

Gal A. Kaminka

Curriculum Vitae

Computer Science Department
Bar Ilan University
Ramat Gan 52900, Israel

+972 3 531 8866
galk@cs.biu.ac.il
<http://www.cs.biu.ac.il/~galk>

Research Interests

I am interested in the computational mechanisms that underly intelligent social behavior, whether artificial or natural. In particular, modeling others from observations of their behavior, and using such models for cooperative, coordinated, or other social behavior. My research emphasizes using robots and simulations to synthesize social intelligence in the lab, and in real-world applications.

Education

Ph.D., Computer Science	University of Southern California	1995–2000
Thesis: <i>Execution Monitoring in Multi-Agent Environments</i>		
Advisor: Professor Milind Tambe.		
Committee members: Profs. George Bekey, Victor Lesser, Daniel O’Leary, Jeff Rickel		
B.A. (Cum Laude), Computer Science	Open University of Israel	1991–1994

Professional Experience

Professor	Bar Ilan University	2012–present
At the computer science department, I head the MAVERICK group, conducting research in multi-robot systems, teamwork, cognitive modeling, and artificial intelligence. We emphasize empirical investigations, coupled with theoretical results. On occasion, we produce application prototypes for technology transfer and commercialization. I am also affiliated with the Gonda brain research center at the university.		
Associate Professor	Bar Ilan University	2008–2012
Radcliffe Fellow	Harvard University	2011–2012
On sabbatical at the Radcliffe Institute for Advanced Study.		
Senior Lecturer	Bar Ilan University	2002–2008
Adjunct Assistant Professor	Carnegie Mellon University	2002–2005
Post Doctorate Fellow	Carnegie Mellon University	2000–2002
Under guidance of Prof. Manuela Veloso, conducted research on learning and inferring models of multi-agent behavior from observations, in theory and empirically, in simulated robot soccer and other domains. In addition, investigated multi-robot systems architectures, and continued development of GameBots research testbed.		
Graduate Research Assistant	University of Southern California	1995–2000
Developed systems and theory for monitoring multiple agents in centralized and distributed settings, online and offline.		
ISIS Team Coordinator	University of Southern California	1997–1998
Our RoboCup simulation team served as platform for research into teamwork and learning. It also placed 3rd and 4th (out of at least 32) in annual international competitions in 1997 and 1998, respectively.		
Visitor	Electro-Technical Laboratory, Japan	3/1998
Gave a number of invited talks, include at ETL and Tokyo Institute of Technology.		

Programmer	Tovna Machine Translation Systems, Ltd.	1993–1995
Developed a system for maintaining file and typesetting formats through translation process, and a report system on statistics used in the translation, assisted in system administration.		
Military Service	Israel Defense Forces	1990–1993
Non-Commissioned Officer, rank: Sergeant First-Class		
Assistant System Administrator	Brandeis University Computer Science Department	1989
Routine system administration duties.		
Programmer	Shaham Computerized Educational Services	1986–1987
Converted the SEMEL tutoring system from Commodore computers to Apple II computers.		

Honors

Landau Prize in Research and Science (in Exact Sciences—Robotics)		2013
This is a prestigious national prize, awarded annually to 5 scientists, for internationally-recognized contribution and excellence. Award category: Exact Sciences—Robotics.		
Best Paper Award, IMMM Conference		2013
Co-authored with Ariella Richardson and Sarit Kraus, our paper “REEF: Resolving Length Bias in Frequent Sequence Mining” won the best paper award at the third international conference on advances in information mining and management (IMMM 2013).		
Best Challenge Paper Award, AAMAS Conference		2013
The challenge paper titled “Curing Robot Autism: A Challenge” was awarded the best challenge paper award, in the AAMAS “Challenges and Visions” special track. Invited for presentation as part of the AAAI conference “Other Conference Highlights” session for award-winning papers.		
Radcliffe Fellow		2012
Radcliffe Institute for Advanced Study, Harvard University.		
Nominated for Best Senior Program Committee Member, AAMAS Conference		2006, 2012
For “reviews, discussions, and feedback that stood out as being particularly helpful, both to the authors, and to program chairs”.		
Best of ICCM-2009		2009
Co-authored by Natalie Fridman, our paper in the International Conference on Cognitive Modeling (ICCM) was invited for publication in the <i>best of ICCM 2009</i> special issue of the journal Cognitive Systems Research.		
Best Paper Award, Cooperative Information Agents (CIA)		2007
Co-authored with Avi Rosenfeld, Claudia V. Goldman, and Sarit Kraus, our paper in the CIA conference won the best paper award.		
IBM Faculty Award		2004
For research excellence in the area of model-based diagnosis of multi-agent systems.		
First Place, International RoboCup Coach League		2001
Best of ICMAS-2000		2000
Co-authored by Milind Tambe, David V. Pynadath, Nicholas Chauvat, and Abhimanyu Das, our paper in the International Conference on Multi-Agent Systems (ICMAS) was invited for publication in the <i>best of ICMAS 2000</i> special issue of the journal Autonomous Agents and Multi-Agent Systems.		
Best of Agents-1999		1999
Co-authored by Stacy C. Marsella, Jafar Adibi, Yaser Al-Onaizan, Ion Muslea, Marcello Tallis, and Milind Tambe, our paper titled “On being a teammate: Experiences acquired in the design of RoboCup teams” in the International Conference on Autonomous Agents was invited for publication in the <i>best of Agents 1999</i> special issue of the journal Autonomous Agents and Multi-Agent Systems.		

