

Summer Term 2018
Seminar / Proseminar
**„Special Issues, Challenges and Methods in Workflow-
Management“**

SYSTEME DER INFORMATIONSVIEWALTUNG, PROF. DR.-ING. KLEMENS BÖHM
INSTITUT FÜR PROGRAMMSTRUKTUREN UND DATENORGANISATION, FAKULTÄT FÜR INFORMATIK



Organizer

- Institute for Program Structures and Data Organisation (IPD)
- Chair for Systems of Information Management
Prof. Klemens Böhm
 - Jutta Mülle, Room 361, muelle@kit.edu
 - Elaheh Ordoni, Room 362, elaheh.ordoni@kit.edu
- Informatics Building Am Fasanengarten
(Building 50.34), 3rd floor
- Web Site of the Chair with Lectures:
 - dbis.ipd.kit.edu

Learning Objectives

Intensive, critical reflection on a current research approach/topic

- Literature search and comparison with related work
- Oral presentation
- Discussion
- Preparing an elaboration / a report

Contents of the Seminar - 1

- Business Process Management (BPM) is a mature and often used technique in business and in all domains with complex proceedings.
- New challenges from
 - Application domains like auctions
 - Technical innovations like block chains
 - Formal approaches
 - Data in Workflows

Contents of the Seminar - 2

- I Workflows with Block Chain Technology
- II Probabilistic Modeling and Verification of Workflows
- III New Application Domains for Workflows
- IV Verification of Data-Centred Workflows

Topics – I

I Workflows with Block Chain Technology (*Supervisor: Jutta Mülle*)

- **Topic 1:** Blockchain & Business Process Management.
J. vom Brocke, I. Weber: Blockchain & Business Process Management. Part 1 the BPM Lifecycle. April, 2018, www.bptrends.com
- **Topic 2:** Blockchain-Based BPM System.
O. López-Pintado, L. García-Banuelos, M. Dumas, I. Weber: Caterpillar: A Blockchain-Based Business Process Management System. BPM Demo Track, 2017
- **Topic 3:** Cross-Organizational WF Management with Blockchains.
G. Fridgen, S. Radzuwill, N. Urbach, L. Utz: Cross-Organizational Workflow Management Using Blockchain Technology – Towards Applicability, Auditability, and Automation. 51st Hawaii Intl. Conf. On System Sciences – HICSS'2018. January 2018

Topics – II

II Probabilistic Modeling and Verification of Workflows (*Supervisor: Elaheh Ordoni*)

- **Topic 4:** Probabilistic Model Description
Li, H.: Modeling and verification of probabilistic data-aware business processes. Chapter 3. Dissertation, Université Blaise Pascal - Clermont-Ferrand II, English. 2015
- **Topic 5:** Verification Methods with Probabilistic Logics
Li, H.: Modeling and verification of probabilistic data-aware business processes. Chapter 4. Dissertation, Université Blaise Pascal - Clermont-Ferrand II, English. 2015
- **Topic 6:** Automatic Verification of Probabilistic Systems
Hinton, A., Kwiatkowska, M., Norman, G., Parker, D.: PRISM: A Tool for Automatic Verification of Probabilistic Systems. TACAS 2006, Tools and Algorithms for the Construction and Analysis of Systems. 2006, pp. 441--444

Topics – III

III New Application Domains for Workflows

- **Topic 7:** Workflow Technology for ETL (*Supervisor: Jutta Mülle*)
Syed M. F. Ali, Robert Wrembel: From conceptual design to performance optimization of ETL workflows: current state of research and open problems. The VLDB Journal (2017) 26:777–801, DOI 10.1007/s00778_017_0477_2
- **Topic 8:** Modeling the Auction Format “CCA” as BPMN Workflow (*Supervisor: Elaheh Ordoni*)
Ausubel, L.M., Cramton, P., Milgrom, P.: The clock-proxy auction: A practical combinatorial auction design. Stanford Inst. Econ. Policy Res. 3, 1–27 (2006).
- **Topic 9:** Modeling the Auction Format “RAD” as BPMN Workflow (*Supervisor: Elaheh Ordoni*)
Kwasnica, A.M., Ledyard, J.O., Porter, D., DeMartini, C.: A New and Improved Design for Multiobject Iterative Auctions. Manage. Sci. 51, 419–434 (2005)

Topics – IV

IV Verification of Data-Centred Workflows (*Supervisor: Jutta Mülle*)

