

CURRICULUM VITAE

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Education

- *Secondary Education*, Pancyprian Gymnasium, Nicosia, Cyprus.
- *B.Sc. Mathematics (First Class)*, Imperial College, University of London, 1977-80.
- *D.I.C. Theoretical Physics*, Imperial College, University of London, 1980-81.
- *Ph.D. Theoretical Physics*, Imperial College, University of London, 1980-83.
- *M.Sc. Computer Science*, Imperial College, University of London, 1986-87.

Academic Appointments

- Postdoctoral position in the Department of Mathematics at King's College, University of London, 1984-86.
- Research visitor in the Department of Physics (Theoretical Physics Section) at Imperial College, University of London, 1986-87.
- Postdoctoral position in the Department of Theoretical Physics, University of Zurich, 1987-1989.
- Research Fellow in the Department of Computing (Computational Logic Section) at Imperial College University of London, 1989 - 1991.
- Associate Professor at the Department of Computer Science, University of Cyprus, 1992-2004.
- Professor at the Department of Computer Science, University of Cyprus, 2004 - present

Research Interests

- **Co-founder of the new scientific area of Abductive Logic Programming**
- Computational Logic: Abduction and Induction
- Computational Bioscience
- Autonomous Agents
- Argumentation and Preference Reasoning
- Reasoning about Actions and Change

Funded Projects (External Funding - Principal Investigator)

- **Compulog II**, ESPRIT III, EU,
August 1992 - September 1995

First externally funded research project at the University of Cyprus

- **CompuCyprus**, KIT, EU,
November 1994- November 1996
- **Compulog-Net**, NoE, EU,
September 1993 - August 1996
- **Cost Action 15**, COST, EU,
August 1996 - August 1998
- **ILP²**, ESPRIT IV, EU,
September 1996 - December 1998
- **CLFSA**, KIT, EU,
October 1997 – December 2003
- **CJIS**, INCO, EU,
December 1998 - December 2001.
- **SOCS**, IST 5th Framework, EU,
January 2002 - June 2005.
- **CoLogNet**, IST 5th Framework, EU,
January 2002 - June 2005.
- **WASP**, IST 5th Framework, EU,
January 2002 - June 2005.
- **Agreement Technologies**, COST Action IC0801, EU,
August 2008 - October 2012

Editorial Activities

- **Editor** of the Journal of Applied Logic, Elsevier.
- **Editor** of the Journal of Artificial Intelligence Communications, IOS Press .
- **Editorial Advisor** of the Journal of Theory and Practice of Logic Programming, Cambridge University Press.
- **Quest Editor** of the Journal of Logic Programming, Elsevier.
- **Quest Editor** of the ACM Journal of Transactions on Computational Logic.
- **Editor in chief** of the scientific magazine "Computational Logic", ISSN 1024-8773, 1994 – 1999.
- **Member** of the Scientific Program Committee of various International Conferences and Workshops.

International Conferences

- **Co-founder** of the Pan-Hellenic Logic Symposium (PLS) in 1997.
- **Co-founder** of the international workshop series on Abduction and Induction in Artificial Intelligence (AIAI) in 1996.
- **Co-founder** of the international workshop on Argumentation and Multi-agent systems (ArgMAS) in 2004.

Administrative duties at the University of Cyprus

- **Member** of the ad hoc Committee for drafting the first Regulations for Undergraduate Studies, 1991-92.
- **Member** of the ad hoc Committee for drafting the Structure and Regulations for the committees of the Senate, 1991-92.
- **Chair** of the interim Buildings Committee of the University, 1992-95
- **Vice-chair** of Department of Computer Science, 1992-94
- **Vice-chair** of Department of Computer Science, 1996-98
- **Coordinator** of Postgraduate Studies, Department of Computer Science, 1994-98
- **Chair** of department of Computer Science, 1998-2003
- **Member** of the Senate Committee of Finance, 1999-2003
- **Dean** of the School of Pure and Applied Sciences, 2005-2006
- **Vice-rector** of International Relations, Finance and Administration, 2007-2010

Other duties outside the University of Cyprus

- **National Contact Point** for IST-Information Society Technologies of the EU 5th framework RTD research program, 1999-2003.
- **Member** of the Cyprus Government Steering Committee for the Information Society, 1996-1999.

