ECAI 2012

20TH EUROPEAN CONFERENCE ON ARTIFICIAL INTELLIGENCE

MONTPELLIER, FRANCE
AUGUST 27-31, 2012

ECAI2012
PROGRAM

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Welcome to ECAI 2012

Welcome to ECAI 2012 in the beautiful city of Montpellier. This year again, researchers and practitioners of Artificial Intelligence gather and discuss the latest trends and challenges on AI's theory and technology. The attached program is composed of 140 presentations and 23 posters selected out of 563 papers, with an open-minded and interdisciplinary perspective.

As in past editions, ECAI 2012 features the STarting AI Researcher Symposium (STAIRS) and the Conference on Prestigious Applications of Intelligent Systems (PAIS) as sub-conferences. It again includes a special session with System Demonstrations and posters. This year, IBM has kindly offered to join and demonstrate its recent WATSON question-answering system.

This is a historical ECAI as we celebrate several anniversaries: the Turing centennial, the 20th ECAI conference and 25 years of existence of AI Communications (the ECCAI journal). These celebrations take the form of a special track where a number of distinguished speakers will provide a historical perspective on the field of Artificial Intelligence in Europe and beyond. In addition, ECAI 2012 features 4 keynote speakers, Wolfram Burgard, Adnan Darwiche, Tom Mitchell and Michael Wooldridge. We also wish to stress the novel Frontiers of Artificial Intelligence track, in which 6 invited speakers will deliver perspective talks on particularly interesting new research directions in Artificial Intelligence or one of its neighbouring fields. Last but not least, there is a very large choice of small workshops, where subcommunities of AI can gather and freely discuss specialized topics prior to attending the main conference, and some satellite events such as RuleML.

Overall we trust ECAI 2012 will be an exciting and thought-provoking conference in the very pleasant environment offered by the city of Montpellier.

Didier Dubois, Luc De Raedt and Christian Bessiere

Keynote Speakers

Wolfram Burgard

University of Freiburg, Germany

Probabilistic Techniques for Mobile Robot Navigation

Tuesday, 18:00

Probabilistic approaches have been discovered as one of the most powerful approaches to highly relevant problems in mobile robotics including perception and robot state estimation. Major challenges in the context of probabilistic algorithms for mobile robot navigation lie in the questions of how to deal with highly complex state estimation problems and how to control the robot so that it efficiently carries out its task. In this talk, I will present recently developed techniques for efficiently learning a map of an unknown environment with a mobile robot. I will also describe how this state estimation problem can be solved more effectively by actively controlling the robot. For all algorithms I will present experimental results that have been obtained with mobile robots in real-world environments.

Short bio

Wolfram Burgard is a professor for computer science at the University of Freiburg, Germany where he heads the Laboratory for Autonomous Intelligent Systems. He studied Computer Science at the University of Dortmund and received his Ph.D. degree in computer science from the University of Bonn in 1991. His areas of interest lie in artificial intelligence and mobile robots. In the past, Wolfram Burgard and his group developed several innovative probabilistic techniques for robot navigation and control. They cover different aspects including localization, map-building, path planning, and exploration. He received the prestigious Gottfried Wilhelm Leibniz-Preis in 2009 and an advanced ERC grant in 2010. He is an AAAI and ECCAI fellow.

Adnan Darwiche

UCLA, United States

Generalized Decision Diagrams: The game is not over yet!

Wednesday, 9:00

Decision diagrams have played an influential role in computer science and AI over the past few decades, with OBDDs (Ordered Binary Decision Diagrams) as perhaps the most practical and influential example. The practical influence of OBDDs is typically attributed to their canonicity, their efficient support of Boolean combination operations, and the availability of effective heuristics for finding good variable orders (which characterize OBDDs and their size). Over the past few decades, significant efforts have been exerted to generalize OBDDs, with the goal of defining more succinct representations while retaining the attractive properties of OBDDs. On the theoretical side, these efforts have yielded a rich set of decision diagram generalizations. Practically, however, OBDDs remain as the single most used decision diagram in applications. In this talk, I will discuss a recent line of research for generalizing OBDDs based on a new type of Boolean-function decompositions (which generalize the Shannon decomposition underlying OBDDs).

I will discuss in particular the class of Sentential Decision Diagrams (SDDs), which branch on arbitrary sentences instead of variables, and which are characterized by trees instead of total variable orders. SDDs retain the main attractive properties of OBDDs and include OBDDs as a special case. I will discuss recent theoretical and empirical results, and a soon-to-be-released open source package for supporting SDDs, which suggest a potential breakthrough in the quest for producing more practical generalizations of OBDDs.

Short bio

Adnan Darwiche is a Professor and former Chairman of the Computer Science Department at UCLA. He obtained his Ph.D. degree in Computer Science from Stanford University in 1993. Professor Darwiche currently directs the automated reasoning group at UCLA which focuses on the theory and practice of probabilistic and logical reasoning, and is credited for publicly releasing a number of award-winning reasoning systems (http://reasoning.cs.ucla.edu/). Professor Darwiche is a former Editor-in-Chief of the Journal of Artificial Intelligence Research (JAIR). He is also an AAAI fellow, and author of the textbook, «Modeling and Reasoning with Bayesian Networks,» published by Cambridge Uni-

Tom Mitchell

CMU, United States

Never Ending Learning

Thursday, 9:00

We will never really understand learning or intelligence until we can build machines that learn many different things, over years, and become better learners over time. This talk describes our research to build a Never-Ending Language Learner (NELL) that runs 24 hours per day, forever, learning to read the web. Each day NELL extracts (reads) more facts from the web, and integrates these into its growing knowledge base of beliefs. Each day NELL also learns to read better than yesterday, enabling it to go back to the text it read yesterday, and extract more facts, more accurately. NELL has been running 24 hours/day for over two years now. The result so far is a collection of 15 million interconnected beliefs (e.g., servedWtih(coffee, applePie), isA(applePie, bakedGood)), that NELL is considering at different levels of confidence, along with hundreds of thousands of learned phrasings, morphological features, and web page structures that NELL uses to extract beliefs from the web. Track NELL's progress at http://rtw.ml.cmu.edu.

Short bio

Tom M. Mitchell founded and chairs the Machine Learning Department at Carnegie Mellon University, where he is the E. Fredkin University Professor. His research uses machine learning to develop computers that are learning to read the web, and uses brain imaging to study how the human brain understands what it reads. Mitchell is a member of the U.S. National Academy of Engineering, a Fellow of the American Association for the Advancement of Science (AAAS), and a Fellow of the Association for the Advancement of Artificial Intelligence (AAAI). He believes the field of machine learning will be the fastest growing branch of computer science during the 21st century.

Michael Wooldridge

University of Liverpool, UK

Bad Equilibria, and What to do About Them

Friday, 9:00

In economics, an equilibrium is a steady-state situation, which is obtained because no participant has any rational incentive to deviate from it. Equilibrium concepts are arguably the most important and widely used analytical weapons in the game theory arsenal. The concept of Nash equilibrium in particular has found a huge range of applications, in areas as diverse and seemingly unrelated as biology and moral philosophy. However, there remain fundamental problems associated with Nash equilibria and their application. First, there may be multiple Nash equilibria, in which case, how should we choose between them? Second, some equilibria may be undesirable, in which case, how can we avoid them? In this presentation, I will introduce work that we have done addressing these problems from a computational/AI perspective. Assuming no prior knowledge of game theory or economic solution concepts, I will discuss various ways in which we can try to engineer a scenario so that desirable equilibria result, or else engineer out undesirable equilibria.

Short bio

Michael Wooldridge is a Professor of Computer Science in the Department of Computer Science at the University of Oxford, and a Senior Research Fellow at Hertford College. He joined Oxford on 1 June 2012; before this he was for twelve years a Professor of Computer Science at the University of Liverpool. In October 2011, he was awarded a 5-year ERC Advanced Grant, entitled «Reasoning About Computational Economies» (RACE).

He is an AAAI Fellow, an ECCAI Fellow, an AISB Fellow, and a BCS Fellow. In 2006, he was the recipient of the ACM Autonomous Agents Research Award. In 1997, he founded AgentLink, the EC-funded European Network of Excellence in the area of agent-based computing. He was program chair for ECAI 2010, held in Lisbon, Portugal, in August 2010. He will be General Chair for the 24th International Joint Conference on Artificial Intelligence (IJCAI-2015), to be held in Buenos Aires, Argentina. Between 2003 and 2009, he was co-editor-in-chief of the Autonomous Agents and Multi-Agent Systems Journal. He is an associate editor of the Journal of Artificial Intelligence Research (JAIR) (2006-2009, 2009-2012), an associate editor of Artificial Intelligence journal (2009-2012) and serves on the editorial boards of the Journal of Applied Logic, Journal of Logic and Computation, Journal of Applied Artificial Intelligence, and Computational Intelligence.

Invited Tutorial Speakers

Michael Beetz

University of Bremen

Knowledge processing and reasoning for robotic agents performing everyday manipulation

The tutorial will describe knowledge processing and reasoning methods that are embodied into an autonomous robot in order to perform everyday manipulation actions such as cleaning up, preparing meals, and setting a table more competently. The tutorial will cover:

- requirements for robot knowledge processing and reasoning,
- semantic robot description language,
- reasoning with the execution time data structures of control systems,
- issues in translating web instructions into robot action plans,
- integrating knowledge processing and perception,
- representing and acquiring semantic, object-based environment maps,
- prediction-based action parameterization,
- simulation-based plan projection, and
- probabilistic reasoning mechanisms.

The tutorial is accompanied with various opensource software tools that can be obtained from ias.cs.tum.edu/research/knowledge (KnowRob), ias.cs.tum.edu/research/cram (CRAM plan language), and ias.cs.tum.edu/research/probcog (PROBCOG) including download instructions and tutorials.

Short bio

Michael Beetz holds the chair on Artificial Intelligence in the Department of Mathematics and Computer Science at the University of Bremen and heads the research group «Intelligent Autonomous Systems». From 2004 to 2012 he has been professor for computer science at the Department of Informatics of Technische Universität München and headed the Intelligent Autonomous Systems group. He has been the vice coordinator of the German cluster of excellence CoTeSys (Cognition for Technical Systems) from 2007-2011 and is coordinator of the EU FP7 integrating project ROBOHOW. Michael Beetz was a member of the steering committee of the European network of excellence in AI planning (PLANET) and coordinated the research area robot planning. He is associate editor of the Artificial Intelligence journal. He is also principal investigator of a number of national and European research projects in the area of AI-based robot control.

Michael Beetz received his diploma degree in Informatics with distinction from the University of Kaiserslautern. He received his MSc, MPhil and PhD degrees from Yale University in 1993, 1994 and 1996 and his Venia Legendi from the University of Bonn in 2000. His research interests include integrated cognition-enabled robotic systems, plan-based control of autonomous robots, knowledge representation and processing for robots, integrated robot learning and cognitive perception.

Peter Flach

University of Bristol

Unity in diversity: the breadth and depth of Machine Learning explained for AI researchers

Machine learning is one of the most active areas in artificial intelligence, but the diversity of the field can be intimidating for newcomers. The aim of this tutorial is to do justice to the field's incredible richness without losing sight of its unifying principles. I will discuss three main families of machine learning models: logical, geometric, and probabilistic. Unity is achieved by

concentrating on the central role of tasks and features. An innovative use of ROC plots provides further insights into the behaviour and performance of machine learning algorithms.

Short bio

Professor Flach publishes widely and on a broad range of subjects. He is an internationally leading researcher in the areas of mining highly structured data and the evaluation and improvement of machine learning models using ROC analysis. He has also published on the logic and philosophy of machine learning, and on the combination of logic and probability. He is author of Simply Logical: Intelligent Reasoning by Example (John Wiley, 1994) and Machine Learning: the Art and Science of Algorithms that Make Sense of Data (Cambridge University Press, 2012). Prof. Flach is currently the Editor-in-Chief of the Machine Learning journal, one of the two top journals in the field that has been published for 25 years by Kluwer and now Springer. He was Program Co-Chair of the 1999 International Conference on Inductive Logic Programming, the 2001 European Conference on Machine Learning, and the 2009 ACM Conference on Knowledge Discovery and Data Mining. In 2012 he will co-chair the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases in Bristol.