- **Topic 10:** Data-aware Compliance Checking
D. Borrego, R. Gasca, M. Gómez-López: Automating correctness verification of artifact-centric business process models. *Information and Software Technology* 62 (2015) pp. 187-197
- **Topic 11:** Data-flow Errors in Workflows and Verification
D. Xiang et al.: Detecting Data-flow Errors Based on Petri Nets with Data Operations. *IEEE/CAA Journal of Automatica Sinica*, Vol. 5, No. 1, January 2018, pp. 251- 260

von Stackelberg et al.: Detecting Data-Flow Errors in BPMN 2.0. *Open Journal of Information Systems*, Vol. 1, No. 2, pp. 1-19, 2014
- **Topic 12:** Optimizing Verification of Workflows
- R. Mrasek, J. Mülle, K. Böhm: A new verification technique for large processes based on identification of relevant tasks. *Information Systems Journal*, Elsevier Science Publisher, 2014

Methodological Procedure

- Initial training: Reading and understanding the article given
- Literature research
- Prepare material for oral presentation / for report
 - Adequate selection and structuring
 - Presentation of the relationships
 - Use own examples
 - Clearly present the facts (e. g., motivate, structure top-down)
 - Explain used terms
 - Critical evaluation
 - Sharply distinguish the approach presented from other literature
 - Provide good readability (e. g., enumerate the figures in your report and reference each figure in the text)
- The seminar report must not be a **1:1-version or translation** of the publication presenting the approach!

Formal Requirements

- Seminar (Master):
 - Report with 12-15 pages w/o title page and references
 - Minimum 4 new bibliographic references
 - Precise academic style
 - 20-25 minutes oral presentation (ca. 17 slides)

- Proseminar (Bachelor)
 - Report with 10-12 pages w/o title page and references
 - Minimum 2 new bibliographic references
 - Precise academic style
 - 20-25 minutes oral presentation (ca. 17 slides)

Requirements for Passing the Seminar

- Prepare
 - Report structure and literature list
 - Presentation slides
 - Report
- Oral presentation
- Actively participate at **all** oral presentation events
- Assessment: Preparation phase and report, oral presentation may change the assessment up to two grades better or worse.

Dates and Deadlines

- Final registration until **23.04.2018** at the „Studierendenportal“:
 - SPO 2015:
 - 7500102 Proseminar
 - 7500040 Seminar
 - SPO 2008/2009:
 - 498 or 70014 Proseminar
 - 9014 Seminar
- Tutorial: How to give a presentation?
 - *Tuesday, 08.05.2018, 15:30 -16:30 Uhr, SR 348*
- Deadline for Report structure and literature list: **08.05.2018**
Individual discussions with the supervisor: during the period **15.-29.05.2018**

Dates and Deadlines / 2

- Presentation dates each with at most 3 presentations at SR 348, 09:15 – 11:15
 - *Thursday 21.06.2018 (Topics 1, 2 and 3)*
 - *Friday 22.06.2018 (Topics 4, 5, and 6)*
 - *Thursday 28.06.2018 (Topics 7, 8 and 9)*
 - *Friday 29.06.2018 (Topics 10, 11 and 12)*
- Deadline for slides of the complete presentation: **2 weeks before presentation date**, then comments of the supervisor
- Deadline for the report: **24.07.2018**