Impact of Research* **(Scientific and Application Impact)**

1. Co-founder of the new area of Abductive Logic Programming (ALP)

The three papers that have founded the area of ALP (in which A. Kakas is a coauthor) have today over 1000 citations. The systems for ALP, namely ACLP, A-system and PrologICA, developed by A. Kakas and his students are available on the web for the scientific community and they have been used by many other research groups. ALP is taught as a part of graduate courses in several departments internationally.

ALP has been used to develop prototype systems for real-life applications in several areas. We have been involved in applications for Crew-scheduling at Cyprus Airways, Timetabling at Universities (used live at the University of Pisa) and Software Specifications Refinement (in collaboration with Imperial College). Recently, we have applied it in the area of Bioinformatics by developing a system for in-silico genotyping of the HIV virus. The system has been installed at the national HIV clinic to be tested as a guide for the drug therapy of HIV carriers.

Our approach to abductive reasoning, shared with several other authors, has attracted interest from philosophy groups, referring to it as the “AKM model” of abduction, where “K” stands for Kakas, Kowalski and Kuipers.

2. Co-proposer of a Framework for Integration of Abduction and Induction in AI

A series of workshops on Abduction and Induction in AI (AIAI), was established and organized by A. Kakas and P. Flach, starting in 1996. The book resulting from the first series is unique in its kind. The framework of integration of abduction and induction proposed by A. Kakas and P. Flach (with earlier collaboration with Y. Dimopoulos) constitutes the theoretical basis for the latest version of Prolog (developed at Imperial College) which is one of the most widely used system of Inductive Logic Programming. Recently, a new system called HAIL that extends Prolog has been developed with direct guidance from A. Kakas. The theoretical framework of integration and its link to Knowledge Development was reported and published at the Godel Centenary meeting in 2006. This integration framework has also attracted interest from philosophy groups.

The proposed framework of integration of abduction and induction is used in several problems of machine learning. We have recently used it to develop the new area of Computational Bioscience of Logical Modelling of Cell Biology and have applied it, or are applying, in collaboration with different biology departments to problems of Predictive Toxicology, Functional Genomics and Cancer Prevention.

3. Argumentation in Artificial Intelligence and Multi-agent systems

A. Kakas with others have introduced the argumentation based interpretation of the semantics for logic programming. This led to Dung's abstract admissibility semantics for argumentation, used now widely by the Artificial Intelligence (AI) community. Together with Dung and

* As requested, in 2009, by the evaluation committee of the Department of Computer Science of the University of Cyprus.

Mancarella we have proposed the acceptability semantics for argumentation that encompasses the admissibility semantics. We also proposed a concrete framework of Logic Programming with Priorities (LPP) for representing argumentation theories. A. Kakas with his student N. Demetriou have developed the Gorgias system for computing argumentation in this framework of LPP. The argumentation framework for LPP was extended and adapted by A. Kakas and P. Moraitis to support autonomous agent decision making at various levels. It forms an integral part of the KGP agent architecture proposed by A. Kakas and colleagues. Gorgias drives the ProSOCS platform for implementing and developing such agents.

The Gorgias system is one of few argumentation systems available on the web and has been used by several research groups in different application problems. These include decision making in medical care and care for the elderly, portfolio construction and pricing policy for retail (with prototypes developed for supermarkets in Greece). Recently, we have used argumentation in the area of network security for analyzing and managing security policies in a novel way attracting interest from the integrated network management community. The approach has been tested using Gorgias on real-life firewall policies.

A. Kakas is a member of the ArgMAS steering committee that launched the Argumentation in MAS workshop in 2004 and oversees this well-attended yearly event and its proceedings publication. A. Kakas is also a member of a group of researchers that has been recently assigned by the community to propose a new model of agency based on argumentation. The group has called this model, ABA agents, and will submit its research direction paper within the next year.

4. Co-founder of the Language E for Reasoning about Actions and Change

The Language E forms (together with the Circumscriptive Event Calculus) the most cited extension of the Event Calculus framework. Through this we are contributing to the integrated study of the frame, ramification and qualification problems that are at the foundation of Artificial Intelligence (AI). Our formulation of the Free Will theorem and its link to Elaboration Tolerance form a theoretical benchmark for other frameworks of Reasoning about Actions and Change. We were invited to report this in a special issue of the AI Journal on CommonSense Reasoning in honour of Professor John McCarthy, the founder of AI. The E-RES system that supports the Language E is available on the web.