Meritorious Service Award	University of Southern California	1997
Presented for outstanding contributions to the success of the USC's Information Sciences Institute (USC/ISI) robots in international competitions.		
Third place, International RoboCup soccer simulation league		1997
Second place, AAAI-1996 International Robot Competition		1996
Graduation cum laude		1994

Teaching
Courses

Multi-Robot Teamwork: Cooperative Multi-Robot Systems		2012–Present
An advanced course focusing on algorithms, data-structures and system architectures for building multi-robot systems.		
Advanced Multi-Robot Systems Seminar		Fall 2002–Present
A seminar focusing on advanced topics in robot control, multi-robot systems, and algorithms for common and advanced robotic tasks. Offered irregularly.		
Behavior Recognition Seminar		Fall 2002–Present
A seminar focusing on techniques for building and using models of agents based on observations of those agents and their actions. Offered irregularly.		
Computer Organization (A Programmer's Perspective)		Fall 2008–Present
An undergraduate course teaching the basics of computer organization and structure: CPU design, assembly language, memory hierarchy, code optimization, data representation.		
Empirical Methods in Computer Science		Spring 2006–Spring 2008
An undergraduate course introducing empirical research methods, and the underlying statistics background. The course covered scales of measurement, central tendency and distribution measures, experiment design, hypothesis testing, and the scientific method.		
Introduction to Multi-Robot Systems (I+II)		Fall 2002–2010
A graduate level course introducing robot control paradigms, algorithms for common tasks, multi-robot coordination and teamwork, and robot architectures.		
Data Structures and Algorithms for Engineers		Fall 2002–Spring 2004
An undergraduate introductory course in data structures and essential algorithms, intended for computer and electrical engineering students. Emphasized practice over theory.		
Seminar: Agents in Peer-to-Peer Systems		Fall 2002
An exploration of research issues in using intelligent agents in peer-to-peer and large-scale multi-agent systems.		
Multi-Agent Systems: Theory and Hands-On Experience		Spring 2001
Co-designed and co-taught with Prof. Manuela Veloso and Michael Bowling. A graduate-level course at Carnegie Mellon University, covering systems, logical, and game-theoretic approaches to the study of multi-agent systems. Students gave the course an average grade of 4.3 (out of 5.0) across 11 evaluation criteria.		
Introduction to Computer Science to Non-Majors		Fall 1994, Spring 1995
A required undergraduate class at the Open University of Israel, covering the BASIC programming language and use of office applications.		

Tutorials

Robot Teamwork		Winter 2006
A tutorial for the Israel Association for Artificial Intelligence (IAAI)		

Agent Modeling	Winter 2006
A PhD tutorial/seminar, given at the Computer Science Department of Universidad Carlos III of Madrid, Spain.	
Situated Agent Teams: Getting Robots to Cooperate	Summer 2006
A tutorial at the European Conference on Artificial Intelligence.	
Multi-Robot Systems: A Tutorial	Summer 2005
A tutorial at the International Conference on Autonomous Agents and Multi-Agent Systems.	
Robotic Teamwork: A Tutorial	2004
European autonomous agents summer school, Indian autonomous agents school.	
Monitoring Selectivity: A Tutorial	2004
Indian autonomous agents school.	
How to Do Research in RoboCup: A Tutorial	2001
A tutorial given at the International RoboCup 2001 event.	

Service

Professional Societies

Member, Ethics Committee	Association for Advancement of Artificial Intelligence (AAAI)	2015–Present
Board Member	International Foundation for Autonomous Agents and Multi-Agent Systems (IFAAMAS)	2008–2014
Member, Executive Committee	RoboCup Federation	2010–2013
Member, Executive Council	Association for Advancement of Artificial Intelligence (AAAI)	2008–2011

Journal Editing

Associate Editor	Communications of the ACM (robotics)	2014–Present
Coordinating Editor	Journal of Autonomous Agents and Multi-Agent Systems	2007–Present
Associate Editor	Journal of Artificial Intelligence Research (JAIR)	2013–Present
Associate Editor (Robotics)	Annals of Mathematics and Artificial Intelligence (AMAI)	2008–2013
International Scientific Committee	Journal of Physical Agents (JOPHA)	2010–2014
Guest Editor	Annals of Mathematics and Artificial Intelligence: Special Issue BISFAI 2007. Co-edited with Sarit Kraus.	2009
Guest Editor	Annals of Mathematics and Artificial Intelligence: Special Issue Multi-Robot Coverage, Search, and Exploration. Co-edited with Amir Shapiro.	2008