Assignment of the Topics

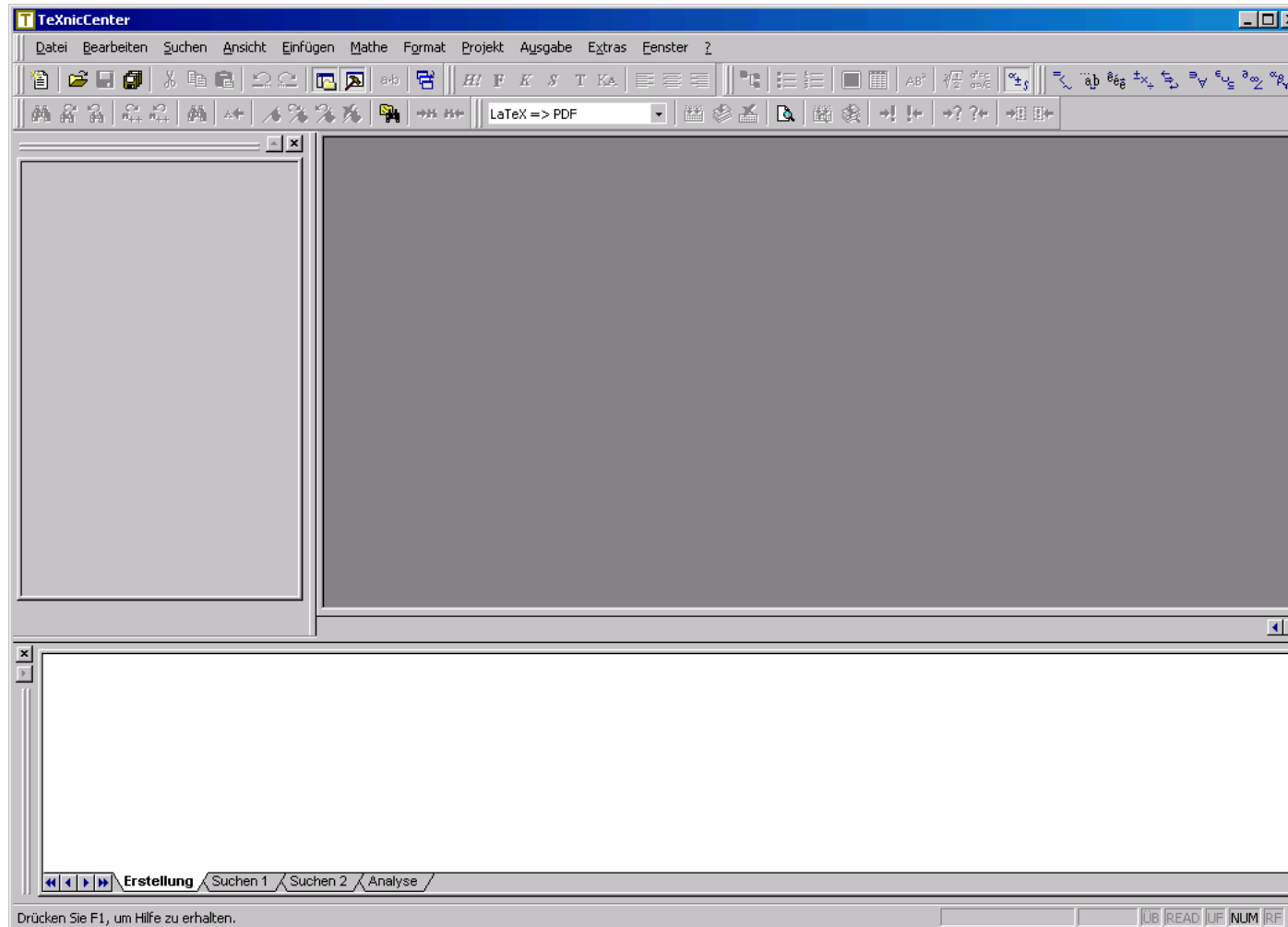
- Topic 1: Anastasia Maklashevskikh
- Topic 2: Adrian Kruck
- Topic 3: -
- Topic 4: Ursule Mbarga
- Topic 5: David Gottwald
- Topic 6: -
- Topic 7: -
- Topic 8: Björn Ehrlinspiel
- Topic 9: -
- Topic 10: -
- Topic 11: -
- Topic 12: -

Technical/ Organisational Instructions

- Report: Use LaTeX or Word / OpenOffice
- Springer LNCS Format (Lecture Notes in Computer Science).
- Downloads + Guidelines see <http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>
- Presentation: Use Powerpoint, OpenOffice or PDF.


Literature Research

Latex (TeXnicCenter)



Literature Research

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Privacy Preferences USA Japan [Erweiterte Suche](#)
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Suche: Das Web Seiten auf Deutsch Seiten aus Deutschland

Web Ergebnisse **1 - 10** von ungefähr **1.730.000** für **Privacy Preferences USA Japan**. (0,16 Sekunden)

[12 Ergebnisse auf Ihrem Computer gespeichert](#) - [Ausblenden](#) - [Info](#)

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A lot of papers are already on your computer?