PUBLICATIONS in Computer Science[†]

RESEARCH SOFTWARE (Available publicly)

- ACLP: Abductive Constraint Logic Programming
- E-RES: Reasoning about Actions and Change
- ACL: Abductive Concept Learning
- A-System: Declarative Problem Solving through Abduction
- GORGIAS: Argumentation and Abduction
- ProLogICA: PROLOG with Integrity Constraints and Abduction
- HIV-ANALYSER (in-Silico Sequencing System): a prototype system for predicting HIV drug resistance from genotypic and clinical data
- PROSOCS: (Programming Societies of Computees): a prototype platform for developing autonomous agents.

EDITED BOOKS and JOURNAL SPECIAL ISSUES

H. Decker, A.C. Kakas, C. Sakama and T. Urpi, "Abduction in Deductive Databases and Knowledge-based Systems, GMD Press, ISBN 3-88457-266-0, (1995).

A.C. Kakas and A. Sinachopoulou, Proceedings of the 1st Panhellenic Symposium on Logic, ISBN 9963-607-11-X (1997).

P.A. Flach and A.C. Kakas, Abduction and Induction: Essays on their Relation and Integration, Kluwer Academic Press, ISBN 0-7923-6250-0, (2000).

K.R. Apt, A.C. Kakas, E. Monfroy and F. Rossi, New Trends in Constraints, LNAI Vol 1865, Springer-Verlag, 2000.

M. Denecker and A.C. Kakas, Abductive Logic Programming, Special issue of Journal of Logic Programming, JLP, Vol. 44(1-3), Elsevier Science, 2000.

K.R. Apt, A.C. Kakas, and F. Sadri, ACM Transactions on Computational Logic TOCL, Volume 2, Number 4. Special issue dedicated to R.A. Kowalski, ACM Press, 2001.

[†] **Citations:** According to the Science Citation Index there are over 1200 citations of the work below, about 90 of which are citations of the work in Theoretical Physics. Google Scholar has found over 3500 citations. Citeseer ranks the author in the first 4000 most cited computer scientists from a pool of nearly one million.

A.C. Kakas and F. Sadri, Computational Logic: Logic Programming and Beyond, LNAI Vol, 2407 & 2408, Springer Verlag, 2002.

A.C. Kakas and I. Niemela, Answer Set Programming and Abductive Reasoning, Proceedings of the Special Track of the 9th International Workshop on Non-Monotonic Reasoning, NMR'2002, Toulouse, France, 2002.

Y. Manolopoulos, S. Evripidou and A.C. Kakas, Advances in Informatics, LNCS Volume 2563, Springer Verlag, 2003.

A.C. Kakas and G. Lakemeyer, Actions and Change, Proceedings of the Special Track of the 11th International Workshop on Non-Monotonic Reasoning, NMR'2006, Lake District, UK, 2006.

P. Flach, A.C. Kakas and O. Ray, Abduction and Induction in Artificial Intelligence and Scientific Modeling, Proceedings of the ECAI International Workshop on the integration of Abduction and Induction in Artificial Intelligence, AIAI'06, Trento, Italy, 2006.

A. C. Kakas and P. Flach, Abduction and Induction in Artificial Intelligence, Journal of Applied Logic, Elsevier, Special Issue: doi:10.1016/j.jal.2008.11.001, 2008.

O. Ray, P. Flach, A.C. Kakas, Abduction and Induction in Artificial Intelligence and Scientific Modeling, Proceedings of the IJCAI International Workshop on the integration of Abduction and Induction in Artificial Intelligence, AIAI'09, California, USA, 2009.

BOOK CHAPTERS

A.C. Kakas and P. Mancarella, "Knowledge Assimilation and Abduction", in Truth Maintenance Systems, (eds. J. Martins and M.Reinfrank) Lecture Notes in Artificial Intelligence, LNAI Vol. 515, pp 54-70, Springer-Verlag, 1991.

A.C. Kakas, "Default Reasoning via Negation as Failure", in Foundations of Knowledge Representation and Reasoning, Lecture Notes in Artificial Intelligence Vol. 810, pp. 160-179, Springer Verlag, 1994.

Y. Dimopoulos and A.C. Kakas, "Abduction and Inductive Learning", in Advances In Inductive Logic Programming, pp. 144-172, (ed L. De Raedt) IOS Press 1996.