Christophe Lecoutre
Olivier Roussel

University of Artois

Constraint Reasoning

At the heart of constraint reasoning, inference methods play a central role, by typically reducing the size of the search space through filtering algorithms. In this tutorial, besides some fundamental recalls about modelling and search, we shall overview the most successful inference algorithms, for a wide range of constraint frameworks. For CSP (Constraint Satisfaction Problem), we shall present general-purpose algorithms for enforcing the property known as GAC (Generalized Arc Consistency), as well as specific GAC algorithms for table constraints and some global constraints. For WCSP (Weighted Constraint Satisfaction problem), we shall introduce the basic and more recent approaches based on cost transfer. For SAT (Satisfiability problem), we shall recall the usual Unit Propagation and the inference techniques that are used to improve its power. We shall focus on the link with GAC on CSP. For pseudo-Boolean constraints, we shall present the cutting plane inference system and establish links with SAT and the other consistency algorithms.

Short bio

Christophe Lecoutre is a professor of Computer Science at the University of Artois, France, and member of the research laboratory CRIL (Centre de Recherche en Informatique de Lens, France). He is the author of Constraint Networks, a book published by Wiley in 2009, and is co-author of more than 50 research papers. His research centers on constraint programing, with a focus on generic algorithms for CSP and WCSP. Olivier Roussel is associate professor of Computer Science at the University of Artois, France. His research interests are focused on satisfiability in a broad sense, including SAT, pseudo-Booleans, CSP, and WCSP. He has organized several editions of various solver competitions (SAT, pseudo-Booleans, CSP).

Olivier Roussel is associate professor of Computer Science at the University of Artois, France. He received his doctoral degree in computer science in 1997 from University of Lille, France. His research interests are focused on satisfiability in a broad sense, including SAT, pseudo-Booleans, CSP, and WCSP. He has organized several editions of various solver competitions (SAT, pseudo-Booleans, CSP).

Eyke Hüllermeier

Universiy of Marburg

Johannes Fuernkranz

TU Darmstadt

Preference Learning

The primary goal of this tutorial is to survey the field of preference learning in its current stage of development. The presentation will focus on a systematic overview of different types of preference learning problems, methods and algorithms to tackle these problems, and metrics for evaluating the performance of preference models induced from data. More details can be found at http://www.ke.tu-darmstadt.de/events/PL-12/tutorial.html

Short bio

Eyke Hüllermeier was born in 1969. He holds MSc degrees in mathematics and business informatics, both from the University of Paderborn (Germany). From the Computer Science Department of the same university he obtained his PhD in 1997 and a Habilitation degree in 2002. He worked as a researcher and teaching assistant in the fields of computer science (artificial intelligence, knowledge-based systems) and statistics at the University of Paderborn and the University of Dortmund. From 1998 to 2000, he spent two years as a Marie Curie fellow at the IRIT -- Institut de Recherche en Informatique de Toulouse. Prior to joining the Department of Mathematics and Computer Science at Marburg University as a full professor, he held a position as an associate professor in the Faculty of Computer Science at the Otto-von-Guericke-Universität Magdeburg (2004-2006) and as a Junior professor in Marburg (2002-2004).

Johannes Fürnkranz is a Professor for Knowledge Engineering at TU Darmstadt. He obtained Master Degrees from TU Wien and the University of Chicago, and a Ph.D. from the TU Wien with a Thesis on «Pruning Algorithms for Rule Learning». His main research interest is machine learning, in particular inductive rule learning and preference learning, and their applications in game playing, web mining, and data mining in the Social Sciences. He is action editor for «Machine Learning» and «Data Mining and Knowledge Discovery», current or past Editorial Board Member of several other renown journals, and a regular Senior PC member of premier conferences in these areas. In 2006, he co-chaired the 6th European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases in Berlin, and in 2010 he served as program co-chair of the 27th International Conference on Machine Learning in Haifa, Israel.

Andreas Krause

ETH Zurich

Stefanie Jegelka

UC Berkeley

Submodularity in Artificial Intelligence

Many problems in AI are inherently discrete. Often, the resulting discrete optimization problems are computationally extremely challenging. While convexity is an important property when solving continuous optimization problems, submodularity, also viewed as a discrete analog of convexity, is closely tied to the tractability of many problems: its structure is key to solving many discrete optimization problems. Even more, the characterizing property of submodular functions, diminishing marginal returns, emerges naturally in various settings and is a rich abstraction for a myriad of problems. Long recognized for its importance in combinatorial optimization and game theory, submodularity is now appearing in an increasing number of applications in AI, in particular in machine learning and computer vision. These include probabilistic inference, structure learning, sparse representation and reconstruction, unspervised and active learning, optimized information gathering, summarization and influence maximization. Recent work ex-

tends submodular optimization to sequential decision making under uncertainty, and addresses learning of submodular functions, combinatorial problems with submodular loss functions and more efficient optimization algorithms. The wide range of applications and of theoretical questions make submodularity a relevant and interesting topic to many researchers in AI. This tutorial introduces AI researchers to the concept of submodular functions, their optimization, applications and recent research directions. Illustrative examples and animations will help develop an intuition for the concept and algorithms. The tutorial aims at providing an overview of existing results that are important to AI researchers, discuss AI applications with an emphasis on machine learning and computer vision, and will provide pointers to further, detailed resources. Sample older slides are available at submodularity.org. The tutorial will also cover new results and directions from the past five years. The tutorial will be divided into four sections:

1. What is submodularity and what is special about it? Is my problem submodular?
2. What are example applications of submodular maximization and minimization?
3. What algorithms exist for optimizing submodular functions?
4. What are new directions?

Short bio

Both authors have considerable expertise in the area. Andreas Krause, assistant professor at ETH Zurich, has investigated several aspects of submodularity in machine learning, with a particular emphasis on optimized information gathering and active learning. His work in this area has won awards at several conferences (KDD, ICML, UAI, AAAI, IPSN). He has previously held tutorials at ICML, IJCAI and LION. Stefanie Jegelka is a postdoctoral researcher at UC Berkeley. Her Ph.D. thesis introduces submodular costs into combinatorial minimization problems in machine learning and computer vision, and addresses practical algorithms and online learning with submodular functions. The authors have also organized a series of workshops on Discrete Optimization in Machine Learning (DISCML) at the annual NIPS conference.

Leon Van Der Torre

University of Luxembourg

Logics for multi-agent systems

A variety of logics is used to reason about multiagent systems. For example, temporal logic has been imported from computer science, in particular ATL to reason about the powers of agents, and extended with modalities for cognitive attitudes. More recently logics for agent interaction have become popular, such as argumentation theory for dialogues, and deontic logic for coordination. In this tutorial we give an overview of logics used in multiagent systems, and discuss their combination and interaction. We illustrate the combination of multiagent logics with an example from agreement technologies.

Short bio

Leon van der Torre developed the BOID agent architecture (with colleagues from Vrije Universiteit), input/output logic (with David Makinson) and the game-theoretic approach to normative multiagent systems (with Guido Boella from University of Turin). He is an editor of the Handbook of Deontic Logic and Normative Systems (in preparation), corner editor of the Journal of Logic and Computation, and member of editorial board of Logic Journal of the IGPL. In January 2006 he joined the University of Luxembourg as a full professor for Intelligent Systems, and on May 2nd, 2007, he delivered his inaugural speech «Violation games: a new approach of handling norms in intelligent systems.'' He is driven by the insight that intelligent systems (like humans) are characterized not only by their individual reasoning capacity, but also by their social interaction potential. His ove-

rarching goal is to develop and investigate comprehensive formal models and computational realizations of individual and collective reasoning and rationality. His current research interests are normative multi-agent systems, autonomous cognitive agents, computational social choice, and the foundations of logic-based knowledge representation and reasoning.

Francesca Rossi

University of Padova, Italy

Kristen Brent Venable

Tulane University and IHMC

Toby Walsh

NICTA Australia and University of New South Wales

Preference reasoning and aggregation

Preferences are ubiquitous in everyday decision making. They are therefore an essential ingredient of many reasoning tools. This tutorial will start by presenting the main approaches to model and reason with preferences, such as soft constraints and CP-nets. We will also consider issues such as preference elicitation and various forms of uncertainty given by missing, imprecise, or vague preferences. We will then consider multi-agent settings, where several agents express their preferences over common objects and the system should aggregate such preferences into a single satisfying decision. In this setting, we will exploit notions and results from different fields, such as social choice, matching, and multi-criteria decision making. Intended audience: The tutorial is meant for students as well as for researchers which may be interested in an introduction to preference modeling and reasoning. The target also includes researchers from several AI fields interested in understanding the applications of preferences to their area. No specific prerequisite knowledge is essential. Some general knowledge of AI and computational complexity is advisable.

Short bio

Francesca Rossi is a full professor of Computer Science at the University of Padova, Italy. She works on constraint programing, preference reasoning, and multi-agent preference aggregation. She has published over 170 papers on these topics and she has edited 16 volumes between collections of articles and special issues. She has been conference chair of CP 1998, program chair of CP 2003, and conference organizer of ADT 2009. She will be program chair of IJCAI 2013. She is a co-editor of the Handbook of Constraint Programming, with Peter Van Beek and Toby Walsh, published by Elsevier in 2006. She has been the president of the Association for Constraint Programming from 2003 to 2007. She is a member of the advisory board of JAIR (where she has been associate editor in 2005-2007) and of the editorial board of Constraints and of the AI Journal, an associate editor of AMAI, and a column editor for the Journal of Logic and Computation. She is an ECCAI fellow.

Kristen Brent Venable is associate professor in the Department of Computer Science of Tulane University and research scientist at IHMC, the Florida Institute of Human and Machine Cognition. In the past she has been assistant professor in the Dept. of Pure and Applied Mathematics at the University of Padova (Italy). Her main research interests are within artificial intelligence and regard, in particular, compact preference representation formalisms, computational social choice, temporal reasoning and, in general, constraint-based optimization. Her list of publications includes more than 70 papers including journals and proceedings of the main international conferences on the topics relevant to her interests. She is involved in a lively international scientific exchange and, among others, she collaborates with researchers from NASA Ames, SRI International, NICTA-UNSW (Australia),University of Amsterdam (The Netherlands), 4C (Ireland) and Ben-Gurion University (Israel).

Toby Walsh is Research Group Leader at NICTA. He is adjunct Professor at the Department of Computer Science and Engineering at the University of New South Wales, external Professor of the Department of Information Science at Uppsala University and an honorary fellow of the School of Informatics at Edinburgh University. He is Editor-in-Chief of the Journal of Artificial Intelligence Research, and was previously Editor-in-Chief of AI Communications. He is on the editorial board of the Journal of Automated Reasoning and the Constraints journal. He has been elected a fellow of both the Association for the Advancement of Artificial Intelligence and the European Coordinating Committee for AI in recognition of his research and service to the community. He has been Secretary of the Association for Constraint Programming (ACP) and is Editor of CP News, the newsletter of the ACP. He is one of the Editors of the Handbook for Constraint Programming, and the Handbook for Satisfiability. He was Program Chair of the Constraint Programming Conference in 2001, Conference Chair of the International Joint Conference on Automated Reasoning in 2004, Program and Conference Chair of the Satisfiability Conference in 2005, Conference Chair of the Constraint Programming Conference in 2008 and Program Chair of the International Joint Conference on AI in 2011.

Program at a Glance

The Monday and Tuesday sessions will be held at Montpellier 2 University. The opening session and all sessions on Wednesday, Thursday and Friday will be held at Le Corum Congress Hall.