[DuD 8/2000: Gateway: Platform for **Privacy Preferences** - P3P](#)
Das Platform for **Privacy Preferences** Project (P3P) ist ein Standard des World ... Situation bezogen sind, gibt es bereits in **USA**, Deutschland und **Japan**. ...
[www.datenschutz-und-datensicherheit.de/jhrg24/p3p.htm](#) - 8k - [Im Cache](#) - [Ähnliche Seiten](#)

Official Organisations

[World Wide Web Consortium kürt P3P 1.0 zur W3C Recommendation](#)
Das Platform for **Privacy Preferences** Project (P3P) 1.0, entwickelt vom W3C, ... P3P ist eine in den **USA** registrierte Wortmarke des World Wide Web Consortium.
[www.w3.org/2002/04/p3p-pressrelease.html.de](#) - 10k - [Im Cache](#) - [Ähnliche Seiten](#)

[World Wide Web Consortium Issues P3P 1.0 as a W3C Recommendation](#) - [[Diese Seite übersetzen](#)]
(This press release is available in French, **Japanese**, and German.) ... The Platform for **Privacy Preferences** Project (P3P) 1.0, developed by W3C, ...
[www.w3.org/2002/04/p3p-pressrelease](#) - 8k - [Im Cache](#) - [Ähnliche Seiten](#)
[[Weitere Ergebnisse von www.w3.org](#)]

Literature Research (Search)

■ Google Scholar



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[Buch] Biostatistical Analysis - [Gruppe von 3](#) »