A.C. Kakas with R.A. Kowalski and F. Toni, The role of Abduction in Logic Programming, in the Handbook in Artificial Intelligence and Logic Programming, Volume 5, (eds. D. Gabbay, C. Hogger and J. Robinson), pp. 235-324, Oxford University Press, 1998.

P.A. Flach and A.C. Kakas, Abductive and Inductive Reasoning: Background and Issues, in *Abduction and Induction: Essays on their Relation and Integration*, pp. 1-27, Kluwer Academic Press, 2000.

P.A. Flach and A.C. Kakas, On the Relation between Abduction and Inductive Reasoning, in the *Handbook of Defeasible Reasoning and Uncertainty Management Systems*, Vol. 4, pp. 1-33, Kluwer Academic Press, 2000.

M. Denecker and A.C. Kakas, Abduction in Logic Programming, in *Computational Logic: Logic Programming and Beyond*, LNAI Vol, 2407, pp. 402-437, Springer Verlag, 2002.

P.A. Flach and A.C. Kakas, Abduction and Induction in Artificial Intelligence, Special Issue of the *Journal of Applied Logic*, Springer Verlag, 2008.

A.C. Kakas, Abduction in Machine Learning, in the *Encyclopedia of Machine Learning*, Springer, to appear in 2010.

JOURNAL Publications

A.C. Kakas and P. Mancarella, "On the relation between partial stable models and preferred extensions", *Journal of Logic Programming* 14 No (3,4) 341-348, (1993).

A.C. Kakas, R.A. Kowalski and F. Toni, "Abductive Logic Programming", *Journal of Logic and Computation*, 2 no 6, 719-770, (1993).

A.C. Kakas and R. Miller, "A Simple Declarative Language for Describing Narratives with Actions", *Journal of Logic Programming*, Volume 31(1-3), pp. 157-200, 1997.

A.C. Kakas and R. Miller, "Reasoning about Actions, Narratives and Ramifications", *Journal of Electronic Transactions in Artificial Intelligence*, Vol 1, No 4, pp. 39-72, 1997.

P.A. Flach and A.C. Kakas, Abduction and Induction in Artificial Intelligence, *Journal of IGPL*, Vol., 6(4) pp. 651-656, Oxford University Press, 1998.

A.C. Kakas and F. Toni, Computing Argumentation in Logic Programming, *Journal of Logic and Computation*, Vol. 9, No 4, pp. 515-562, Oxford University Press, 1999.

M. Denecker and A.C. Kakas, Abductive Logic Programming: Editors Introduction, *Journal of Logic Programming*, Vol. 44(1-3), pp. 1-4, Elsevier, 2000.

A.C. Kakas, A. Michael and C. Mourlas, ACLP: Abductive Constraint Logic Programming, *Journal of Logic Programming*, Vol. 44(1-3), pp. 129-177, Elsevier, 2000.

A.C. Kakas and F. Riguzzi, Abductive Concept Learning, *New Generation Computing*, Vol. 18, pp. 243-294, Ohmsha and Springer-Verlag, 2000.

A.C. Kakas and A. Michael, An Abductive-based Scheduler for Air-crew Assignment, *Journal of Applied Artificial Intelligence*, Vol. 15 (1-3), pp. 333-360, Taylor & Francis, 2001.

Y. Dimopoulos and A.C. Kakas, Information Integration and Computational Logic, *Computational Logic, Special Issue: Technological Roadmap for CL*, pp. 105-135, 2001. (Submitted also to *ACM Computing Surveys*).

A.C. Kakas and P. Moraitis, Argumentative Agent Deliberation, Roles and Context, *Electronic Notes in Theoretical Computer Science* Vol. 70, No 5, 16 pages, 2002.

G. Fakas, A.C. Kakas and C.N. Schizas, Electronic Roads: Intelligent Navigation Through Multi-Contextual Information, *Knowledge and Information Systems, International Journal*, Springer, Volume 6, Number 1, pp. 103-124, 2003.

A. Bracciali, N. Demetriou, U. Endriss, A.C. Kakas, W. Lu, K. Stathis, “Crafting the Mind of PROSOCS Agents”, *Journal of Applied Artificial Intelligence*, Taylor & Francis, Volume 20(2-4), pp. 105-131, 2006.