	Monday, August 27				Tuesday, August 28			
Morning 9.00 - 12.40	Tutorials	Workshops	STAIRS	RuleML	Tutorials	Workshops	STAIRS	RuleML
								10.10 - 10.30
	Tutorials	Workshops	STAIRS	RuleML	Tutorials	Workshops	STAIRS	RuleML
								12.40 - 14.30
Afternoon 14.30 - 18.00	Tutorials	Workshops	STAIRS	RuleML	Tutorials	Workshops	STAIRS	RuleML
								16.10 - 16.45
	Tutorials	Workshops	STAIRS	RuleML	Tutorials	Workshops	STAIRS	RuleML
					18.00 - **Opening Session** Keynote Speaker: Wolfram Burgard			
					20.00 - **Welcome Cocktail Buffet**			

Legend:

ECAI main conference

WEDNESDAY, AUGUST 29			THURSDAY, AUGUST 30			FRIDAY, AUGUST 31	
RuleML	Keynote Speaker Adnan Darwiche		Keynote Speaker Tom Mitchell			Keynote Speaker Michael Wooldridge	
// COFFEE BREAK							
RuleML	Anniversary Turing Session	Parallel Sessions	PAIS	Anniversary Turing Session	Parallel Sessions	Anniversary Turing Session	Parallel Sessions
// LUNCH BREAK							
RuleML	Parallel Sessions		PAIS	Parallel Sessions		Parallel Sessions	
// COFFEE BREAK							
RuleML	Parallel Sessions		16.10- System Demo and Poster Session			16.30 - CLOSING SESSION	
18.30 - 22.00 - Visit to IBM			18.00 - Buses departure: GALA DINNER at Valmagne Abbey				

ECAI Workshop&Tutorial Program

Location: Montpellier 2 University

Monday, August 27

TUTORIALS

Morning // 9:00-12:30

T5 // Submodularity in Artificial Intelligence Andreas Krause and Stefanie Jegelka

T6 // Logics for Multi-Agent Systems Leon Van der Torre

Afternoon // 14:00-17:30

T2 // Unity in diversity: the breadth and depth of Machine Learning explained for AI researchers Peter Flach

T1 // Knowledge processing and reasoning for robotic agents performing everyday manipulation Michael Beetz

WORKSHOPS

M+A W1 // Spatio-Temporal Dynamics (STeDy 2012) [Program chairs: Mehul Bhatt, Hans W. Guesgen and Ernest Davis]

M+A W2 // 13th International Workshop on Computational Logic in Multi-Agent Systems (CLIMA XIII) [Program chairs: Michael Fisher and Leon Van Der Torre]

A W3 // Ubiquitous Data Mining (UDM) [Program chairs: Joao Gama, Manuel Santos, Nuno Marques, Paulo Cortez and Pedro Rodrigues]

M+A W6 // Workshop on Configuration (ConfWS'12) [Program chairs: Wolfgang Mayer and Patrick Albert]

M+A W11 // 2nd International Workshop on Agent-based Modeling for PoLicy Engineering [Program chairs: Francien Dechesne, Amineh Ghorbani and Neil Yorke-Smith]

A W14 // Active and Incremental Learning (AIL) [Program chairs: Vincent Lemaire, Pascal Cuxac and Jean-Charles Lamir]

M+A W16 // 1st International Workshop of Artificial Intelligence and Netmedicine (NetMed) [Program chairs: Aldo Franco Dragoni and Roberto Posenato]

M W18 // Citi-Sen2012 [Program chairs: Jordi Nin and Daniel Villatoro]

M+A W19 // 12th International Workshop On Computational Models of Natural Argument (CMNA 12) [Program chairs: Floriana Grasso, Nancy Green and Chris Reed]

M+A W20 // Workshop on AI Problems and Approaches for Intelligent Environments (AI@IE 2012) [Program chairs: Sebastian Bader, Anika Schumann and Stephan Sigg]

M+A W21 // SAMAI: Similarity and Analogy-based Methods in AI [Program chairs: Gilles Richard]

M+A W23 // Artificial Intelligence meets the Web of Data (AImWD) [Program chairs: Christophe Guéret, Dino Ienco, Francois Scharffe and Serena Villata]

M+A W25 // 6th Multidisciplinary Workshop on Advances in Preference Handling [Program chairs: Nicolas Maudet, Kristen Brent Venable and Paolo Viappiani]

M+A W31 // COmbining COnstraint solving with MIning and LEarning (CoCoMile) [Program chairs: Remi Coletta, Tias Guns, Barry O'Sullivan, Andrea Passerini and Guido Tack]

M+A W33 // Computer Games Workshop at ECAI 2012 [Program chairs: Tristan Cazenave]

M+A W36 // Machine Learning for Interactive Systems (MLIS): Bridging the Gap Between Language, Motor Control and Vision [Program chairs: Heriberto Cuayahuitl, Lutz Frommberger, Nina Dethlefs and Hichem Sahli]

A W39 // Diagnostic REAsoning: Model Analysis and Performance (DREAMAP) [Program chairs: Yannick Pencolé, Alexander Feldman and Alban Grastien]

M+A W40 // Computational Creativity, Concept Invention, and General Intelligence 2012 [Program chairs: Tarek Richard Besold, Kai-Uwe Kuehnberger, Alan Smaill and Marco Schorlemmer]

M+A W42 // BNC'12: Belief change, Nonmonotonic reasoning, and Conflict resolution [Program chairs: Sébastien Konieczny and Tommie Meyer]

TUESDAY, AUGUST 28

TUTORIALS

MORNING // 9:00-12:30

T7 // Preference reasoning and aggregation Francesca Rossi, Kristen Brent Venable, Toby Walsh

AFTERNOON // 14:00-17:00

T3 // Preference learning Eyke Hüllermeier and Johannes Fuernkranz

T4 // Constraint Reasoning Christophe Lecoutre and Olivier Roussel

EVENING // 18:00-20:00

OPENING SESSION at the CORUM

WORKSHOPS

M W1 // Spatio-Temporal Dynamics (STeDy 2012) [Program chairs: Mehul Bhatt, Hans W. Guesgen and Ernest Davis]

M W2 // 13th International Workshop on Computational Logic in Multi-Agent Systems (CLIMA XIII) [Program chairs: Michael Fisher and Leon Van Der Torre]

M+A W8 // Proposal of Chance Discovery and Data Synthesis [Program chairs: Nori Abe and Yukio Ohsawa]

M W9 // 7th International and ECAI 2012 Workshop on Explanation-aware Computing (ExaCt 2012) [Program chairs: Thomas Roth-Berghofer, David Leake and Jörg Cassens]

M+A W10 // 5th International Workshop on Evolutionary and Reinforcement Learning for Autonomous Robot Systems (ERLARS 2012) [Program chairs: Nils T Siebel and Yohannes Kassahun]

M+A W12 // Algorithmic issues for inference in graphical models [Program chairs: Nathalie Peyrard, Thomas Schiex and Stéphane Robin]

M+A W13 // What can FCA do for Artificial Intelligence (FCA4AI) [Program chairs: Sergei Kuznetsov, Amedeo Napoli and Sebastian Rudolph]

M W17 // 8th Workshop on Knowledge Engineering and Software Engineering (KESE2012) [Program chairs: Grzegorz J. Nalepa, Joaquín Cañadas and Joachim Baumeister]

M+A W22 // AI for Knowledge Management [Program chairs: Eunika Mercier-Laurent, Nada Matta, Ines Saad and Mieczyslaw Owoc]

M+A W24 // RDA2 - Rights and Duties of Autonomous Agents [Program chairs: Olivier Boissier, Grégory Bonnet and Catherine Tessier]

M+A W26 // JIMSE: Joint workshops on Intelligent Methods for Software System Engineering [Program chairs: Ioannis Stamelos, Stamatia Bibi and Alessandro Moschitti]

M+A W28 // Planning to Learn (PlanLearn 2012) [Program chairs: Joaquin Vanschoren, Pavel Brazdil and Jorg-Uwe Kietz]

M+A W29 // Cooking with Computers (CwC) [Program chairs: Amélie Cordier and Emmanuel Nauer]

M W30 // Preference Learning: Problems and Applications in Artificial Intelligence (PL–12) [Program chairs: Johannes Fürnkranz and Eyke Hüllermeier]

M+A W32 // Acquisition, Representation and Reasoning with Contextualized Knowledge, 4th International Workshop (ARCOE-12)

M+A W34 // WL4AI: Weighted Logics for AI [Program chairs: Lluis Godo and Henri Prade]

M+A W35 // 3rd International Workshop on Combinations of Intelligent Methods and Applications (CIMA-12) [Program chairs: Ioannis Hatzilygeroudis and Vasile Palade]

M+A W37 // 3rd International Workshop on Artificial Intelligence and Logistics (AILog) [Program chairs: Lutz Frommberger, Kerstin Schill and Bernd Scholz-Reiter]

M W38 // Workshop on Artificial Intelligence for Telecommunications and Sensors Networks (WAITS) [Program chairs: Barry O'Sullivan, Ken Brown and Cormac Sreenan]

M+A W44 // Intelligent Agents in City Simulations and Smart Cities [Program chairs: Vincent Corruble, Fabio Carrera and Stephen Guerin]

M+A Morning and Afternoon
M Morning
A Afternoon

Morning: 9:00 -13:00. Afternoon: 14:00 -18:00.
Workshops on tuesday will stop at 17:00.

STAIRS Program

Location: Montpellier 2 University

Monday, August 27

Opening

09:00-10:00
Invited Talk, Alan Bundy, University of Edinburg, UK

10:10-10:20
Poster Spotlights (4+1 minutes each)

1. «Towards a Semantic Classifier Committee based on Rocchio» Shereen Albitar, Sebastien Fournier and Bernard Espinasse
2. «Enhancing Coalition Formation in Multi-Agent Systems When Agents Plan Their activities» Souhila Arib and Samir Aknine
3. «Towards Decentralised AGV Control With Negotiations» Christoph Schwarz and Juergen Sauer
4. «Counterfactual dependency and actual causation in CP-logic and structural models: a comparison» Sander Beckers and Joost Vennekens

10:20-11:00 // Coffee break

11:00-11:40
Contributed Talks

1. «Set-Labeled Diagrams for CSP Compilation» Alexandre Niveau, Helene Fargier and Cédric Pralet
2. «A submodular-based decomposition strategy for valued CSPs» Maher Helaoui and Wady Naanaa

11:40-12:30
Poster Spotlights

1. «Identifying Geographic Events and Processes in Spatio-temporal Data» Claudio Campelo, Brandon Bennett and Vania Dimitrova
2. «Planning and Scheduling in Hybrid Domains» Sandeep Chintabathina
3. «Modeling Temporal Aspects of Contract Net Protocol Using Timed Colored Petri Nets» Boukredera Djamila, Aknine Samir and Maamri Ramdane
4. «Reward Function Learning for Dialogue Management» Layla El Asri, Romain Laroche and Olivier Pietquin
5. «Interleaving Planning and Plan Execution with Incomplete Knowledge in the Event Calculus» Manfred Eppe and Dominik Dietrich
6. «Adopting a Risk-Aware Utility Model for Repeated Games of Chance» Nathaniel Gemelli, Jeffrey Hudack and Jae Oh
7. «Investigating Strategic Considerations in Persuasion Dialogue Games» Christos Hadjinikolis, Sanjay Modgil, Elizabeth Black, Peter Mcburney and Michael Luck
8. «Hierarchical Action Selection for Reinforcement Learning in Infinite Mario» Mandar Joshi, Rakesh Khobragade, Saurabh Sarda, Umesh Deshpande and Shiwali Mohan
9. «Local stability of Belief Propagation algorithm with multiple fixed points» Victorin Martin, Jean-Marc Lasgouttes and Cyril Furtlehner