Conference Organization

Program Co-Chair, ECAI	2016
Robotics Track Co-Chair, AAMAS	2015
Integrated Systems Track Co-Chair, AAI	2015
Area Chair, IJCAI	2011
Program Co-Chair, AAMAS	2010
Chair, AAMAS Workshop Program	2009
Co-Chair, AAMAS Doctoral Mentoring Program and Symposium	2008
Program Co-Chair, BISFAI	2007
Chair, AAMAS Doctoral Mentoring Program and Symposium	2004
Co-Chair, RoboCup Symposium	2002
Chair, RoboCup Soccer Simulation World Cup	2001
Chair, RoboCup Soccer Simulation Evaluation Sessions	1998–2001
Member, RoboCup Soccer Simulation Technical Committee	1998–2002

<i>Workshop Organization</i>	Founder & Co-Chair, ARMS (Autonomous Robots and Multirobot Systems) Workshop	2011–2007
	Co-Chair, AAAI Workshop on Evaluating Architectures for Intelligence	2007
	Program Co-Chair, EUMAS Workshop	2005
	Founder & Chair/Co-Chair, MOO (Modeling Others from Observations) Workshop	2004–2006
<i>Senior Program Committee Member</i>	Autonomous Agents and Multi-Agent Systems (AAMAS)	2005–2006, 2011–2012, 2014
	National Conference on Artificial Intelligence (AAAI)	2005–2007
<i>Program Committee Member/Reviewer</i>	Autonomous Agents and Multi-Agent Systems	2002–2004, 2008–2009, 2013
	International Conference on Robotics and Automation (ICRA)	2005, 2008, 2010–2011, 2014
	International Cognitive Robotics Workshop	2008
	IEEE Conference on Intelligent Robotic Systems (IROS)	2008
	SDIR Workshop at IEEE Conference on Robotics and Automation (ICRA)	2007
	International Joint Conference on Artificial Intelligence (IJCAI)	1999, 2007, 2009
	User Modeling (UM)	2005
	Biennial Israeli Symposium on Foundations of AI (BISFAI)	2005
	Intelligent Autonomous Systems	2002, 2004
	National Conference on Artificial Intelligence (AAAI)	2002–2004
	RoboCup Symposium	1998, 2000, 2001, 2003
	Autonomous Agents	1998–2001
	International Conference on Multi-Agent Systems	2000
	Distributed Autonomous Robot Systems (DARS)	2000
	Workshop on Collective Robotics	1998
<i>Journal Reviewer</i>	International Journal of Robotics Research	
	Computational Intelligence	
	Annals of Mathematics and Artificial Intelligence	
	Journal of Field Robotics	
	Journal of Physical Agents	
	Autonomous Robots	
	Journal of Artificial Intelligence Research	
	Autonomous Agents and Multi-Agent Systems Journal	
	Artificial Intelligence	
	IEEE Transactions on Systems, Man, and Cybernetics	
	IEEE Transactions on Robotics	
	IEEE Intelligent Systems	
	Robotics and Autonomous Systems	
	Advanced Robotics	
	Constraints	
	Machine Learning	
	Journal of Computational and Mathematical Organization Theory	
	International Journal of Information Technology & Decision Making	
<i>External Ph.D. Examiner</i>	Joana Dimas Couto Silva Universidade de Lisboa, Instituto Superior Técnico	2016
	When “I” becomes “We”: Creating Agents with Dynamic Identity.	
	Matthew Johnson Delft University of Technology, Netherlands	2014
	Coactive Design: Designing Support for Interdependence in Human-Robot Teamwork.	
	Aris Valtzanos University of Edinburgh, UK	2013
	Decision Shaping and Strategy Learning in Multi-Robot Interactions.	
	Boštjan Kaluža Jožef Stefan International Postgraduate School, Slovenia	2013
	Detection of Anomalous and Suspicious Patterns from Spatio-Temporal Agent Traces.	

Nicola Basilico	Politecnico di Milano, Italy	2010
Navigation Strategies for Exploration and Patrolling with Autonomous Mobile Robots.		
Lavindra de Silva	RMIT University, Australia	2009
Planning in BDI Agent Systems.		
David Poutakidis	RMIT University, Australia	2008
Debugging Multi-Agent Systems with Design Documents.		
Nikolaus Correll	École Polytechnique Fédérale de Lausanne (EPFL), Switzerland	2007
Coordination Schemes for Distributed Boundary Coverage with a Swarm of Miniature Robots: Analyses and Experimental Validation.		
Eric Platon	Laboratoire d'informatique de Paris 6, Université Pierre et Marie Curie	2007
Modeling Exception Management in Multi-Agent Systems.		
Silvia Rossi	University of Trento, Italy	2006
Communication and Overhearing for Modelling and Monitoring Group Interactions		
<i>Institutional</i>	Member of the University Senate	2014–Present
	Chair, Academic and Teaching Committee, Bar Ilan Computer Science Dept.	2013–Present
	Undergraduate Student Advisor and Deputy Chair, Bar Ilan Computer Science Dept.	2009–2011
	Member, Bar Ilan Computer Science Dept. Systems Committee	2005–2006
	Member, Bar Ilan Computer Science Dept. Teaching Committee	2002–2005
	Student Liaison, USC Computer Science Graduate Organization	1995–1997