A. Kakas, N. Maudet, P. Moraitis. “Modular Representation of Agent Interaction Rules through Argumentation” *Journal of Autonomous Agents and Multiagent Systems*, 11(2):189-206, Springer Verlag, 2005.

P.A. Flach and A.C. Kakas, On the Logic of Scientific Knowledge Development, in the Kurt Gödel Society Collegium Logicum, Vol IX Gödel Centenary 2006, pp. 19-23, 2006.

A. Tamaddoni-Nezhad, R.Chaleil, A.C. Kakas and S. Muggleton, Application of abductive ILP to learning metabolic network inhibition from temporal data, *Journal of Machine Learning*, Vol. 64, no 1-3, pp. 209-230, Springer, 2006.

A. Tamaddoni-Nezhad, R.Chaleil, A.C. Kakas, M.-Sternberg and S. Muggleton, Modelling the effects of toxins in metabolic networks, *IEEE Engineering in Medicine and Biology*, Vol. 26, no 2, pp. 37-47, 2007.

A.C. Kakas, P. Mancarella, F.Sadri, K.Stathis, F. Toni, “Computational Logic Foundations of KGP Agents”, *Journal of Artificial Intelligence Research*, Volume 33, pp. 285-348, 2008.

A. C. Kakas, L. Michael and R. Miller, Modular-E: An Elaboration Tolerant Approach to the Ramification and Qualification Problem, special issue of the *Journal of Artificial Intelligence*, on the occasion of the 80th birthday of the founder of Artificial Intelligence, Professor John McCarthy, Elsevier, Electronic version: <http://dx.doi.org/10.1016/j.artint.2010.04.008>, forthcoming in print, 2010.

TOP-TIER CONFERENCE Publications (Referred with 3 Reviewers)

A.C. Kakas and P. Mancarella, "Anomalous models and Abduction" in Proceedings of the second International Symposium on Artificial Intelligence, Monterrey, Mexico, (ed. F.J. Cantu-Ortiz) McGraw-Hill, pp. 1-17, 1989.

A.C. Kakas and P. Mancarella, "Generalised Stable Models: A Semantics for Abduction" in Proceedings of the ninth European Conference on Artificial Intelligence, ECAI-90, Stockholm, Sweden, (ed. L.C. Aiello) Pitman Publishing, pp. 385-391, (1990).

A.C. Kakas and P. Mancarella, "On the relation between Truth Maintenance and Abduction" in Proceedings of the first Pacific Rim International Conference on Artificial Intelligence, PRICAI-90, Nagoya, Japan (ed. T. Fukumura) Ohmsha Ltd.(1990) 438-443.

A.C. Kakas and P. Mancarella, "Database Updates through Abduction", in Proceedings of the 16th International Conference on Very Large Databases, VLDB-90, Brisbane, Australia, (eds. D. McLeod, R. Sacks-Davis and H. Schek) Morgan Kaufmann, pp. 650-661, (1990).

A.C. Kakas and P. Mancarella, "Abductive Logic Programming", in Proceedings of the NACLPL-90 International Workshop on Non-Monotonic Reasoning and Logic Programming, Austin, USA, (eds. W. Marek, A. Nerode, D. Pedreschi and V.S. Subrahmanian), pp. 49-62, (1990).

A.C. Kakas and P. Mancarella, "Negation as Stable Hypotheses", in Proceedings of the first International Workshop on Logic Programming and Non-Monotonic Reasoning, LPNMR91, Washington, USA, (1991).

A.C. Kakas and P. Mancarella, "Stable Theories for Logic Programs", in Proceedings of the 1991 International Logic Programming Symposium, San Diego, California, USA, pp. 85-100, (1991).

C. Evans and A.C. Kakas, "Hypothetico-Deductive Reasoning", in Proceedings of the International Conference on Fifth Generation Computer Systems, FGCS-92, pp. 546-555, Tokyo, Japan, (1992).

A.C. Kakas and G. Papadopoulos, "Parallel Abduction in Logic Programming", in Proceedings of the first International Symposium on Parallel Symbolic Computation, PASCO-94, pp. 214-224, World Scientific Press, 1994.

A.C. Kakas, P. Mancarella and P.M. Dung, "Acceptability semantics for Logic Programs", in Proceedings of the 11th International Conference on Logic Programming, ICLP-94, pp. 504-519, Santa Margarita Ligure, Italy, MIT Press, (1994).

