

# Biographical Sketch

Prof. Dr. rer. nat. Jürgen Dix \*

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## Abstract

This is a four pages CV focussing on the last 10 years. More activities and an updated publication list (as well as pdf- files of most of the papers) can be accessed from my homepage which is regularly updated.

Since 2004, Jürgen Dix is Full Professor at the Department of Computer Science at Clausthal University of Technology (Dipl.-Math. in 1986 (University of Heidelberg), Dr. rer.-nat. in 1992 (TU Karlsruhe), Univ.-Doz. (Habilitation) in 1996 (TU Vienna)). He represents the area of formal methods in Artificial Intelligence/logics in multiagent systems and is also member of the Institute of Information Systems at TU Vienna (Austria). From 2004-2008, he served as Head of Department and from 2008-2011 he acted as Dean of the faculty of Mathematics, Computer Science and Engineering. Since 2011 he is Vice-Dean.

He is working since 1989 in several areas of *Computational Logic* (nonmonotonic reasoning, logic programming, deductive databases, knowledge representation) and, since 1998, also in *Multi-Agent Reasoning*. He has published more than 240 papers and gave more than 70 invited talks/tutorials. He has co-authored two monographs (MIT Press and Cambridge University Press), co-edited 18 books (Springer LNCS, LNAI, MASA) and 15 special issues of various journals. He was coordinating node for CompuLog, CoLogNet, AgentLink I, II, III and for WASP, a European network on answer set programming and is member of the *American Association of Artificial Intelligence*, and the *Association of Computing Machinery*.

Among the key achievements of his work are the foundations of logic-based heterogenous agent systems and contributions to computational logic (deductive databases). Lately he is interested in logics of strategic abilities and their model checking problem. Prof. Dix has led a range of successful projects (more than 1 Mio €) and organised more than 40 international conferences and workshops (6 Dagstuhl Seminars since 2008). Since 1990 he was on the programme committees of more than 180 international events and on the steering committees of ProMAS, NMR, LAMAS, EMAS and CLIMA. He acts as Associate Editor (AMAI) and is on the Editorial Boards of 8 international journals.

He has supervised 9 PhD's and one habilitation, is currently supervising another 3, and acted as external examiner for 9 PhD's/Habilitations (UK, Italy, Germany, Spain, Argentina, The Netherlands, Austria).

**Name:** Jürgen Dix

**Degrees:**

1979 Abitur                   Gutenberg Gymnasium (Wiesbaden), **1.0**  
1986 Dipl.-Math.            Mathematics/Physics, (Heidelberg), **outstanding**  
1992 Dr. rer.-nat.            CS Department, TU Karlsruhe, **Summa cum Laude**  
1996 Univ.-Doz.              (Habilitation) CS Department, TU Vienna, Austria

**Career Review:**

1994-2000                    Assistant Professor (C1), Koblenz (Germany)  
1999                            Visiting Professor at University of Maryland, College Park (USA)  
2000-2004                    Reader for Knowledge Representation and Reasoning, Manchester (UK)  
since 2004                    Full Professor for Computational Intelligence (W3), Clausthal (Germany)

**Professional Activities:**

since 1996                    Organiser of >40 and PC member of >170 international WS's and conferences  
since 2000                    Founding Member of Steering committees of ProMAS-, CLIMA-conferences  
since 2001                    Editorial Board of Annals of Mathematics and Artificial Intelligence  
since 2004                    Editorial Board of Theory and Practice of Logic Programming  
since 2005                    Editorial Board of International Journal of Agent Oriented Software Engineering  
since 2006                    Member of the EPSRC Peer Review College  
since 2006                    Expert Evaluator in the 6/7th framework  
2008–2012                    Editorial Board of IEEE TKDE and JACIL  
since 2008                    Associate Editor of Board of Annals of Math and AI  
since 2008                    Federführender Vertrauensdozent der Studienstiftung des dt. Volkes  
since 2012                    Founding Member of Steering committee of EMAS-conferences