12:30-14:00 // Lunch break

14:00-15:00
Invited Talk, Andreas Krause, ETH Zurich, Switzerland

15:00-15:30
Poster Spotlights

1. «Tools for Finding Inconsistencies in Real-world Logic-based Systems» Kevin McAreavey, Weiru Liu, Paul Miller and Chris Meenan
2. «Complexity and Approximability of Egalitarian and Nash Product Social Welfare Optimization in Multiagent Resource Allocation» Nhan-Tam Nguyen, Trung Thanh Nguyen, Magnus Roos and Joerg Rothe

3. «Multi-Attribute Auction Mechanism for Supporting Resource Allocation in Business Process Enactment» Albert Pla, Beatriz Lopez and Javier Murillo
4. «A two-phase bidirectional heuristic search algorithm» Francisco Javier Pulido Arrebola, Lawrence Mandow and Jose-Luis Perez De La Cruz
5. «A Logic for Specifying Agent Actions and Observations with Probability» Gavin Rens, Gerhard Lakemeyer and Thomas Meyer
6. «OCL Plus: Processes and Events in Object-Centered Planning» Shahin Shah, Lukas Chrpa, Peter Gregory, Thomas McCluskey and Falilat Jimoh

15:30-16:00 // Coffee break

16:00 - 16:30
Poster Spotlights

1. «Neural Network-based Framework for Data Stream Mining» Bruno Silva and Nuno Marques
2. «Exploring Metric Sensitivity of Planners for Generation of Pareto Frontiers» Michal Sroka and Derek Long
3. «Toward an Activity Theory Based Model of Spatio-Temporal Interactions» Jakob Suchan and Mehul Bhatt
4. «Multiclass Cascades for Ensemble-based Boosting Algorithms» Teo Susnjak, Andre L. C. Barczak, Napoleon Reyes and Ken Hawick
5. «The Landmark-based Meta Best-First Search Algorithm for Classical Planning» Simon Vernhes, Guillaume Infantes and Vincent Vidal
6. «A Multi-Hypothesis Monitoring Architecture: Application to Ambulatory Physiology» Benoit Vettier, Laure Amate and Catherine Garbay

16:30-18:00
Poster Session

Tuesday, August 28

Invited Talk Michele Sebag, Universite Paris Sud, France

10:10-10:30
Contributed Talk (15+5 minutes each)
«The Landmark-based Meta Best-First Search Algorithm for Classical Planning» Simon Vernhes, Guillaume Infantes and Vincent Vidal

10:30-11:00 // Coffee break

11:00 - 12:20
Contributed Talks

1. «NorMC: a Norm Compliance Temporal Logic Model Checker» Piotr Kazmierczak, Truls Pedersen and Thomas Agotnes
2. «Exploring Metric Sensitivity of Planners for Generation of Pareto Frontiers» Michal Sroka and Derek Long
3. «Deliberative Acceptability of Arguments» Cosmina Croitoru and Timo Koetzing
4. «Probabilistic Path-Disruption Games» Anja Rey and Joerg Rothe.

12:20-14:00 // Lunch break

14:00 - 15:00
Invited Talk Gemma C. Garriga, INRIA Lille Nord Europe, France

15:00-15:40
Contributed Talks

1. «Control in Judgment Aggregation» Dorothea Baumeister, Gabor Erdelyi, Olivia J. Erdelyi and Jôrg Rothe
2. «Adaptive negotiation for resource intensive tasks in Grids» Valeriia Haberland, Simon Miles and Michael Luck

15:40-16:00 // Coffee break

16:00-17:00
Invited Talk Malte Helmert, Univerity of Basel, Switzerland,

17:00-17:30
Wrap-Up and Discussion

ECAI Main Conference Program

Location : Corum Congress Hall

Tuesday, August 28

18:00

P **Opening Session**

P **Invited Speaker** Wolfram Burgard

Probabilistic Techniques for Mobile Robot Navigation

20:00

P **Welcome Cocktail Buffet**

Wednesday, August 29

09:00

P **Invited Speaker** Adnan Darwiche

Generalized Decision Diagrams: the Game is not over yet!

10:10 - 10:30 // Coffee Break

10:30-12:40

P **Anniversary and Turing Session 1**

Opening Remarks

Einar Fredriksson and Maria Fox

European Collaboration in Automated Reasoning

Alan Bundy

Biological, Computational and Robotic Connections with Kant's Theory of Mathematical Knowledge

Aaron Sloman

J **Session 1A: Auctions, Mechanism Design and Trust**

Almost-truthful Mechanisms for Fair Social Choice Functions

Julien Lesca and Patrice Perny

Multi-unit Auctions with a Stochastic Number of Asymmetric Bidders

Ioannis Vetsikas, Sebastian Stein and Nicholas R. Jennings

Multi-unit Double Auction under Group Buying

Dengji Zhao, Dongmo Zhang and Laurent Perrussel

A Protocol Based on a Game-Theoretic Dilemma to Prevent Malicious Coalitions in Reputation Systems

Grégory Bonnet

Trust-based Solution for Robust Self-configuration of Distributed Intrusion Detection Systems

Karel Bartos and Martin Rehak

JAB **Session 1B: Heuristic Search**

A New Approach to the Snake-In-The-Box Problem

David Kinny

Speeding Up 2-way Number Partitioning

Jesús Cerquides and Pedro Meseguer

A Study of Local Minimum Avoidance Heuristics for SAT

Thach-Thao Duong, Duc Nghia Pham and Abdul Sattar

Ideal Point Guided Iterative Deepening

Javier Coego, Lawrence Mandow and Jose Luis Pérez de la Cruz

Finding and Proving the Optimum: Cooperative Stochastic and Deterministic Search

Jean-Marc Alliot, Nicolas Durand, David Gianazza and Jean-Baptiste Gotteland

B **Session 1C: Machine Learning**

Comparator selection for RPC with many labels

Samuel Hiard, Pierre Geurts and Louis Wehenkel

A Bayesian Multiple Kernel Learning Framework for Single and Multiple Output Regression

Mehmet Gönen

Adversarial Label Flips Attack on Support Vector Machines

Han Xiao, Huang Xiao and Claudia Eckert

Compression-based AODE Classifiers

Giorgio Corani, Alessandro Antonucci and Rocco de Rosa

An Analysis of Chaining in Multi-Label Classification

Krzysztof Jerzy Dembczynski, Willem Waegeman and Eyke Hüllermeier

R Session 1D: Planning and Scheduling

Enhancing predictability of schedules by task grouping
Michel Wilson, Cees Witteveen and Bob Huisman

Logic-based Benders Decomposition for Alternative Resource Scheduling with Sequence-Dependent Setups
Tony Tran and J. Christopher Beck

Complexity of Conditional Planning under Partial Observability and Infinite Executions
Jussi Rintanen

Opportunistic Branched Plans to Maximise Utility in the Presence of Resource Uncertainty
Amanda Coles

Preferring Properly: Increasing Coverage while Maintaining Quality in Anytime Temporal Planning
Patrick Eyerich

S3 RuleML

L 12:40 - 14:30 // Lunch Break

14:30-16:10

J1 Session 2A: Negotation and Coordination

An efficient and adaptive approach to negotiation in complex environments
Siqi Chen and Gerhard Weiss

Guiding User Choice During Discussion by Silence, Examples and Justifications
Maier Fenster, Inon Zuckerman and Sarit Kraus

Negotiating Concurrently with Unknown Opponents in Complex, Real-Time Domains
Colin R. Williams, Valentin Robu, Enrico H. Gerding and Nicholas R. Jennings

Coordinated Exploration with a Shared Goal in Costly Environments
Igor Rochlin, David Sarne and Moshe Laifenfeld

JAB Session 2B: Possibilistic Approaches

Hybrid Possibilistic Conditioning for Revision under Weighted Inputs
Salem Benferhat, Célia da Costa Pereira and Andrea G. B. Tettamanzi

Decision-making with Sugeno integrals: DMU vs. MCDM
Miguel Couceiro, Didier Dubois, Henri Prade and Tamás Waldhaus

Three-valued possibilistic networks
Salem Benferhat and Karim Tabia

Characterization of Positive and Negative Information in Comparative Preference Representation
Souhila Kaci

B Session 2C: Non-monotonic Reasoning

Maxi-Consistent Operators in Argumentation
Srdjan Vesic

Large-scale Parallel Stratified Defeasible Reasoning
Ilias Tachmazidis, Grigoris Antoniou, Giorgos Flouris, Spyros Kotoulas and Lee McCluskey

A Ranking Semantics for First-Order Conditionals
Gabriele Kern-Isberner and Matthias Thimm

Fixed-Parameter Algorithms for Closed World Reasoning
Martin Lackner and Andreas Pfandler

R Session 2D: Markov Decision Processes

Ordinal Decision Models for Markov Decision Processes
Paul Weng

Path-Constrained MDPs: bridging the gap between probabilistic model-checking and MDP planning
Florent Teichteil-Königsbuch

Exploiting Expert Knowledge in Factored POMDPs
Felix Müller, Christian Späth, Thomas Geier and Susanne Biundo

Sample-Based Policy Iteration for Constrained DEC-POMDPs
Feng Wu, Nicholas R. Jennings and Xiaoping Chen

JCD Session 2E: Description Logics

Introducing Datatypes in DL-Lite
Ognjen Savkovic and Diego Calvanese

DL-Lite with Attributes and Datatypes
Alessandro Artale, Roman Kontchakov and Vladislav Ryzhikov

Updating inconsistent Description Logic knowledge bases
Maurizio Lenzerini and Domenico Fabio Savo
Concepts, Agents, and Coalitions in Alternating Time
Wojciech Jamroga

S3 RuleML

16:10-16:45 // Coffee Break

16:45-18:00

J1 Session 3A: ECCAI Best Dissertation Talks
Honorable mention: Dynamic Magic Sets
Mario Alviano
Honorable mention: The evolution of grounded spatial language
Michael Spranger
Best Dissertation: Approaches to Model Learning for Mobile Manipulation Robots
Jürgen Sturm

JAB Session 3B: Search in Games
Improving Local Decisions in Adversarial Search
Brandon Wilson, Inon Zuckerman, Austin Parker and Dana S. Nau
Game-theoretic Approach to Adversarial Plan Recognition
Viliam Lisy, Radek Pibil, Jan Stiborek, Branislav Bosansky and Michal Pechoucek
Multiple-Outcome Proof Number Search
Abdallah Saffidine and Tristan Cazenave

R Session 3C: Agent and Game Learning
Efficient Crowdsourcing of Unknown Experts using Multi-Armed Bandits
Long Tran-Thanh, Sebastian Stein, Alex Rogers and Nicholas R. Jennings
Creating Features from a Learned Grammar in a Simulated Student
Nan Li, Abraham Schreiber, William W. Cohen and Kenneth R. Koedinger
Learning to Play Simplified Boardgames by Observing
Yngvi Björnsson

B Session 3D: Actions, Change and Causality
Representing Value Functions with Recurrent Binary Decision Diagrams
Daniel Beck and Gerhard Lakemeyer
Strategic and Epistemic Reasoning for the Game Description Language GDL-II
Ji Ruan and Michael Thielscher
Planning as Quantified Boolean Formula
Michael Cashmore, Maria Fox and Enrico Giunchiglia

JCD Session 3E:Ontologies
Inconsistency Handling in Datalog+/- Ontologies
Thomas Lukasiewicz, Maria Vanina Martinez and Gerardo I. Simari
Large-scale Interactive Ontology Matching: Algorithms and Implementation
Ernesto Jiménez-Ruiz, Bernardo Cuenca Grau, Yujiao Zhou and Ian Horrocks
Context-Aware Access Control for RDF Graph Stores
Luca Costabello, Serena Villata and Fabien Gandon