Y. Dimopoulos and A.C. Kakas, "Learning Non-Monotonic Logic Programs: Learning Exceptions" in Proceedings of the 8th European Conference in Machine Learning, ECML-95, LNAI Volume 912, pp. 122-138, Springer-Verlag, 1995.

A.C. Kakas and A. Michael, "Integrating Abductive and Constraint Logic Programming", in Proceedings of the Twelfth International Conference on Logic Programming, ICLP-95, pp. 399-417, MIT Press, 1995.

F. Toni and A.C. Kakas, "Computing the Acceptability Semantics", in Proceedings of the third workshop on Logic Programming and Non-monotonic Reasoning, Lecture Notes in Artificial Intelligence, Volume 928, pp. 401-417, Springer-Verlag, 1995.

Y. Dimopoulos and A.C. Kakas, "Logic Programming without Negation as Failure", Proceedings of the Fifth International Logic Programming Symposium, ILPS-95, pp. 369-384, MIT Press, 1995.

A.C. Kakas, "Viable Non-monotonic Applications", in proceedings of the ECAI96 workshop on Integrating Non-monotonicity into Automated Reasoning Systems, Budapest, pp. 32-37, 1996.

Y. Dimopoulos, A.C. Kakas and S. Dzeroski, "Integrating Explanatory and Descriptive Induction in ILP" in Proceedings of the 15th International Joint Conference on Artificial Intelligence (IJCAI97), Nagoya, Japan, 1997, pp. 411- 418.

A.C. Kakas and C. Mourlas, "ACLP: Flexible Solutions to Complex Problems", Fourth International Conference on Logic Programming and Non-monotonic Reasoning (LPNMR97), Volume 1265, Springer Verlag, 1997, pp. 387-399.

A.C. Kakas and F. Riguzzi, "Learning with Abduction", Seventh International Workshop on Inductive Logic Programming (ILP97), Lecture Notes in Artificial Intelligence, Volume 1297, Springer Verlag, 1997, pp. 181-189.

A.C. Kakas, R.S. Miller and F. Toni, An Argumentation Framework for Reasoning about Actions and Change, in Proceedings of LPNMR'99, LNAI Vol. , pp. 78--91, Springer Verlag, 1999.

A.C. Kakas, E. Lamma and F. Riguzzi, Learning Multiple, in Proceedings of the 8th International Conference on Artificial Intelligence: Methodology, Systems and Applications (AIMSA98), LNAI 1480, pp. 303-316, Springer Verlag, 1998.

A.C. Kakas and A. Michael, Air-Crew Scheduling through Abduction, In proceedings of the 12th International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems, IEA/AIE-99, pp. 600-612, 1999.

A.C. Kakas, A. Michael and C. Mourlas, ACLP: a case for non-monotonic reasoning, in Proceedings of the seventh International Workshop on Nonmonotonic reasoning, NMR98, Trento, Italy, pp. 46-56, 1998.

A.C. Kakas, R.S. Miller and F. Toni, Planning with Incomplete Information, in the proceedings of NMR2000, <http://xxx.lanl.gov/abs/cs.AI/0003049>, 2000.

A.C. Kakas, ACLP: Integrating Abduction and Constraint Solving" in the proceedings of NMR2000, <http://xxx.lanl.gov/abs/cs.AI/0003020>, 2000.

A.C. Kakas, R.S. Miller and F. Toni, E-RES: A system for reasoning about actions, events and observations, in the proceedings of NMR2000, <http://xxx.lanl.gov/abs/cs.AI/0003034> , 2000.

P.A. Flach and A.C. Kakas, The Cycle of Abductive and Inductive Knowledge Development, in Proceedings of Machine Intelligence 17, MI-17, pp. 17-25, July 2000.

A.C. Kakas, R.S. Miller and F. Toni, E-RES: Reasoning about Actions, Events and Observations, in the proceedings of LPNMR2001, LNAI Vol. 2173, pp. 254-266, Springer Verlag, 2001.

A.C. Kakas, B. Van Nuffelen, A-System: Programming with Abduction, in the proceedings of LPNMR-01, LNAI Vol. 2173, pp. 393-396, Springer Verlag, 2001.

A.C. Kakas, B. Van Nuffelen and M. Denecker, A-System: Declarative Problem Solving through Abduction, in the proceedings of IJCAI2001, pp. 591-597, Morgan Kaufmann, 2001.

