Thomas Troels Hildebrandt
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## Short presentation

Thomas Hildebrandt is professor in software engineering and head of the research section for software, data, people & society. With a background in formal process models he has in more than 10 years been leading inter-disciplinary research and innovation projects with focus on methods and technologies for developing reliable and flexible software systems suited for the people who use them, including digitalisation of law, workflows and business processes information systems. His vision is to develop the foundation for reliable digital systems that can continuously be adapted to changing user needs and legislation, also after the systems have been taken into use. He is a member of several advisory boards and committees for digitalisation and artificial intelligence.

## Qualifications

Computer Science, PhD, Aarhus University Award Date: 23 Feb 2000

## **Employment**

## **Professor**

Software, Data, People & Society København N. 28 Feb 2018 → nu

#### **Professor**

Software, Data, People & Society København N.

1 Mar 2018 → nu

## Research outputs (Not complete, autogenerated)

The Right to Transparency in Public Governance: Freedom of Information and the Use of Artificial Intelligence by Public Agencies

Olsen, Henrik Palmer, Hildebrandt, Thomas Troels, Wiesener, Cornelius, Larsen, M. S. & Flügge, Asbjørn William Ammitzbøll, 12 Mar 2024, In: Digital Government: Research and Practice. 5, 1, 15 p., 8.

Adding Generic Role- and Process-based Behaviors to Smart Contracts using Dynamic Condition Response Graphs Xu, Yibin, Slaats, Tijs, Duedder, Boris & Hildebrandt, Thomas Troels, May 2023, 2023 IEEE/ACM International Conference on Software and System Processes (ICSSP). IEEE, p. 70-80

#### BERMUDA: Participatory Mapping of Domain Activities to Event Data via System Interfaces

Cosma, Paul, Hildebrandt, Thomas Troels, Gyldenkærne, C. H. & Slaats, Tijs, 2023, *Process Mining Workshops - ICPM 2022 International Workshops, Revised Selected Papers*. Montali, M., Senderovich, A. & Weidlich, M. (eds.). Springer, p. 127-139 (Lecture Notes in Business Information Processing, Vol. 468 LNBIP).

### **Data-Dependent Confidentiality in DCR Graphs**

Geraldo, E., Seco, J. C. & Hildebrandt, Thomas Troels, 2023, *Proceedings of the 25th International Symposium on Principles and Practice of Declarative Programming (PPDP 2023)*. Association for Computing Machinery, 13 p. 7

#### **Declarative Choreographies with Time and Data**

Hildebrandt, Thomas Troels, López, H. A. & Slaats, Tijs, 2023, *Business Process Management Forum - BPM 2023 Forum, Proceedings.* Di Francescomarino, C., Burattin, A., Janiesch, C. & Sadiq, S. (eds.). Springer, p. 73-89 17 p. (Lecture Notes in Business Information Processing, Vol. 490 LNBIP).

## Transforming Dynamic Condition Response Graphs to Safe Petri Nets

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### Decision Modelling in Timed Dynamic Condition Response Graphs with Data

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#### DisCoveR: accurate and efficient discovery of declarative process models

Back, C. O., Slaats, Tijs, Hildebrandt, Thomas Troels & Marquard, M., 2022, In: International Journal on Software Tools for Technology Transfer. 24, 4, p. 563–587

#### Event-based data-centric semantics for consistent data management in microservices

Zuckmantel, Tilman, Duedder, Boris, Zhou, Yongluan & Hildebrandt, Thomas Troels, 2022, *DEBS '22: Proceedings of the 16th ACM International Conference on Distributed and Event-Based Systems*. Association for Computing Machinery, p. 97-102

#### Selected Papers of BPM 2019 - Editorial to the Special Issue

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#### 'Thinking problematically' as a resource for AI design in politicised contexts

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# Exploring how users engage with hybrid process artifacts based on declarative process models: a behavioral analysis based on eye-tracking and think-aloud

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### ReGraDa: Reactive Graph Data

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What's in the Box? The Legal Requirement to Explain Computationally Aided Decision-Making in Public Administration Olsen, Henrik Palmer, Slosser, Jacob Livingston & Hildebrandt, Thomas Troels, 2021, *Constitutional Challenges in the Algorithmic Society*. Cambridge University Press, p. 219-235

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#### Chain of Events: Modular Process Models for the Law

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EcoKnow: Engineering Effective, Co-created and Compliant Adaptive Case Management Systems for Knowledge Workers Hildebrandt, Thomas Troels, Andaloussi, A. A., Christensen, L. R., Debois, S., Healy, N. P., López, H. A., Marquard, M., Møller, Naja Holten, Petersen, A. C. M., Slaats, Tijs & Weber, B., 2020, *ICSSP '20: Proceedings of the International Conference on Software and System Processes.* Association for Computing Machinery, p. 155--164

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#### **Declarative Choreographies and Liveness**

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# What's in the Box? The Legal Requirement of Explainability in Computationally Aided Decision-Making in Public Administration

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#### EcoKnow: Effective, Co-Created & Compliant Adaptive Case Management for Knowledge Workers

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#### The DCR Workbench: Declarative Choreographies for Collaborative Processes

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#### **Declarative Process Mining for DCR Graphs**

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## **Expert System**

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#### Declarative event based models of concurrency and refinement in psi-calculi

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## A verification environment for bigraphs

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#### A Logic for Choreographies

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