S3 RuleML

18:30-22:00
Visit to IBM

Thursday, August 30

09:00

P Invited Speaker Tom Mitchell
Never Ending Learning

10:10 - 10:30 // Coffee Break

10:30-12:40
P Anniversary and Turing Session 2
Artificial Intelligence in a Historical Perspective
Wolfgang Bibel

A Perspective on the Early History of AI in Europe
Erik Sandewall
Deliberate Action in Robotics: a Perspective
Malik Ghallab

J1 Session 4A: Computational Social Choice

Weighted Manipulation for Four-Candidate Llull Is Easy
Piotr Faliszewksi, Edith Hemaspaandra and Henning Schnoor
Combining Voting Rules Together
Nina Naroditskaya, Toby Walsh and Lirong Xia
Choosing Combinatorial Social Choice by Heuristic Search
Minyi Li and Quoc Bao Vo
Online Voter Control in Sequential Elections
Edith Hemaspaandra, Lane A. Hemaspaandra and Jörg Rothe
Institutionalised Paxos Consensus
David Sanderson and Jeremy Pitt

JAB Session 4B: Data Mining

Symmetries in Itemset Mining
Said Jabbour, Lakhdar Sais, Yakoub Salhi and Karim Tabia
Extending Set-Based Dualization: Application to Pattern Mining
Lhouari Nourine and Jean-Marc Petit
Hierarchical and Overlapping Co-Clustering of mRNA: miRNA Interactions
Gianvito Pio, Michelangelo Ceci, Corrado Loglisci, Domenica D'Elia and Donato Malerba
Multirelational Consensus Clustering with Nonnegative Decompositions
Liviu Badea
Process Discovery via Precedence Constraints
Gianluigi Greco, Antonella Guzzo and Luigi Pontieri

R Session 4C: Planning (1)

On Exploiting Structures of Classical Planning Problems: Generalizing Entanglements
Lukas Chrpa and Lee McCluskey
Macros, Reactive Plans and Compact Representations
Christer Bäckström, Anders Jonsson and Peter Jonsson
From Macro Plans to Automata Plans
Christer Bäckström, Anders Jonsson and Peter Jonsson
Engineering Efficient Planners with SAT
Jussi Rintanen
Propositional Planning as Optimization
Andreas Sideris and Yannis Dimopoulos

B Session 4D: Spatial and Temporal Reasoning

SAT vs. Search for Qualitative Temporal Reasoning
Jinbo Huang
Nearness Rules and Scaled Proximity
Özgür L Özçep, Rolf Grütter and Ralf Möller
Combining DRA and CYC into a Network Friendly Calculus
Malumbo Chipofya
Convex Solutions of RCC8 Networks
Steven Schockaert and Sanjiang Li
Interval Temporal Logics over Finite Linear Orders: the Complete Picture
Davide Bresolin, Dario Della Monica, Angelo Montanari, Pietro Sala and Guido Sciavicco

JCD PAIS 1

Context-Based Search in Software Development
Bruno Antunes, Joel Cordeiro and Paulo Gomes
Event Processing for Intelligent Resource Management
Alexander Artikis, Robin Marterer, Jens Pottebaum and Georgios Paliouras
Partially Observable Markov Decision Process for Closed-Loop Anesthesia Control
Eddy C. Borera, Brett L. Moore and Larry D. Pyeatt
POMDP-based Online Target Detection and Recognition for Autonomous UAVs
Caroline P. Carvalho Chanel, Florent Teichteil-Königsbuch and Charles Lesire
A Multi-objective Approach to Balance Buildings Construction Cost and Energy Efficiency
Alvaro Fialho, Youssef Hamadi and Marc Schoenauer

L 12:40 - 14:30 // Lunch Break

J1 Session 5A: Argumentation

What Does it Take to Enforce an Argument? Minimal Change in Abstract Argumentation
Ringo Baumann

A Probabilistic Semantics for Abstract Argumentation
Matthias Thimm

An empirical study of argumentation schemes for deliberative dialogue
Alice Toniolo, Timothy J. Norman and Katia Sycara

Agent Strategies for ABA-based Information-seeking and Inquiry Dialogues
Xiuyi Fan and Francesca Toni

JAB Session 5B: Constraints, Satisfiability and Learning

Improving Local Search for Random 3-SAT Using Quantitative Configuration Checking
Chuan Luo, Kaile Su and Shaowei Cai

A SAT-Based Approach for Discovering Frequent, Closed and Maximal Patterns in a Sequence
Emmanuel Coquery, Said Jabbour, Lakhdar Sais and Yakoub Salhi

Inconsistency Measurement based on Variables in Minimal Unsatisfiable Subsets
Guohui Xiao and Yue Ma

Hybrid Regression-Classification Models for Algorithm Selection
Lars Kotthoff

R Session 5C: Multi-Disciplinary Approaches

Towards a Complete Classical Music Companion
Andreas Arzt, Gerhard Widmer, Sebastian Böck, Reinhard Sonnleitner and Harald Frostel

When intelligence is just a matter of copying
William Correa, Henri Prade and Gilles Richard

Solving Raven's IQ-tests: An AI and Cognitive Modeling Approach
Marco Ragni and Stefanie Neubert

Best Reply Dynamics for scoring rules
Reyhaneh Reyhani and Mark C. Wilson

B Session 5D: Perception and Robotics

Improving Video Activity Recognition using Object Recognition and Text Mining
Tanvi S. Motwani and Raymond J. Mooney

Detecting Human Patterns in Laser Range Data
Theodoros Varvadoukas, Ioannis Giotis and Stasinos Konstantopoulos

Routing for continuous monitoring by multiple micro UAVs in disaster scenarios
Vera Mersheeva and Gerhard Friedrich

Planning with Semantic Attachments: An Object-Oriented View
Andreas Hertle, Christian Dornhege, Thomas Keller and Bernhard Nebel

JCD Session 5E: Description Logics (2)

Verification of Description Logic Knowledge and Action Bases
Babak Bagheri Hariri, Diego Calvanese, Giuseppe De Giacomo, Riccardo De Masellis, Paolo Felli and Marco Montali

ExpExpExplosion: Uniform Interpolation in General EL Terminologies
Nadeschda Nikitina and Sebastian Rudolph

Complexity of Branching Temporal Description Logics
Víctor Gutiérrez-Basulto, Jean Christoph Jung and Carsten Lutz

Reconciling OWL and Non-monotonic Rules for the Semantic Web
Matthias Knorr, Pascal Hitzler and Frederick Maier

S3 PAIS 2

Cooperatives for Demand Side Management
Ramachandra Kota, Georgios Chalkiadakis, Valentin Robu, Alex Rogers and Nicholas R. Jennings

Wind Speed Forecasting using Spatio-temporal Indicators
Orlando Ohashi and Luís Torgo

Predicting the Power Output of Distributed Renewable Energy Resources within a Broad Geographical Region
Athanasios Aris Panagopoulos, Georgios Chalkiadakis and Eftichios Koutroulis

A Reinforcement Learning Approach to Optimize the Longitudinal Behavior of a Partial Autonomous Driving Assistance System
Olivier Pietquin and Fabio Tango

16:10-16:45 // Coffee Break

16:10-18:00

System Demonstrations

An Infrastructure for Human Inclusion in MAS
Pablo Almajano, Tomas Trescak, Inmaculada Rodriguez and Maite Lopez-Sanchez

Training Crisis Managers with PANDORA
Liz Bacon, Amedeo Cesta, Luca Coraci, Gabriella Cortellessa, Riccardo De Benedictis, Sara Grilli, Jure Polutnik and Keith Strickland

FlowOpt: Bridging the Gap Between Optimization Technology and Manufacturing Planners
Roman Barták, Milan Jaska, Ladislav Novák, Vladimír Rovensky, Tomás Skalicky, Martin Cully, ConSheahan and Dang Thanh-Tung

WantEat: Interacting with Social Networks of Smart Objects for Sharing Cultural Heritage and Supporting Sustainability
Luca Console, Giulia Biamino, Francesca Carmagnola, Federica Cena, Elisa Chiabrando, Roberta Furnari, Cristina Gena, Pierluigi Grillo, Silvia Likavec, Ilaria Lombardi, Michele Mioli, Claudia Picardi, Daniele Theseider Dupré, Fabiana Vernero, Rossana Simeoni, Fabrizio Antonelli, Vincenzo Cuciti, Matteo Demichelis, Fabrizio Franceschi, Marina Geymonat, Alessandro Marcengo, Dario Mana, Michele Mirabelli, Monica Perrero, Amon Rapp, Franco Fassio, Piercarlo Grimaldi and Fabio Torta

Mo.Di.Bot – Mobile Diagnostic Robot
Cristina Cristalli, Giacomo Angione, Luca Lattanzi, Birgit Graf, Florian Weisshardt and Georg Arbeiter

Metaheuristic Aided Software Features Assembly
José del Sagrado, Isabel M.del Águila and Francisco J. Orellana

Designing KDD-Workflows via HTN-Planning
Jörg-Uwe Kietz, Floarea Serban, Abraham Bernstein and Simon Fischer

Confidence: Ubiquitous Care System to Support Independent Living
Mitja Lustrek, Bostjan Kaluza, Bozidara Cvetkovic, Erik Dovgan, Hristijan Gjoreski, Violeta Mirchevska and Matjaz Gams

Autonomous Construction with a Mobile Robot in a Resource-limited Environment: a Demonstration of the Integration of Perception, Planning and Action
Stéphane Magnenat, Alexey Gribovskiy and Francesco Mondada

WissKI: A Virtual Research Environment for Cultural Heritage
Martin Scholz and Guenther Goerz

AGENTFLY: Multi-Agent Simulation of Air-Traffic Management
David Sislak, Premysl Volf, Dusan Pavlicek and Michal Pechoucek

Congress Hall Level 0 ECAI Posters

A Stubborn Set Algorithm for Optimal Planning
Yusra Alkhazraji, Martin Wehrle, Robert Mattmüller and Malte Helmert

Preemption Operators
Philippe Besnard, Éric Grégoire and Sébastien Ramon

Reasoning for Agreement Technologies
Guido Boella and Leon Van der Torre

An Adaptive Clustering Model that Integrates Expert Rules and N-gram Statistics for Coreference
Razvan Bunescu

Mining Extremes: Severe Rainfall and Climate Change
Debasish Das, Evan Kodra, Zoran Obradovic and Auroop Ganguly

CAKES: Cross-lingual Wikipedia Knowledge Enrichment and Summarization
Valeria Fionda and Giuseppe Pirró

A Novel Way to Connect BnB-ADOPT+ with Soft AC
Patricia Gutierrez and Pedro Meseguer

Controlling Candidate-Sequential Elections
Edith Hemaspaandra, Lane Hemaspaandra and Jörg Rothe

Implementation of Critical Path Heuristics for SAT
Jinbo Huang

Evolutionary Clustering on CUDA
Pavel Krömer, Jan Platos and Václav Snášel
Practical Reformulations With Table Constraints
Olivier Lhomme
On Partitioning for Maximum Satisfiability
Ruben Martins, Vasco Manquinho and Inês Lynce
Ontologising Semantic Relations into a Relationless Thesaurus
Hugo Gonçalo Oliveira and Paulo Gomes
Advances in Distributed Branch and Bound
Lars Otten and Rina Dechter
Intermediary Local Consistencies
Thierry Petit
The Consistency of Majority Rule
Daniele Porello
Probabilistic Path-Disruption Games
Anja Rey and Jörg Rothe
Towards a Declarative Spatial Reasoning System
Carl Schultz and Mehul Bhatt
An Alternative Eager Encoding of the All-Different Constraint over Bit-Vectors
Pavel Surynek
VOI-aware MCTS
David Tolpin and Solomon Eyal Shimony
Approximation of Steiner Minimum Trees in Planar Graphs Using Euclidian Steiner Minimum Trees
Bjoern Zenker
Reasoning with Fuzzy-EL+ Ontologies Using MapReduce
Zhangquan Zhou, Guilin Qi, Chang Liu, Pascal Hitzler and Raghava Mutharaju