JH Zar - 2007 - Prentice-Hall, Inc. Upper Saddle River, NJ, USA

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Archives

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- IEEE Explore



- link.springer.com



- citeseer.ist.psu.edu

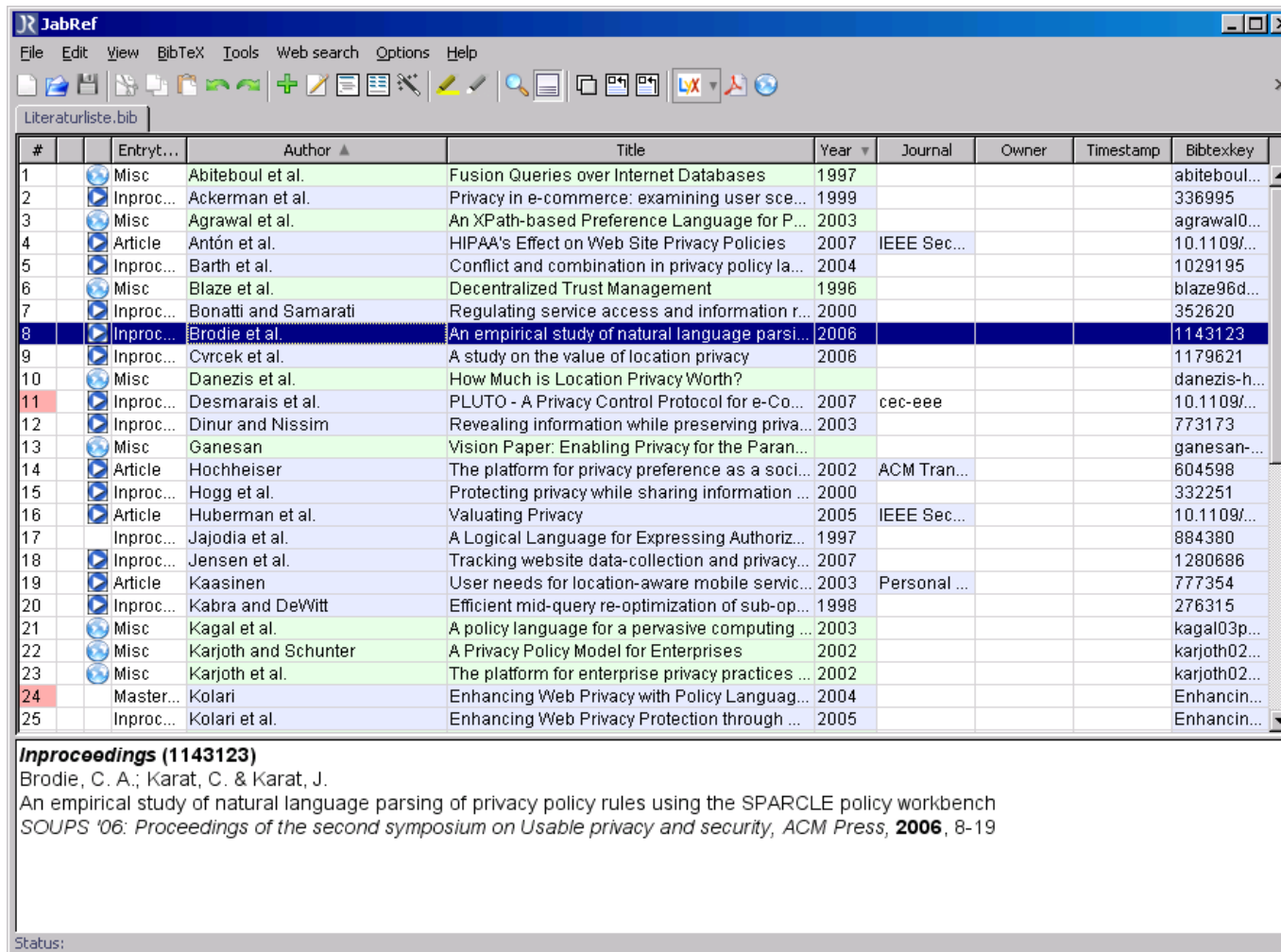


- DBLP <http://www.informatik.uni-trier.de/~ley/db/>

Latex (BibTex)

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@INPROCEEDINGS{1143123,  
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  title = {An empirical study of natural language parsing of privacy policy  
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  booktitle = {SOUPS '06: Proceedings of the second symposium on Usable  
    privacy  
    and security},  
  year = {2006},  
  pages = {8--19},  
  address = {New York, NY, USA},  
  publisher = {ACM Press},  
  doi = {http://doi.acm.org/10.1145/1143120.1143123},  
  isbn = {1-59593-448-0},  
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}
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Literature Research (JabRef)