Funding

PI, Plan Recognition by Mirroring	Israel Science Foundation (ISF)	2016–2020
Investigating a novel approach to plan, activity, and intent recognition (PAIR), inspired by the primate mirroring neuron system.		
PI, An exploration of plan recognition in cybersecurity	BIU Cybersecurity Center	2016–2017
Preliminary identification of the potential for plan recognition in cybersecurity applications.		
PI, Crowd behavior in homeland security simulation	MEIMAD	2015–2016
Research and technology transfer of crowd behavior modeling algorithms, applied to homeland security and disaster response simulations, for training and decision-support. Commercial partner: El-Tel, Ltd.		
PI, Game-Theory, Reinforcement Learning, and Emergent Behavior in Robots and Agents	Israel Science Foundation (ISF)	2012–2016
Investigating the game-theoretic properties (including rationality) of multi-robot swarm behaviors.		
Co-PI, ROBIL2: A robotics consortium	MAFAT	2013–2017
Co-PI: Dr. Noa Agmon. Multi-organization consortium to build and evaluate generic robotics technologies in ROS. Our areas: decision-making, and multi-robot teamwork. Other partner organizations include Ben Gurion University, Technion, Cogniteam, IAI.		
Co-PI, AIDL	Boeing Research and Technology Europe	2014
Enabling higher levels of autonomy. Main PI: Dr. Noa Agmon, Bar Ilan University.		
Co-PI, ROBIL: Israel's entry to the DARPA Robotics Challenge	MAFAT, DARPA	2012
Lead PI: Prof. Hugo Guterman, Ben Gurion University (BGU). Multi-organization consortium to build a team to compete in the DARPA Robotics Challenge (in addition to Bar Ilan University: Ben Gurion University, Technion, Cogniteam, IAI). My areas: decision-making and complex behaviors.		
PI, Improving Walking in Legged Robots	MAFAT	2009, 2011
Using machine learning and other techniques to improve stability and speed of quadruple walking robots.		
PI, PointBots	MAFAT	2010–2013
Multirobot semi-autonomous exploration and mapping. A technology transfer and accelerated research and development program.		

PI, Groups of Autonomous Marine Surface Vehicles MAFAT 2010–2012
Support and advise a MAFAT-funded project at University of Texas, building autonomy control modules for marine surface vehicles.

PI, A Spectrum of Social Models in Theory and Robots Israel Science Foundation (ISF) 2007–2012
Secondary PI: Prof. Sarit Kraus (Bar Ilan University). Development of advanced logic theory and practical algorithms for controlling cooperative groups of autonomous robots, beyond teams.

PI, Social Comparison in Crowds U.S. Air Force Office of Scientific Research 2009,2011
Investigation of social comparison mechanisms in crowds.

PI, Modeling Crowd Behavior MAFAT 2005–2012
Using cognitive architectures and other AI tools to model crowd behavior.

PI, Diagnosis and Decision-Support for UAVs MAFAT 2007–2010
Development of a multivariate monitoring system for detecting and diagnosing failures.

PI, Autonomous robot mapping RAFAEL 2009
Demonstration of autonomous mapping capabilities by robots.

PI, Multi-Robot Formations with a Single Operator Ministry of Commerce 2007–2009
MAGNETON program with Elbit Systems, Ltd.

Co-PI, "Mind reading" of the visual content from population responses in the visual cortex of behaving monkeys Center for Complexity Science 2007–2008
Co-PI: Dr. Hamutal Slovin (Bar Ilan University). Development and application of machine learning techniques for decoding neuron population responses in the visual cortex.

PI, Cooperation in Robotic Ground Platform MAFAT 2005–2009
Algorithms and control systems for teams of physical robots in security tasks.

PI, Research in multi-agent systems Samsung Telecommunications Research, Israel 2006–2007

PI, Teamwork in Computer Generated Forces Elbit Systems, Ltd. 2005–2006
Using the Soar architecture to model CGF teams.

Co-PI, National Infrastructure Program in Robotics Ministry of Science and Technology 2005–2007
Co-PIs: Profs. Ehud Rivlin, Alfred Bruckstein (Technion); Sarit Kraus (Bar Ilan University); Eyal Shimony, Ariel Felner (Ben Gurion University). Development of canonical tasks and solutions for multi-robot systems, of multiple scales.

Co-PI, Recognizing Anomalous Behavior Ministry of Commerce 2004–2007
Co-PI: Prof. Sarit Kraus (Bar Ilan University). Development of algorithms for recognizing anomalous and suspicious behavior based on evidence from observations.

PI, Teamwork in Theory and Robots Israel Science Foundation (ISF) 2004–2007
Secondary PI: Prof. Sarit Kraus (Bar Ilan University). Development of logic theory and practical algorithms for controlling teams of autonomous robots.

PI, RoboSweep MAFAT 2004–2005
Robotic teams for efficient and robust area coverage.

PI, Distributed Model-Based Diagnosis IBM 2004
Development of model-based diagnosis techniques for large-scale distributed systems.

Co-PI, Principled Design and Control of Robot Teams Binational Science Foundation (BSF) 2004–2007
Co-PIs: Prof. Manuela Veloso, Dr. Brett Browning (Carnegie Mellon University). Development of tools for design and deployment of coordinated robot teams.

Co-writer, RoboHunt DARPA 2001
PI: Prof. Manuela Veloso. Development of the infrastructure for investigating teams in cooperative and adversarial team games. Wrote significant portions of the proposal.