**Grants:**

1995–2000                    Disjunctive Logic Programming (400.000 €, DFG)  
1999–2003                    Intelligent Information Extraction (DFG, 150.000 €)  
2001–2004                    Optimizations of MAS (£ 65.000, EPSRC)  
2002–2004                    Semantic Webs and Agents in integrated Economies (FP6, (110.000 €)  
2007–2008                    Argumentation and MAS (German/Argentinean project)(12.000 €)  
2008–2011                    IT Eco Systems (MWK Lower Saxony, 150.000 € (of 5 Mio €))  
2009–2011                    MSC/PhD Track ITIS (MWK Lower Saxony, 130.000 € (of 500.000 €))  
2013–2015                    Galot (120.000 € (of 300.000 €), DFG/FNR)  
2013–2016                    DeSim (180.000 € (of 4 Mio €), Simulation Centre/TUC)

**Teaching (International):**

1999                            *Algorithms and Datastructures* CMS351, UMD at College Park, USA  
2000                            *Multi-Agenten Systeme*, (SS 2000), TU Wien, Austria  
2001                            *Heterogenous Agents*, (Oct. 2001), Ushuaia, Argentina  
2002                            CS3172 *Advanced Algorithms*, University of Manchester, UK  
2002                            *Programming Multi-Agent Systems*, (Aug. 5-16)  
                                  European Summer School in Logic Language and Information, Trento, Italy  
2003                            CS3172 and CS616 KR and Reasoning, University of Manchester, UK  
2003                            *Multi Agent Systems, Planning and Answer Set Programming*, (July/August)  
                                  Post Graduate course, The University of New South Wales, Sydney, Australia  
2006                            *Modal Logics for Multi-Agent Systems*, (July 17-21)  
                                  European Summer School in Agents, Annecy, France  
2007                            *Two Traditions: Logic Programming vs. Modal Logic*, (Aug. 10-23)  
                                  European Summer School in Logic Language and Information, Dublin, Ireland  
2008                            *What can agents achieve?*, (May 5-9)  
                                  European Summer School in Agents, Lisbon, Portugal  
2010                            *Model Checking Temporal and Strategic Logic*, (August 11–18)  
                                  European Summer School in Agents, Saint Etienne, France  
2012                            *Modelling and verification of MAS*, (August 7–12)  
                                  European Summer School in Agents, Valencia, Spain  
2013                            *Games, Coalitions and Logics*, (July 1–5)  
                                  European Summer School in Agents, London, UK

**Publications:**

total: > 220 >35 books and invited chapters in books, >60 journal papers,  
>13 invited tutorials, 13 special journal issues  
since 2007: >65 13 books and invited chapters in books, 15 journal papers  
5 invited tutorials, 8 special journal issues  
DBLP count: 141  
Citeseer/ H-Index : <10000 / 29 (most cited author in the department)