PAIS Posters

LSA for Mining Hidden Information in Action Game Semantics
Katia Lida Kermanidis, Panagiotis Pandis, Costas Boletsis and Dimitra. Chasanidou
WeMiT: Web-Mining for Translation
Mathieu Roche and Oana Mihaela Garbasevschi
Master Orientation Tool
Alexandru Surpatean, Evgueni Smirnov and Nicolai Manie

18:00 // Buses leave for Gala Dinner

09:00

P Invited Speaker Michael Wooldridge
Bad Equilibria, and What to do About Them

10:10 - 10:30 // Coffee Break

10:30-12:40

P Anniversary and Turing Session 3

Alan Turing and the development of Artificial Intelligence
Stephen Muggleton
TBA
Michèle Sebag
Artificial Intelligence: from programs to solvers
Hector Geffner

JCD Session 6A: Model Based Reasoning and Diagnosis

Optimizations for the Boolean Approach to Computing Minimal Hitting Sets
Ingo Pill and Thomas Quaritsch
On computing correct processes and repairs using partial behavioral models
Wolfgang Mayer, Gerhard Friedrich and Markus Stumptner
Spectrum Enhanced Dynamic Slicing for better Fault Localization
Birgit Hofer and Franz Wotawa
LoCo - A Logic for Configuration Problems
Markus Aschinger, Conrad Drescher and Heribert Vollmer
Diagnosing Delays in Multi-Agent Plans Execution
Roberto Micalizio and Gianluca Torta

JAB Session 6B: Natural Language Processing (1)

Markov Constraints for Generating Lyrics with Style
Gabriele Barbieri, François Pachet, Pierre Roy and Mirko Degli Esposti
Synonymy Extraction From Semantic

Networks Using String and Graph Kernel Methods
Tim vor der Brück and Yu-Fang Helena Wang
Natural Language Arguments: A Combined Approach
Elena Cabrio and Serena Villata
Discovering Cross-language Links in Wikipedia through Semantic Relatedness
Antonio Penta, Gianluca Quercini, Chantal Reynaud and Nigel Shadbolt
Self-Assessing Agents for Explaining Language Change: A Case Study in German
Remi van Trijp

J1 Session 6C: Cooperation and Coordination

Efficient Norm Emergence through Experiential Dynamic Punishment
Samhar Mahmoud, Nathan Griffiths, Jeroen Keppens and Michael Luck
Partial Cooperation in Multi-agent Local Search
Alon Grubshtein, Roie Zivan and Amnon Meisels
Conservative Social Laws
Thomas Ågotnes, Wiebe van der Hoek and Michael Wooldridge
Approximate Tradeoffs on Matroids
Laurent Gourvès, Jérôme Monnot and Lydia Tlilane
An approach to multi-agent planning with incomplete information
Alejandro Torreneo, Eva Onaindia and Óscar Sapena

R Session 6D: Constraint Satisfaction, Optimisation and Programming

Joint Assessment and Restoration of Power Systems
Pascal Van Hentenryck, Nabeel Gillani and Carleton Coffrin
An O(n log n) BC Algorithm for the Conjunction of an alldifferent and a linear inequality...
Nicolas Beldiceanu, Mats Carlsson, Thierry Petit and Jean-Charles Régin
A Path-Optimal GAC Algorithm for Table Constraints
Christophe Lecoutre, Chavalit Likitvivatanavong and Roland H. C. Yap
Here, There, but Not Everywhere: An Extended Framework for Qualitative Constraint Satisfaction
Weiming Liu and Sanjiang Li
Deciding Membership in a Class of Polyhedra
Salvatore Ruggieri

B Session 6E1: Automated Reasoning

Implementing and Evaluating Provers for First-order Modal Logics
Christoph Benzmüller, Jens Otten and Thomas Raths
Efficient Reasoning in Multiagent Epistemic Logics
Gerhard Lakemeyer and Yves Lespérance
Knowledge-Based Programs as Plans: The Complexity of Plan Verification
Jérôme Lang and Bruno Zanuttini

B Session 6E2: Frontiers in AI

Recent Advances in Imprecise-Probabilistic Graphical Models
Gert de Cooman, Jasper De Bock and Arthur Van Camp
Developmental Mechanisms for Autonomous Life-Long Learning in Robots
Pierre-Yves Oudeyer

12:40 - 14:30 // Lunch Break

14:30-16:30

B Session 7A: Frontiers in AI

(Frontiers in AI) Executable Logic for Dialogical Argumentation
Elizabeth Black and Anthony Hunter
(Frontiers in AI) Computational Creativity: The Final Frontier?
Simon Colton and Geraint A. Wiggins
(Frontiers in AI) Lifted Probabilistic Inference
Kristian Kersting
(Frontiers in AI) Robot Skill Learning
Jan Peters, Katharina Mülling, Jens Kober, Duy Nguyen-Tuong and Oliver Krömer

JCD Session 7B: Preferences

The Possible Winner Problem with Uncertain Weight
Dorothea Baumeister, Magnus Roos, Jörg Rothe, Lena Schend and Lirong Xia

Bounded single-peaked width and proportional representation
Denis Cornaz, Lucie Galand and Olivier Spanjaard

Fair Division of Indivisible Goods under Risk
Charles Lumet, Sylvain Bouveret and Michel Lemaître

Justifying Dominating Options when Preferential Information is Incomplete
Christophe Labreuche, Nicolas Maudet and Wassila Ouerdane

Importance-based Semantics of Polynomial Comparative Preference Inference
Nic Wilson

S3 Session 7C: Natural Language Processing (2)

Preference Extraction From Negotiation Dialogues
Anaïs Cadilhac, Nicholas Asher, Farah Benamara, Vladimir Popescu and Mohamadou Seck

Relation Mining in the Biomedical Domain using Entity-level Semantics
Kateryna Tymoshenko, Swapna Somasundaran, Vinodkumar Prabhakaran and Vinay Shet

Disambiguating Road Names in Text Route Descriptions using Exact-All-Hop Shortest Path Algorithm
Xiao Zhang, Baojun Qiu, Prasenjit Mitra, Sen Xu, Alexander Klippel and Alan M. MacEachren

Combining Bootstrapping and Feature Selection for Improving a Distributional Thesaurus
Olivier Ferret

Using Learning to Rank Approach for Parallel Corpora Based Cross Language Information Retrieval
Hosein Azarbonyad, Azadeh Shakery and Heshaam Faili

R Session 7D: Planning (2)

Symbolic A* Search with Pattern Databases and the Merge-and-Shrink Abstraction
Stefan Edelkamp, Peter Kissmann and Álvaro Torralba

ArvandHerd: Parallel Planning with a Portfolio
Richard Valenzano, Hootan Nakhost, Martin Müller, Jonathan Schaeffer and Nathan Sturtevant

Width and Serialization of Classical Planning Problems
Nir Lipovetzky and Hector Geffner

Case-based Planning for Problems with Real-valued Fluents: Kernel Functions for Plan Retrieval
Alfonso E. Gerevini, Alessandro Saetti and Ivan Serina

Tunneling and Decomposition-Based State Reduction for Optimal Planning
Raz Nissim, Udi Apsel and Ronen Brafman

JAB Session 7E: Reinforcement Learning

Argumentation-Based Reinforcement Learning for RoboCup Soccer Keepaway
Yang Gao, Francesca Toni and Robert Craven

A Reinforcement-Learning Algorithm for Sampling Design in Markov Random Fields
Mathieu Bonneau, Nathalie Peyrard and Régis Sabbadin

Heuristically Accelerated Reinforcement Learning: Theoretical and Experimental Results
Reinaldo A. C. Bianchi, Carlos H. C. Ribeiro and Anna H. R. Costa

Towards Generalizing the Success of Monte-Carlo Tree Search beyond the Game of Go
António Gusmão and Tapani Raiko

Nested Monte-Carlo Tree Search for Online Planning in Large MDPs
Hendrik Baier and Mark H. M. Winands

J1 Session 7F: Game-theoretic and Economic Foundations

An Anytime Algorithm for Finding the epsilon-Core in Nontransferable Utility Coalitional Games
Greg Hines, Talal Rahwan and Nicholas R. Jennings

Delegating Decisions in Strategic Settings
Sarit Kraus and Michael Wooldridge

Hard and Easy k-Typed Compact Coalitional Games: The Knowledge of Player Types Marks the Boundary
Gianluigi Greco, Antonella Guzzo and Luigi Pontieri

Iterative Algorithm for Solving Two-player Zero-sum Extensive-form Games with Imperfect Information
Branislav Bosansky, Christopher Kiekintveld, Viliam Lisy and Michal Pechoucek

A Robust Approach to Addressing Human Adversaries in Security Games
James Pita, Richard John, Rajiv Maheswaran, Milind Tambe and Sarit Kraus

16:30-17.00

P **Closing Session**

Regular Talks will be 25min (i.e. 20 min talk + 5 min questions)
Frontiers Talks will be 30 min (i.e. 25 min talk + 5 min questions)
Talks in the Anniversary and Turing Session will be 40 min (i.e. 30 min talk + 10 min questions)

Recommended Sessions for Researchers focussing on

Agents&Multi-Agents:
1A, 2A, 4A, 5A, 6C, 7F
Search, Constraints and Satisfiability:
1B, 3B, 5B, 6D
Planning and Scheduling:
1D, 2D, 4C, 7D
Knowledge Representation:
2C, 3D, 4D, 6E, 7B
Machine Learning/Data Mining:
1C, 2D, 3C, 4B, 7E
Ontologies and Descriptions Logics:
2E, 3E, 5E

Social events

Welcome Cocktail Buffet

Tuesday, 28 August
20:00 – 23:00

Corum Congress Hall top floor

ECAI 2012 organizers are pleased to invite you to a Welcome Cocktail Buffet on the top floor of the Corum Congress Hall. You will get a tasty experience with a great variety of local dishes prepared by a famous Montpellier caterer. The Welcome Cocktail dinner is included in the Main Conference Registration Fee. Do not miss it!

Gala Dinner

Thursday, August 30
18:00 – 23:00

Valmagne Abbey

(45mn by bus from Corum Congress Hall)

Meeting Point

18:00 sharp at the entrance of the Corum Congress Hall. Go down the stairs: buses will be waiting for you close to the Corum tram stop.

ECAI 2012 Gala Dinner will be held in the stunning **Valmagne abbey**. Valmagne was one of the richest abbeys in southern France in the 12th and 13th centuries. The construction of present Gothic style church started in 1257 on the foundations of the original Romanesque chapel, which had become too small for the ever-increasing number of monks. Inspired from the great cathedrals of northern France, the church is 83 meters long and 24 meters high. The church was turned into a vine cellar in the 18th century and visitors can still see and smell the rich flavour of wooden barrels. Open to the public since 1975, Valmagne Abbey is well known to archaeologists and lovers of old monuments.

Valmagne cloister

Germain Traiteur, one of the most famous caterers in Languedoc-Roussillon, will treat you to a refined Mediterranean dinner with the best local wines.

Useful Information

Registration Desk

Corum Congress Hall : level 0
(Close to the stairs)

Opening Session

Tuesday, August 28.
18:00

Venue: Corum Congress Hall: Pasteur room

Invited Speaker: Wolfram Burgard - Probabilistic Techniques for Mobile Robot Navigation.
Followed by the **Welcome Cocktail Buffet** on the Corum Congress Hall top floor.

Coffee breaks

Morning: 10:10 - 10:30.
Afternoon: 16:10 - 16:45.

Corum Congress Hall: level 0

Lunch time

Time for you to discover Montpellier town center and its countless small restaurants. You can stroll down the Charles de Gaulle Esplanade close to le Corum and get a light meal in the shade. Or you can go for the more touristic Place de la Comédie. Else you can have a go at any square: place Notre Dame, place de la Chapelle Neuve, place Saint-Côme, place Saint-Roch...