Co-PI, GameBots USC/Information Sciences Institute 2000
Co-PI: Sheila Tejada (University of Southern California/Information Sciences Institute). High-risk/high-visibility funding for developing infrastructure for research using PC game environments. This was the only funded proposal by graduate students.

- Panels, Invited Talks**
- Teams, Swarms, Crowds and Collectives: Special Cases?** 2016
Invited keynote talk at the AAI workshop on multiagent interaction without prior coordination.
- No Robot is an Island, No Team and Archipelago** 2015, 2016
Tel Aviv University, Ben Gurion University ABC Robotics Initiative, Invited keynote talk at the 2016 Robotics Systems and Science (RSS) workshop on online decision making for multiple robots.
- No Robot is an Island: Translational Psychomimetic Research** 2015
A short talk at the BrainTech 2015 Conference, Israel.
- Doctoral Mentoring Panel** 2015
A panel at the AAMAS conference doctoral consortium and mentoring program, on career management and PhD advice.
- The Aleph-Bet of Robotics** 2014
An invited talk at an invitation-only workshop on commercialization, investment, and business in the area of Internet-of-Things. Organized by VC firm Aleph.
- Curing Robot Autism: A Challenge to the Community** 2014
An invited talk at workshop on Interactive Intelligence, Lorentz Center, the Netherlands.
- Forward the architecture: Integrated AI through robotics** 2013
Invited talk at BISFAI 2013 (Israel).
- Curing Robot Autism: A Challenge** 2013
An invited presentation (short version) of the above-titled award-winning paper, at the AAI conference special session highlighting research from other conferences.
- We, Robots** 2013
An invited popular-science talk contrasting science fiction literature and culture views of robots, with the commercial and scientific reality; a discussion of Asimov's three laws of robotics and their significance. Presented at the Israeli conference on science fiction and fantasy (ICON).
- Reusable Teamwork in Multi-Robot Teams** 2012, 2013
Carnegie Mellon University, University of Texas at Austin, University of Massachusetts at Amherst, Massachusetts Institute of Technology, Georgia Institute of Technology, Harvard University, University of Massachusetts at Lowell, Ninth International Workshop on Foundations on Mobile Computing.
- The Robots are Here!** 2013
A popular-science talk on the current and future prospects of robotics. Part of "Mada La'am" series organized by Israel's Ministry of Science and Technology.
- Pets, Slaves, or Companions: Robots in Human Society** 2012
A panel, part of a mini-symposium on *Robots in Human Society*. Moderated by Dr. Guy Hoffman. Other panelists include Prof. Ken Goldberg, Dr. Roey Tzezana.
- The Present and Future of Robotics** 2012
An invited popular science talk at the ICON TLV international sci-fi and fantasy festival (Hebrew). Available at <http://www.youtube.com/watch?v=0QQHc-B-btM>
- Panel on the Technological Singularity: Fashionable Hysteria or a Certain Future?** 2012
Moderated by Yael Dan, the other panel members included Dr. Immanuel Lotem, and Yanki Margalit.

- Modeling Crowds: Psycho-history Reinvented** 2012
An invited talk at the Crowds 2012 workshop at the University of Southern California.
- Modeling Human Crowds and Robot Swarms: Two Different Approaches** 2012
University of Southern California.
- This Is Not a Game: Old and New Challenges in Adversarial Reasoning** 2011
Invited talk at the AARM (Applied Adversarial Reasoning and Modeling) workshop, at the AAAI 2011 conference.
- Use-Inspired Research in Robotics** 2011
Invited talk at the CARE (Collaborative Agents—Research and Development) workshop, University of Southern California workshop on Use-Inspired Research.
- Unsupervised Data-Mining and Anomaly Detection** 2011
Invited talk at the ADMI (Agents and Data Mining Interaction) workshop.
- Teamwork in Robots: Applying Lessons from Humans** 2011
Invited talk at the annual Taiwan AI Forum (Taipei).
- Towards Rapid Prototyping of Socio-Cognitive Simulations** 2011
An invited talk at the 711 Human Performance Wing, Wright-Patterson Air Force Base.
- Challenges in Robot and Human-Robot Teamwork** 2010
A keynote presentation for *HART* (Human-Agent-Robot Teamwork) 5-day focused workshop.
- A Cognitive Modeling Approach to Crowd Simulations** 2009–2010
An invited talk at University of Southern California's TEAMCORE group, at the 711 Human Performance Wing, Wright-Patterson Air Force Base, at Singapore Management University (School of Information Sciences).
- No robot is an island: On the role of multi-robot technology in commercial robotics** An invited talk at the World Innovation Summit 2009.
- RoboCup and Lessons for Science Competitions** 2007, 2009
An invited talk at the AAAI 2007 Workshop on Evaluation of Architectures, and the AAMAS 2009 Workshop on Agent Design: Adapting from Practice to Theory (ADAPT).
- Distributed Multi-Agent Robotics** 2008
An invited talk at the 2008 IEEE International Conference on Distributed Human-Machine Systems.
- Robots are Agents, Too!** 2007
An invited talk at the International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS). Also given at Hebrew University of Jerusalem.
- 10 Years of Situated Teamwork or Separating Teamwork from Taskwork in Multi-Robot Teams** 2006–2007
University of Trento and ITC-irst, University of Southern California, Ben Gurion University of the Negev National Seminar in AI, EPFL Switzerland Summer Research Institute.
- Multi-Robot Systems** 2006–2009
An annual talk at the *Computer Science, Academy, and Industry* educational program for exceptional high-school students at Weizmann Institute of Science.
- Single Operator, Multiple Robots: The Case of Coordinated Robots** 2004–2005
University of Southern California Computer Science Department, NASA/JPL, Natanya College, University of Pittsburgh HCI group.
- Robotics: Present and Future** 2005
Bar Ilan Science Day keynote speech.
- Robotics: Technological and Educational Challenge for Israel** 2004
Haifa University robotics competition, keynote address.