A.C. Kakas and L. Michael, Modeling Complex Domains of Reasoning about Action and Change, in the Proceedings of the 9th International Workshop on Non-Monotonic Reasoning, NMR'2002, pp. 380-388, Toulouse, France, 2002.

A.C. Kakas and P. Moraitis, Argumentative Agent Deliberation, Roles and Context, in Proceedings of CLIMA02, pp. 35-49, 2002.

A.C. Kakas and P. Moraitis, Argumentative Deliberation for Autonomous Agents, in Proceedings of the ECAI02 workshop on Computational Models of Natural Argumentation, pp. 65-74, 2002.

A.C. Kakas and P. Moraitis, Argumentative Deliberation for Autonomous Agents, in Proceedings of the 2nd International Joint Conference on Autonomous Agents and Multi-Agent Systems, AAMAS-03, pp. 883-890, ACM Press, 2003.

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Y. Dimopoulos, A.C. Kakas, L. Michael. "Reasoning about Actions and Change in Answer Set Programming" Logic Programming and Nonmonotonic Reasoning, 7th International Conference, LPNMR 2004, Fort Lauderdale, FL, USA, pg. 61-73, LNCS 2923, Springer 2004.

Kostas Stathis , Antonis C. Kakas, Wenjin Lu , Neophytos Demetriou, Ulle Endriss and Andrea Bracciali, "PROSOCS: a platform for programming software agents in computational logic", Proceedings of the 17th European Meeting on Cybernetics and Systems Research, Vol. II, Symposium "From Agent Theory to Agent Implementation" (AT2AI-4), pp. 523—528, 2004.

A.C. Kakas, P. Mancarella, F.Sadri, K.Stathis, F. Toni, “The KGP model of Agency”, in proceedings of the 16th European Conference on Artificial Intelligence, ECAI 2004, pp. 354-359, IOS Press, 2004.

A.C. Kakas, P. Mancarella, F.Sadri, K.Stathis, F. Toni, “Declarative Agent Control”, in Proceedings of Computational Logic in Multi-Agent Systems, CLIMA V, pp. 212-226, 2004.

A.C. Kakas, Paolo Torroni and Neophytos Demetriou, “Agent Planning, Negotiation, and Control of Operation”, in proceedings of the 16th European Conference on Artificial Intelligence, ECAI 2004, pp. 28-32, IOS Press, 2004.

A Bracciali, A.C. Kakas, “Frame consistency: Reasoning with causal explanations”, in the Proceedings of the 10th International Workshop on Non-Monotonic Reasoning, NMR'2004, pp. 79-87, Whistler BC, Canada, 2004.

Alireza Tamaddoni-Nezhad, Antonis Kakas, Stephen Muggleton and Florencio Pazos, “Modelling inhibition in metabolic pathways through Abduction and Induction”, in Proceeding of ILP04, LNAI Vol. **3194**, pp. 305-323, 2004.

A. Kakas, N. Maudet, P. Moraitis. “Layered strategies and protocols for argumentation-based agent interaction” in Proceedings of the First International Workshop on Argumentation in Multi-Agent Systems (ArgMA04), Springer LNAI, Vol 3360, pp. 66-81, 2004.

A. Bracciali, N. Demetriou, U. Endriss, A. C. Kakas, W. Lu, P. Mancarella, F. Sadri, K. Stathis, G. Terreni, and F. Toni, “The KGP Model of Agency for Global Computing: Computational Model and Prototype Implementation”, Springer LNAI, Vol 3267, pp. 340-367, 2005.

A. C. Kakas, L. Michael and R. Miller, Modular-E: An Elaboration Tolerant Approach to the Ramification and Qualification Problems. Springer LNAI, Volume 3662, 211-226, 2005.

I. Papatheodorou, A. C. Kakas and M. J. Sergot: Inference of Gene Relations from Microarray Data by Abduction. Springer LNAI, Volume 3662, 389-393, 2005.

A. Tamaddoni-Nezhad, R. Chaleil, A. Kakas and S. Muggleton, Abduction and induction for learning models of inhibition in metabolic networks, in IEEE Proceedings of the Third International Conference on Machine Learning and Applications, ICMLA'05, Los Angeles, California, USA, 2005.

A. Yip, J. Forth, A. C. Kakas, K. Stathis, Software Anatomy of a KGP Agent, in Proceedings of EUMAS'05: 459-472, 2005.

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