JabRef

File Edit View BibTeX Tools Web search Options Help

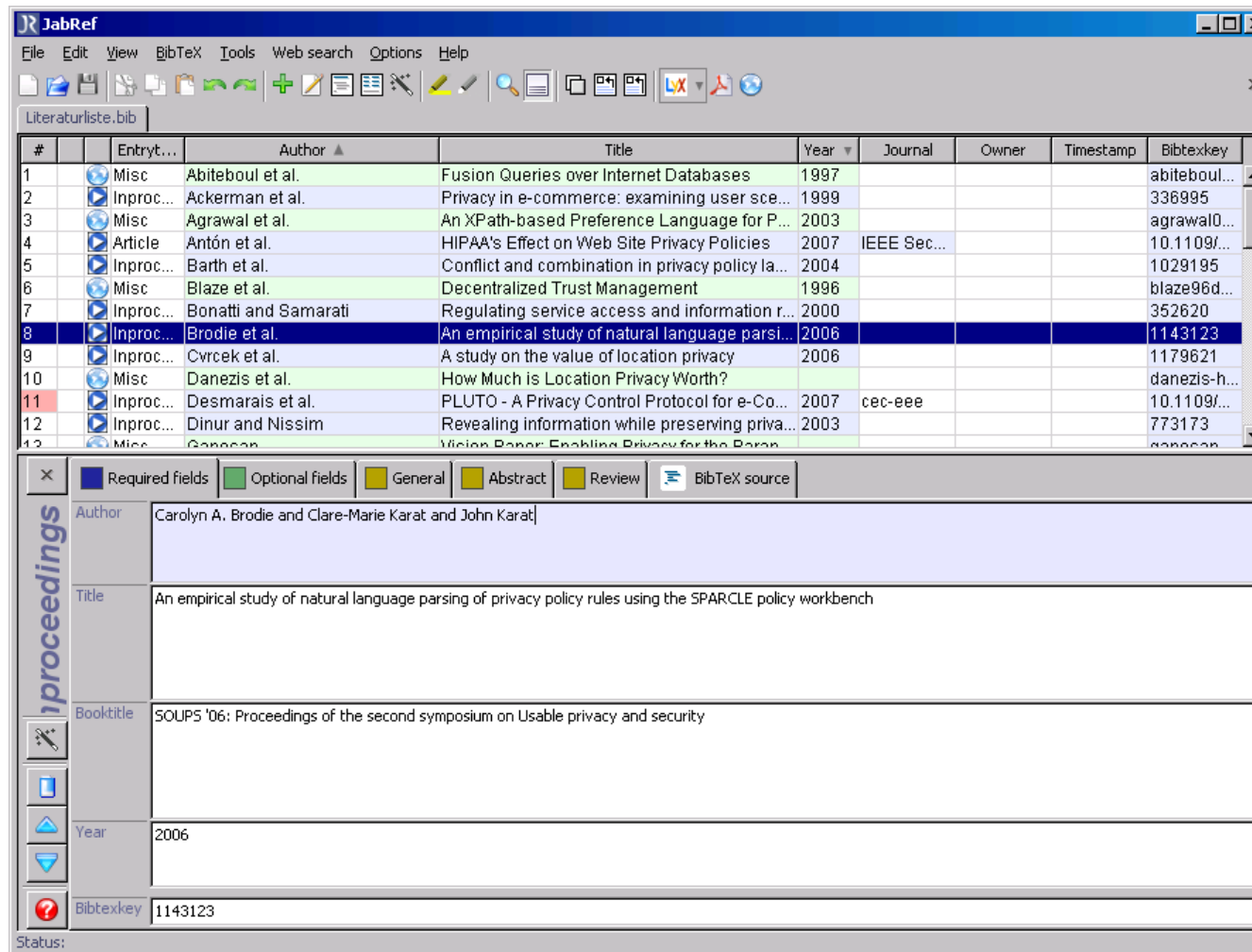
Literaturliste.bib

#	Entry...	Author ▲	Title	Year ▼	Journal	Owner	Timestamp	Bibtexkey
1	Misc	Abiteboul et al.	Fusion Queries over Internet Databases	1997				abiteboul...
2	Inproc...	Ackerman et al.	Privacy in e-commerce: examining user sce...	1999				336995
3	Misc	Agrawal et al.	An XPath-based Preference Language for P...	2003				agrawal0...
4	Article	Antón et al.	HIPAA's Effect on Web Site Privacy Policies	2007	IEEE Sec...			10.1109/...
5	Inproc...	Barth et al.	Conflict and combination in privacy policy la...	2004				1029195
6	Misc	Blaze et al.	Decentralized Trust Management	1996				blaze96d...
7	Inproc...	Bonatti and Samarati	Regulating service access and information r...	2000				352620
8	Inproc...	Brodie et al.	An empirical study of natural language pars...	2006				1143123
9	Inproc...	Cvrcek et al.	A study on the value of location privacy	2006				1179621
10	Misc	Danezis et al.	How Much is Location Privacy Worth?					danezis-h...
11	Inproc...	Desmarais et al.	PLUTO - A Privacy Control Protocol for e-Co...	2007	cec-eee			10.1109/...
12	Inproc...	Dinur and Nissim	Revealing information while preserving priva...	2003				773173
13	Misc	Ganesan	Vision Paper: Enabling Privacy for the Paran...					ganesan-...
14	Article	Hochheiser	The platform for privacy preference as a soci...	2002	ACM Tran...			604598
15	Inproc...	Hogg et al.	Protecting privacy while sharing information ...	2000				332251
16	Article	Huberman et al.	Valuating Privacy	2005	IEEE Sec...			10.1109/...
17	Inproc...	Jajodia et al.	A Logical Language for Expressing Authoriz...	1997				884380
18	Inproc...	Jensen et al.	Tracking website data-collection and privacy...	2007				1280686
19	Article	Kaasinen	User needs for location-aware mobile servic...	2003	Personal ...			777354
20	Inproc...	Kabra and DeWitt	Efficient mid-query re-optimization of sub-op...	1998				276315
21	Misc	Kagal et al.	A policy language for a pervasive computing ...	2003				kagal03p...
22	Misc	Karjoth and Schunter	A Privacy Policy Model for Enterprises	2002				karjoth02...
23	Misc	Karjoth et al.	The platform for enterprise privacy practices ...	2002				karjoth02...
24	Master...	Kolari	Enhancing Web Privacy with Policy Languag...	2004				Enhancin...
25	Inproc...	Kolari et al.	Enhancing Web Privacy Protection through ...	2005				Enhancin...

Proceedings (1143123)
 Brodie, C. A.; Karat, C. & Karat, J.
 An empirical study of natural language parsing of privacy policy rules using the SPARCLE policy workbench
SOUPS '06: Proceedings of the second symposium on Usable privacy and security, ACM Press, 2006, 8-19

Status:

Literature Research (JabRef)



The screenshot shows the JabRef application window with a menu bar (File, Edit, View, BibTeX, Tools, Web search, Options, Help) and a toolbar. The main window displays a table of bibliographic entries. The selected entry (row 8) is expanded in a detailed view below the table.

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13	Misc	Geneson	Vision Paper: Enabling Privacy for the B...					888888

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Author	Carolyn A. Brodie and Clare-Marie Karat and John Karat				
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