Internet Access

No code is needed. Choose any « Corum+number » signal you get (Corum23, Corum25 etc.).

System Demonstrations

Demos will take place on Thursday, August 30, from 16:10 to 18:00, in the Congress Hall on level 0. They will also be given during coffee breaks and at lunch time on that day.

Visit to IBM

A visit to IBM is scheduled on Wednesday, August 29. Buses will run from 18:30 to 22:00 to get you there and back.

How to get to the Corum Congress Hall

(Public Transport Network)
You can either stop at the Comédie tram stop or the Corum tram stop.
From Comédie tram stop: Cross the Comédie square and walk to the end of the tree-shaded esplanade. Then go down the flight of stairs. The entrance to the Congress Hall will be on your right.
From Corum tram stop: Go up the flight of stairs. The entrance to the Congress Hall will be on your left.

Taxis

Either give them a call:
Taxis bleus: +33 (0)4 67 03 2000; +33 (0)4 67 10 00 00
Taxi Trams: +33 (0)4 67 58 10 10
Or go to the taxi stand close to Saint-Roch train station. When facing the train station main entrance, go on your right and follow the tram track for a while. Soon enough, you'll see taxis.
There is also a taxi stand close to the Comédie square on Sarrail boulevard. It is closer to the Corum Congress Hall but there is no guarantee that taxis will be queuing up there.

Emergency phone number

112

Going out in Montpellier

There are a very large number of restaurants in the city center, best discovered on foot during a nice stroll in the evening. Res-

taurants open for food at around 7pm. Bars stop serving alcohol at 1am. There are only two small and noisy nightclubs in downtown Montpellier: the **Fizz nightclub** and the **Panama nightclub**. For the full clubbing experience, you will need to go outside the city, near the beach.
"Les Estivales" take place every Friday evening in July and August, between the Corum Congress Hall and the Comedie square: loads of food and crafts stands. The food is very nice, prices ok by French standards, and the atmosphere great!

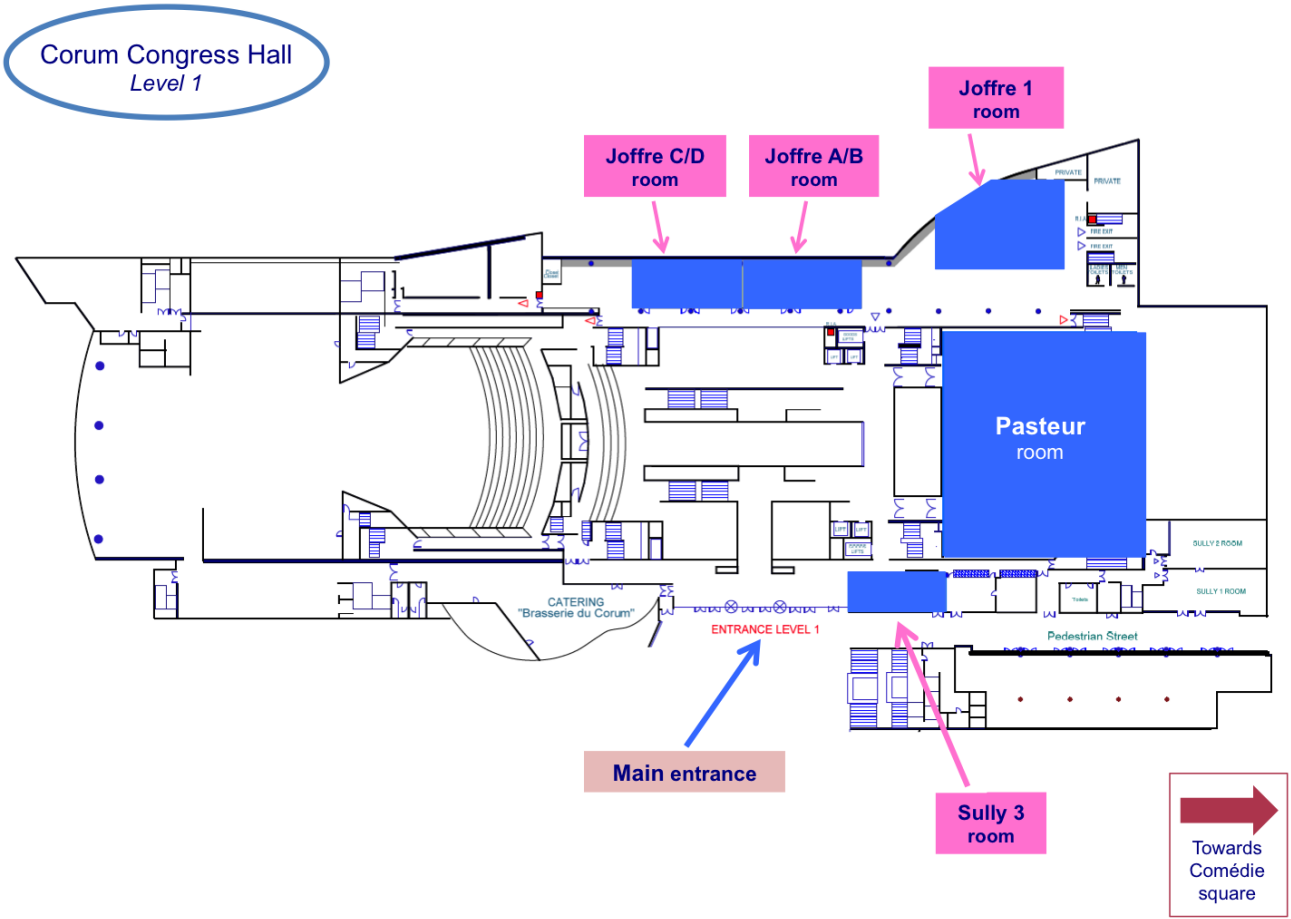
Shopping in Montpellier

There are two main shopping malls in Montpellier: the small **Polygone** shopping mall just off the Comédie square (walking through the Polygone will allow you to go to the Antigone area) and **Odysseum**, the new big open air shopping centre at the terminus of tram line 1.

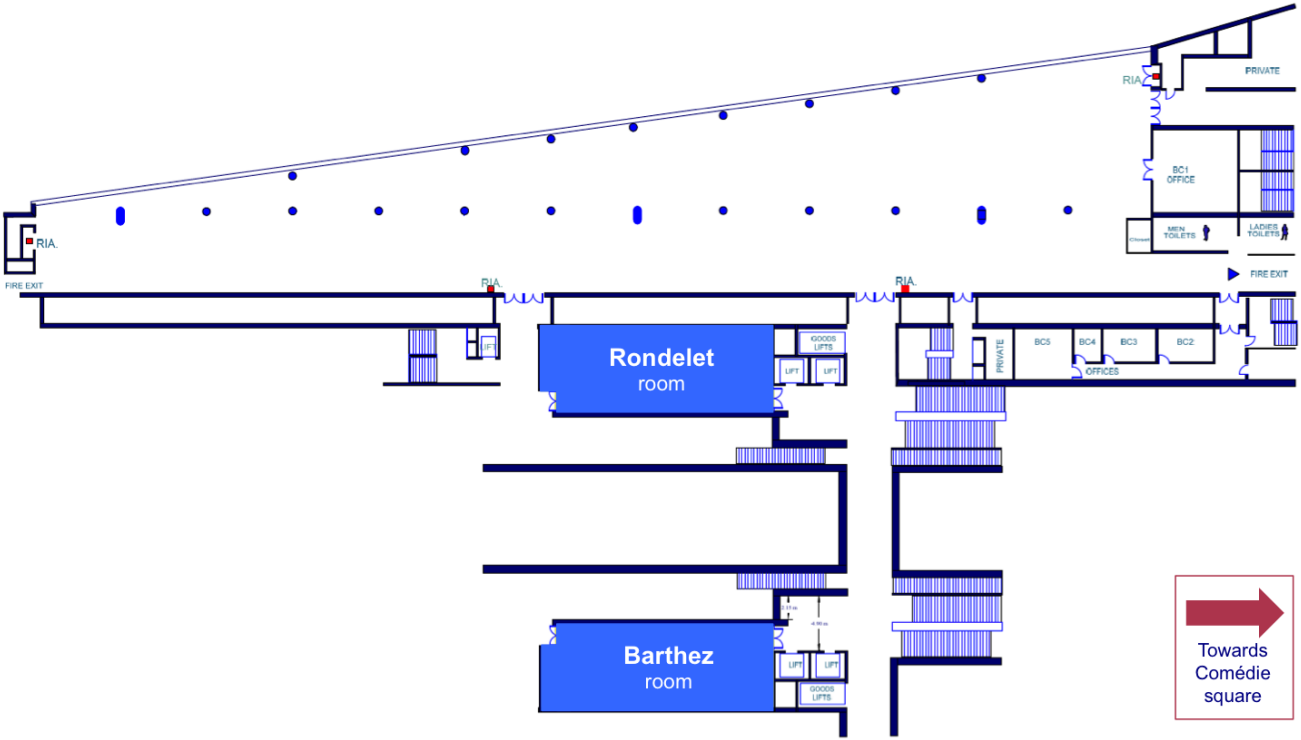
Fabre Painting Museum

The Fabre Painting Museum is so close to the Corum Congress Hall that you just have to go there!
Permanent collection : 15th- to 19th-century painting. Romanticism, Orientalism, Ingrism, Realism, Impressionism, and Fauvism are also all represented, together with the rise of abstraction and the current re-emergence of painting as a contemporary creative force.
Temporary exhibition: "Bodies and Shadows, Caravaggio and European Caravaggism". A display of 130 masterpieces from Caravaggio to Rembrandt or Georges de la Tour, rarely loaned, and made possible through the cooperation of prestigious international institutions.
Opening times: Open every day 10:00 – 20:00, except Mondays.
Ticket prices: 9€. The entrance ticket also gives access to the permanent collections and the department of Decorative Arts.