**Selected Publications (2001–2012):** (Logical Foundations of AI, KR and Reasoning, MAS)

J. Dix, W. Faber and V. S. Subrahmanian (2012):

*Privacy Preservation Using Multi-context Systems and Default Logic.*

**Correct Reasoning: Essays on Logic-based Reasoning, Springer.**

J. Dix and M. Fisher (2011):

*Where Logic and Agents meet.*

**Annals of Math and AI, 61(1)\*15–28.**

J. Dix, W. Jamroga and D. Samet (2011):

*Reasoning about Interaction: From Game Theory to Logic and Back.*

**Dagstuhl Seminar 11101, Report 1(3): 1-18**

N. Bulling, J. Dix and W. Jamroga (2010):

*Model Checking Logics of Strategic Ability and their Complexity.*

**In *Specification and Verification of Multi-Agent Systems*, Chapter 12, Springer.**

A. Garcia, J. Dix, and G. Simari (2009):

*Argument-based Logic Programming.*

**In *Argumentation in Artificial Intelligence*, Chapter 8, Springer.**

T. Behrens and J. Dix (2008):

*Model Checking Multiagent Systems with Logic Based Petri Nets.*

**Annals of Mathematics and Artificial Intelligence, 51(1–2)\*81–121**

J. Dix, S. Kraus, VS Subrahmanian (2006):

*Heterogenous Temporal Probabilistic Agents.*

**ACM Transactions of Computational Logic, 7(1)\*151–198.**

G. Brewka and J. Dix (2005):

*Knowledge Representation with Extended Logic Programs*

**Handbook of Philosophical Logic (Gabbay/Guenthner (Eds.)),**

**2nd Edition, Volume 6, Chapter 1, pages 1–85.**

J. Dix, T. Eiter, M. Fink, A. Polleres and Y. Zhang (2003):

*Monitoring Agents using Declarative Planning*

**Fundamenta Informaticae, 57(2–4)\*345–370.**

J. Dix, K. Schlechta (2002):

*Explaining Updates by minimal Sums*

**Theoretical Computer Science, 266(1-2)\*819–838.**

J. Dix, M. Osorio, C. Zepeda (2001):

*A General Theory of Confluent Rewriting Systems for LP*

**Annals of Pure and Applied Logic, 108(1-3)\*153–188.**

## PhD/Habilitation Students (12)

1. Wenjin Lu: *Nonmonotonic Reasoning based on Minimal Models and its Implementation*, Dr. rer.-nat., University of Koblenz (Germany), 1998.
2. Yingqian Zhang: *Making multiagent systems more reliable*, Dr. phil., The University of Manchester (United Kingdom), 2005.
3. Frank Stamm: *Verifikation von Java-Card*, Dr. rer.-nat., Clausthal University of Technology (Germany), 2005.
4. Andreas Brüning: *Kontinuierliche und multi-distributive Erweiterungen von Estimation of Distribution Algorithms*, Dr. rer.-nat., Clausthal University of Technology (Germany), 2006.
5. Juan Acosta Guadarrama: *A Language for Beliefs and Knowledge Representation*, Dr. rer.-nat., Clausthal University of Technology (Germany), 2009.
6. Wojtek Jamroga: *A Language for Beliefs and Knowledge Representation*, Clausthal University of Technology (Germany), **Habilitation: Dr. rer.-nat. habil**, 2009.
7. Peter Novak: *Behavioural State Machines: Agent Programming and Engineering*, Dr. rer.-nat., Clausthal University of Technology (Germany), 2009.
8. Nils Bulling: *Modelling and Verifying Abilities of Rational Agents*, Dr. rer.-nat., Clausthal University of Technology (Germany), 2010.
9. Tristan Behrens: *Towards Building Blocks for Agent-Oriented Programming*, Dr. rer.-nat., Clausthal University of Technology (Germany), 2012.
- 10.– 12. Michael Köster: *Local Communities: Specification, Verification and Simulation*, Dr. rer.-nat., TUC (Germany), expected in 2013. Federico Schlesinger: *Planning as model checking*, Dr. rer.-nat., TUC (Germany), expected in 2015. Nils Bulling: *NN*, **Habilitation: Dr. rer.-nat. habil**, TUC (Germany), expected in 2015.

## External Examiner (9)

1. Pablo Fillotrani: *Semantics for negation in extended logic programs*, Universidad Nacional del Sur, Bahia Blanca (Argentina), 2001.
2. Ioannis Xanthakos: *Semantic Integration of Information by Abduction*, Imperial College, London (UK), 2003.
3. Arianna Tocchio: *Intelligent Agents in Computational Logic* University d'Aquila (Italy), 2005.
4. Owen Cliffe: *Specifying and Analysing Institutions in Multi-Agent Systems using Answer Set Programming*, University of Bath (UK), 2006.
5. Juan Carlos Nieves Sanchez: *Modeling arguments and uncertain information: A NMR approach*, Technical University of Catalonia (Spain), 2008.
6. Gerhard Weiß: *Agent Orientation in Computer Science*, Johannes Kepler Universität Linz, Österreich. **Habilitation thesis**, 2008.
7. Michael Köhler-Bußmeier: *Koordinierte Selbstorganisation und selbstorganisierte Koordination*, Universität Hamburg, Germany. **Habilitation thesis**, 2009.
8. Michal Sindlar: *In the Eye of the Beholder: Explaining Behavior through Mental State Abduction*, University of Utrecht (Netherlands), 2011.
9. Chetan Yadati Narashima: *Coordinating Autonomous Planning and Scheduling*, Technical University of Delft (Netherlands), 2013.