Teamwork in Autonomous Systems	2003
El-Op, Ltd. industry day, MAFAT robotics day.	
GameBots: A Research Testbed	2002
University of Pittsburgh HCI group.	
Monitoring Teams by Overhearing	2002
University of Massachusetts—Amherst computer science department, Carnegie Mellon University RETSINA group, Interdisciplinary Center in Hertzelia (Israel), Bar Ilan University computer science department.	
Teamwork and Coordination panel member	2001
A simulation league panel at the International RoboCup 2001 event.	
Teamwork and Coordination panel member	2001
First NASA workshop on Radical Agent Concepts.	
Multi-Agent Modeling	2001
Ben Gurion University, Hebrew University of Jerusalem, Tel-Aviv University, Technion: Israel Institute of Technology.	
If I'm OK, and You're OK, are We OK?	1999
Carnegie Mellon University CORAL Group, Ben-Gurion University, Hebrew University of Jerusalem.	
Teamwork and Learning in the ISIS RoboCup Team	1998
Japan Elctro-Technical Laboratory (ETL)—now AIST.	

Students

<i>Current Ph.D.</i>	Mor Vered	Ph.D. student
	Computational Modeling of Cognitive Mirroring Processes.	
<i>Current M.Sc.</i>	Roi Yehoshua	Ph.D. student
	Adversarial Robot Coverage. Co-advised by Noa Agmon, Bar Ilan University.	
	Mika Barkan	M.Sc. student
	Undecided topic in multi-robot systems.	
	Ella Checnoverov	M.Sc. student
	Undecided topic in molecular robotics (nanobotics).	
	Niv Rafaeli	M.Sc. student
Integrating active perception into a decision-making architecture.		
<i>Alumni Ph.D.</i>	Inbal Wiesel	M.Sc. student
	Rule-based programming of molecular nano-robots. Co-advised by Ido Bachelet and Noa Agmon at Bar Ilan University.	
	Yinon Douchan	M.Sc. student (Mech. Eng., Tel Aviv University)
	Reinforcement learning in robot swarms. Co-advised by Avraham Seifert, Tel Aviv University.	
	Sharon Yalov-Handzel	Ph.D. 2016
Stable Humanoid Whole Body Motion Generation.		
Natalie Fridman	Ph.D. 2013	
Modeling Crowd Behavior.		
Elisheva Bonchek-Dokow	Ph.D. 2012	
Cognitive Modeling of Human Intention Recognition.		
Ariella Richardson	Ph.D. 2011	
Mining and Classification of Multivariate Sequential Data. Co-advised by Sarit Kraus, Bar Ilan University. <i>Now faculty at Jerusalem College of Technology.</i>		

Noa Agmon Ph.D. 2009
 Models and Algorithmic Approaches for Cooperative Multi-Robot Systems. Co-advised by Sarit Kraus, Bar Ilan University. Dissertation was recognized specifically as a runner-up to the *IFAAMAS Victor Lesser Best Dissertation Award*. Now a post-doc at Univ. of Texas, Austin.

Yehuda Elmaliach Ph.D. 2009
 Multi-Robot Frequency-Based Patrolling. Now faculty at Israeli College of Management, and founder of Cogniteam, Ltd.

Dorit Avrahami Ph.D. 2009
 Efficient Hybrid Algorithms for Plan Recognition and Detection of Suspicious and Anomalous Behavior.

Avi Rosenfeld Ph.D. 2007
 Adaptive coordination for multi-robot and multi-agent teams. Co-advised by Sarit Kraus, Bar Ilan University. Now faculty at Jerusalem College of Technology.

Yael Termin Ph.D. 2007
 Perception of a 3D Colored Image from One Colored and One Gray-Scale Images. Co-advised by Ari Zivotofsky, Bar Ilan University.

Meir Kalech Ph.D. 2007
 Diagnosing Coordination Faults in Multi-Agent Systems. Now faculty at Ben Gurion University, Israel.

Gery Gutnik Ph.D. 2006
 Monitoring large-scale multi-agent systems using overhearing.

Alumni M.Sc. (thesis)

Ilan Lupu M.Sc. 2015
 Optimal Construction of Control Graphs in Multi-Robot Systems. Co-advised by Noa Agmon, Bar Ilan University.

Shahar Kosti M.Sc. 2013
 Single Operator Control of Multiple Robots in Exploration. Co-advised by David Sarne, Bar Ilan University.

Limor Marciano (Bagizada) M.Sc. 2013
 CPNP: Colored Petri-Net Plans for Single and Multiple Robots.

