videnskab+IT (online), Januar 5th, 2005
19. *Category Theory and Computer Science at ITU*, readIT, October 1st, 2004
20. *ITU startup aims to revolutionize live-streaming technology*, readIT, May 25th, 2004