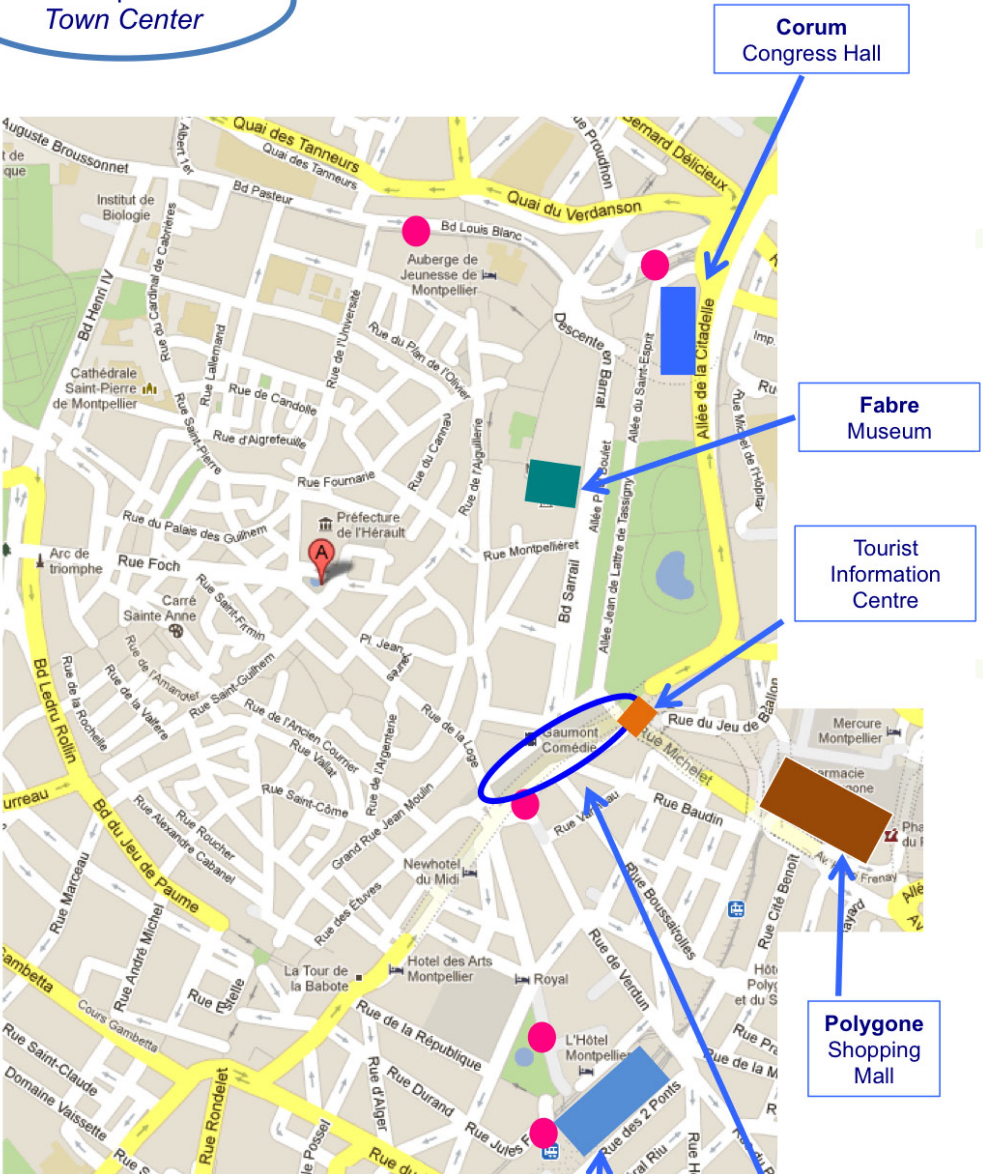

Corum Congress Hall
Level 0
BUS AND TAXI STOP
BERLIOZ GATE
LOUISVILLE ROOM
BARCELONE ROOM
TIBERIADE ROOM
CAR PARK ACCESS
EINSTEIN ROOM
ACCESS EINSTEIN ROOM
BE 3 Office
BE 2 Office
BE 1 Office
AUDIOVISUAL BOOTH
EINSTEIN ROOM
ACCESS PASTEUR ROOM
Pasteur room
COFFEE BREAKS
POSTER SESSION
GOODS LIFTS
LIFT
RIA
ACCESS BERLIOZ ROOM
REGISTRATION
CASH POINT
Computers Area
MEN TOILETS
LADIES TOILETS
BO 1 Office
BO 2
BO 3
Offices
Registration Desk
Conference Organizers' Office
Towards Comédie square


Corum Congress Hall
Level 1
Joffre 1 room
Joffre C/D room
Joffre A/B room
Pasteur room
CATERING
"Brasserie du Corum"
ENTRANCE LEVEL 1
Pedestrian Street
Main entrance
Sully 3 room
Towards Comédie square

Corum Congress Hall
Level 2



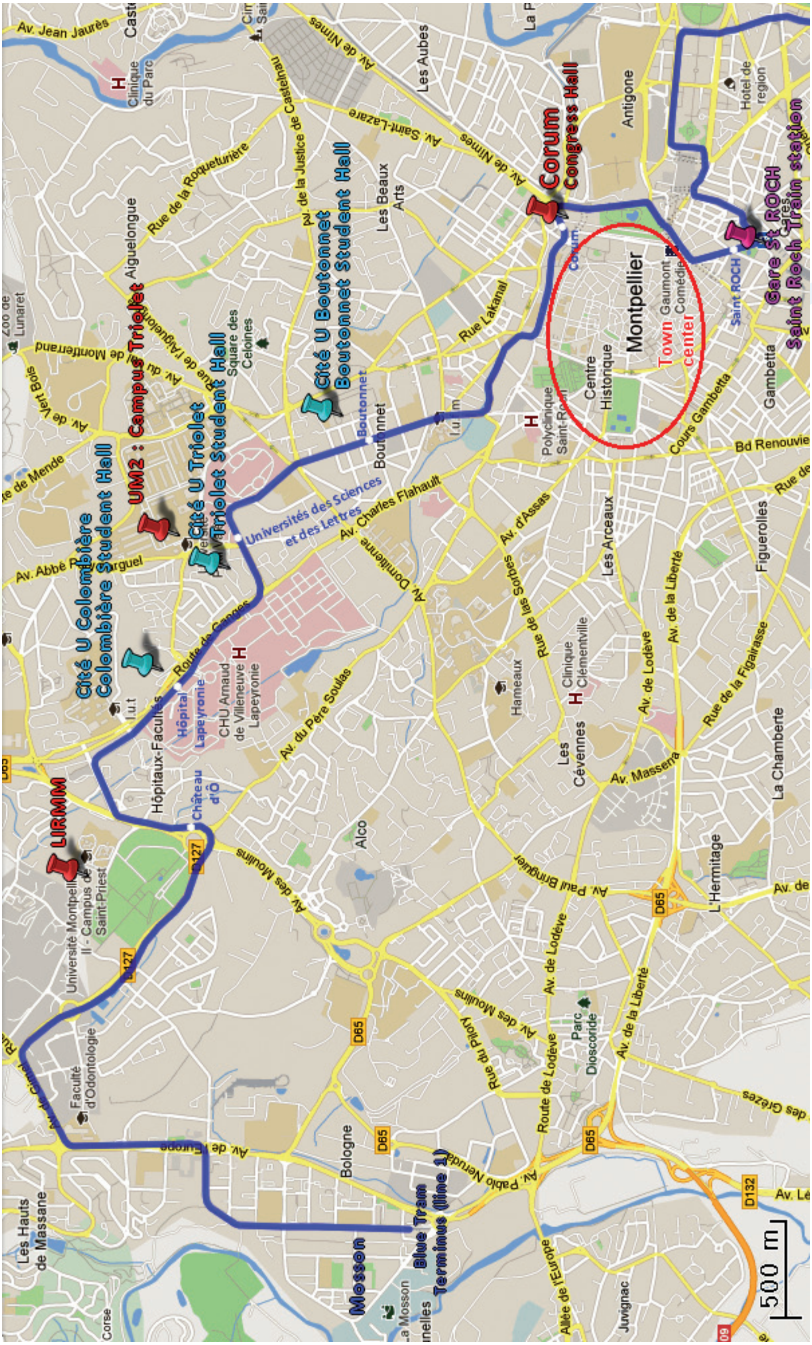
Montpellier
Town Center



Source: Google maps

Legend:

Tram stop



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Boutonnet
Corum
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500 m

Co-located Conference : RuleML 2012 Symposium Program

Monday, August 27

Doctoral Consortium of RuleML2012

6th International Rule Challenge

LegalRuleML Tutorial by Monica Palmirani and Tara Athan

LegalRuleML OASIS TC Meeting

Tuesday, August 28

Montpellier 2 University

9.00 – 10.00

Invited Speaker Prof. Dr. Marie-Laure Mugnier

Ontology-Based Query Answering with Existential Rules

10.00 – 10.30 // Coffee Break

10.30 – 11.55

Session: Rules and the Semantic Web

Using SOIQ(D) to Formalize Semantics within a Semantic Decision Table

Yan Tang and Trung-Kien Tran

Imposing Restrictions Over Temporal Properties in OWL: A Rule Based Approach

Sotiris Batsakis and Euripides Petrakis

OWL RL in Logic Programming: Querying, Reasoning and Inconsistency Explanation

Jesus M. Almendros-Jimenez

Using data-to-knowledge exchange for transforming relational databasesto knowledge bases

Tadeusz Pankowski

11.55 – 12.40

Session: Rule Transformation, Extraction and learning

An Approach to Parallel Class Expression Learning

Tran C. An, Jens Dietrich, Hans W. Guesgen and Stephen Marsland

Rule-Based High-Level Situation Recognition from Incomplete TrackingData

David Muench, Joris Ijsselmuiden, Ann-Kristin Grosselnger, Michael Arens and Rainer Stiefelhagen

12.40 – 14.30 // Lunch

14.30 – 15.30

Visit at GraphIK Laboratory

15.30 – 16.00 // Coffee Break

16.00 – 17.40

Session: Rule-based Event Processing and Reaction Rules

Reaction RuleML 1.0: Standardized Semantic Reaction Rules

Adrian Paschke, Harold Boley, Zhili Zhao, Kia Teymourian and Tara Athan

On Algebraic Semantics of Reaction Rules

Katerina Ksystra, Nikolaos Triantafyllou and Petros Stefaneas

A Rule-based Calculus and Processing of Complex Events

Stefano Bragaglia, Federico Chesani, Paola Mello and Davide Sottara

Complex Reactivity with Preferences in Rule-Based Agents

Stefania Costantini and Giovanni De Gasperis

17.40 – 18.00 // Coffee Break

18.00 – 19.30

Session: Rule-based Policies and Agents on the Pragmatic Web

The Pragmatic Web: Putting Rules in Context

Hans Weigand and Adrian Paschke

HARM: A Hybrid Rule-based Agent Reputation Model based on Temporal Defeasible Logic

Kalliopi Kravari and Nick Bassiliades

Whispering Interactions to the End User Using Rules
Benjamin Jailly, Christophe Gravier, Julien Subercaze, Marius Predaand Jacques Fayolle
Personalizing Location Information through Rule-Based Policies
Iosif Viktoratos, Athanasios Tsadiras and Nick Bassiliades

20.00
ECAI Welcome Cocktail Buffet

WEDNESDAY, AUGUST 29

Corum Congress Hall: Sully 3 Room

9.00 – 10.10
Session: Rule Markup Languages and Rule Interchange
PSOA2TPTP: A Reference Translator for Interoperating PSOARuleML with TPTP Reasoners
Gen Zou, Reuben Peter-Paul, Harold Boley and Alexandre Riazanov
PSOA RuleML API: A Tool for Processing Abstract and ConcreteSyntaxes
Mohammad Sadnan Al Manir, Alexandre Riazanov, Harold Boley and Christopher J.O. Baker
Syntax Reuse: XSLT as a Metalanguage for Knowledge RepresentationLanguages
Tara Athan

10.10 – 10.30 // COFFEE BREAK

10.30 – 11.30
Invited Speaker Dr. Francois Briant
RIDER (Research for IT Driven EneRgy efficiency)

11.30 – 12.40
Session: Business Rules and Processes I
A Model Driven Reverse Engineering Framework for ExtractingBusiness Rules out of a Java Application
Valerio Cosentino, Jordi Cabot, Patrick Albert, Philippe Bauquel and Jacques Perronnet
Business Process Data Compliance
Mustafa Hashmi, Guido Governatori and Moe Wynn
An Automated approach for Business Rule Generation from BusinessProcess Models
Saleem Malik and Imran Sarwar Bajwa

12.40 – 14.30 // LUNCH BREAK

14.30 – 16.10
Invited Speaker Prof. Robert Kowalski
A Logic-Based Framework for Reactive Systems
Robert Kowalski and Fariba Sadri

RuleML2012 Best Paper Session
A Production Rule-based Framework for Causal and Epistemic Reasoning
Theodore Patkos, Abdelghani Chibani, Dimitris Plexousakis and Yacine Amirat

16.10 – 16.45 // COFFEE BREAK

16.45 – 18.00
Session: Business Rules and Processes II
Formalizing Both Refraction-Based and Sequential Executions ofProduction Rule Programs
Bruno Berstel-Da Silva
Bringing OWL ontologies to the Business Rules Users
Adil El Ghali, Amina Chniti and Hugues Citeau
From regulatory texts to BRMS: how to guide the acquisition ofbusiness rules?
Abdoulaye Guisse, Francois Levy and Adeline Nazarenko

18.30
IBM visit

While RuleML2012 officially ends on August 29, ECAI 2012 activities take place until August 31, 2012. As RuleML2012 participant you get access to all ECAI 2012 events.

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