Matan Kedar M.Sc. 2012
 Fast Frontier Detector for Robot Exploration.

Meytal Traub M.Sc. 2011
 Topics in Multi-Robot Teamwork.

Eliyahu Khalastchi M.Sc. 2010
 Anomaly detection and diagnosis in robots and unmanned vehicles. Co-advised by Meir Kalech, and by Raz Lin

Asaf Shiloni M.Sc. 2010
 Robot *Ants* and *Elephants*: Computational multi-robot systems. Co-advised by Noa Agmon and Ariel Felner.

Igor Vainer M.Sc. 2009
 Obtaining Scalable and Accurate Classification in Large Scale Spatiotemporal Domains. Co-advised by Sarit Kraus, Bar Ilan University.

Dan Erusalimchik M.Sc. 2009
 Adaptive multi-robot coordination based on resource spending velocity.

Victor Shafran M.Sc. 2008
 Multilateral distributed matchmaking, and hybrid multi-robot coverage. Co-advised by Sarit Kraus, Bar Ilan University.

Niron Cohen-Nov-Slapak M.Sc. 2008
 On Integrated Multi-Agent Intention Recognition Systems.

Ari Yakir M.Sc. 2007
 Soaring Higher: Advanced Teamwork and Development Environment for Computer-Generated Forces.

	Gilad Armon-Kest Supporting Collaborative Activity. Co-advised by Sarit Kraus, Bar Ilan University.	M.Sc. 2007
	Natalie Fridman Modeling Crowd Behavior Based On Social Comparison Theory.	M.Sc. 2007
	Ido Ikar Area Coverage by a Multi-Robot System.	M.Sc. 2007
	Einat Marhasev (Haifa University, Computer Science) Recognition of Duration-Based Behavioral Patterns with Hidden Semi Markov Models. Co-advised by Meirav Hadad.	M.Sc. 2007
	Edi Shmukler Anytime Fuzzy Control.	M.Sc. 2006
	Eran Shoham (Technion, Industrial Engineering) Multi-Agent Coalition Reformation and League Ranking. Co-advised by Omn Shehory, IBM Research and the Technion.	M.Sc. 2006
	Inna Frenkel Flexible Teamwork in Behavior-Based Robots	M.Sc. 2005
	Danny Shimony A tool for multi-user, multi-application modeling.	M.Sc. 2005
	Noam Hazon Robust and efficient multi-robot coverage.	M.Sc. 2005
	Ruti Glick Robust multi-robot formations.	M.Sc. 2005
	Yehuda Elmaliach Single operator control of tightly-coordinated multi-robot teams.	M.Sc. 2004
	Dorit Avrahami Symbolic behavior recognition.	M.Sc. 2004
<i>Alumni M.Sc. (no thesis)</i>	Alon Levy Multi-Robot Patrolling with Stopping Events.	M.Sc. 2010
	Mark Bramnik Human-assisted robot mapping.	M.Sc. 2009
	Alex Fridman Learning and data-mining for anomaly detection.	M.Sc. 2009

Media Coverage

- [1] Asimov's imagination: A dramatization and literary discussion of isaac asimov's vision of robots, September 20 2016. Interview on the reality of robotics versus Asimov's vision.
- [2] Programmable nano-robots. An interview on the *London at Kirshenbaum* TV talk show (Hebrew), August 23 2016. Available online at: <http://10tv.nana10.co.il/Category/?CategoryID=600262>.
- [3] On the AlphaGo computer beating go master lee sedol. Galei Tzhal Radio, March 13 2016.
- [4] Hanan Greenwood. It will happen in the near future (Hebrew). *Makor Rishon Motzash (weekend section)*, page 50, Dec 12 2015.
- [5] On robots and artificial intelligence. Galei Tzhal Radio, Part 1: Nov 22; Part 2: Nov 30 2015.
- [6] An open letter on autonomous weapons. Reshet Bet Radio, July 29 2015.

- [7] David Shamah. Israel's 'robot revolutionary' wins top prize. *The Times of Israel*, December 27 2013. Available online at: <http://www.timesofisrael.com/israels-robot-revolutionary-wins-top-prize/>.
- [8] An hour with professor Gal Kaminka. Galei Tzahal Radio, October 13 2013.
- [9] Ayelett Shani (photography: Gali Eitan). The robot is a friend (hebrew). *Haaretz magazine*, August 29 2013. Available online at: <http://www.haaretz.co.il/magazine/ayelet-shani/1.2110002/>.
- [10] Ami Rojkes Domba. Moving to open code in robotics (hebrew). *Israel Defense*, June 24 2013. Available online at: <http://www.israeldefense.co.il/?CategoryID=760&ArticleID=4720>.
- [11] The robots are here (hebrew). A TV interview on Channel 1's "Erev Hadash" (Hebrew), March 14 2013.
- [12] Avi Belizovsky. From saving UAVs to saving lives (hebrew). *Haareez online (science channel)*, April 24 2012. Available online at: <http://bar-ilan.haaretz.co.il/?p=393&s=1717>.
- [13] A professor without matriculation exams... and with robots (hebrew). Reshet Bet Radio(IBA), June 13 2011. Available online at: <http://www.iba.org.il/?autoStartOnFirstElement=true&defaultSearchTerm=7469818&filterType=CM>.
- [14] Gabi Gazit. The university that is open to all. A radio interview on 103fm, "Radio Le'lo Hafsaka" (Hebrew), May 31 2011. Available online at: <http://www.103.fm/programs/Media.aspx?ZrqvnVq=FFKDEJ&c41t4nzVQ=EE>.
- [15] Karin Kloosterman. Surgery? border patrol? israeli robots do it all. *Israel21c.org*, March 17 2011. Available online at: <http://israel21c.org/health/surgery-border-patrol-israeli-robots-can-do-it-all-2/>.
- [16] Karin Kloosterman. Forget the world cup, think soccer robotics. *Israel21c.org*, July 8 2010. Available online at: <http://israel21c.org/culture/forget-the-world-cup-think-soccer-robotics/>.
- [17] Achiya Cohen. Robots on the grass (Hebrew). *Makor Rishon (sports section)*, page 26, July 5 2009.
- [18] A robot instead of a human being? An interview on the *London at Kirshenbaum* TV talk show (Hebrew), July 30 2009. Available online at: <http://lnk.nana10.co.il/Article/?ArticleID=654111>.
- [19] Robots in the fight against terrorism. A part of a televised 1-hour meeting with Israel president Shimon Peres (Hebrew), June 2009. Available online at: <http://www.iba.org.il/vod/player.aspx?scode=2179256&t=&cat=>.
- [20] Dudi Goldman. Israel versus Iran on the field in Austria: Two robot soccer players, and a robot goalie (Hebrew). *Yediot Acharonot*, June 28 2009.
- [21] Ofri Ilani. IDF's new warrior: A robot cat (in hebrew). *Ha'aretz Online*, November 20 2008. Available online at: <http://www.haaretz.co.il/hasite/spages/1039188.html>.
- [22] Nir Dvori. Coordinating robots (Hebrew). Channel 22 News (part of a longer item on the 2nd Israeli Conference on Robotics, of which I was program chair), November 20 2008. Available online at: <http://www.mako.co.il/news/channel2/Channel-2-Newscast/Articles/itemId=e4dd190e56bbd110VgnVCM100000290c10acRCRD>.
- [23] Israel Binyamini. On your walls I put robot guards (hebrew). *Galileo*, 121:44–51, September 2008.
- [24] Yotam Feldman. The robots that will replace you in guard duty (hebrew). *The Marker*, July 11 2008. Available online at: <http://www.themarker.com/technation/it/1.1757091>.
- [25] Yotam Feldman. From vacuum cleaners to electronic soldiers in the IDF (hebrew). *Ha'aretz*, July 9 2008. Available online at: <http://www.haaretz.co.il/captain/gadget/1.1336581>.
- [26] Yotam Feldman. The transformers. *Ha'aretz Magazine*, pages 20–22, July 11 2008. Available online at: http://www.cs.biu.ac.il/~galk/file_biu_08_07_20_10_00.pdf.
- [27] Judy Siegel-Itzkovich. Bar-Ilan researchers develop mini-robots to bolster IDF patrols. *The Jerusalem Post*, June 5 2008. Available online at: <http://www.jpost.com/servlet/Satellite?cid=1212659671909&pagename=JPost>

- [28] Yisrael Binyamini. The future: Social robots? (hebrew). *Galileo*, January 9 2007. Available online at: <http://www.ynet.co.il/articles/0,7340,L-3349284,00.html>.
- [29] Dudi Goldman. Private robot, you have guard duty! (Hebrew). *24 Minutes*, page 4, June 5 2008.
- [30] Barbara Opall-Rome. Red forces get smart: Advanced AI adds unpredictability to simulated terrorists. *Training and Simulation Journal (TSJ)*, page 24, December 24 2007. Available online at: <http://www.tsjonline.com/story.php?F=3116545>.
- [31] Barbara Opall-Rome. Smart entities program brings 'human' element to counterterror training. *Defense News*, page 24, November 5 2007. Available online at: <http://www.defensenews.com/story.php?F=3143987&C=thisweek>.
- [32] YNet News Service. The future: Social robots? (Hebrew). <http://www.ynet.co.il/articles/0,7340,L-3349284,00.html>, January 9 2007.
- [33] Zohar Guri. Groups of robots in action (Hebrew). *Rosh Gadol*, 2006.
- [34] Tami Pollack. Robots: The true story (Hebrew). *Makor Rishon—Children's Section*, February 2006.
- [35] YNet News Service. Wanted: Young scientists (Hebrew). <http://www.ynet.co.il/articles/0,7340,L-3144236,00.html>, September 19 2005.
- [36] Channel 8 (The Cable Science Channel). Coordinating robots (Hebrew), February 15 2005.
- [37] PrimeTime. Social intelligence and robots (Hebrew). Yes+ TV Channel, September 10 2003.
- [38] SAfm Sport. Live radio interview. SABC Radio—Johannesburg, South Africa, November 10 2001.
- [39] Duncan Graham-Rowe. Managers face reprogramming after defeat. *New Scientist*, August 21 2001.

Patents

- A robotic system for maintaining, servicing, and monitoring surfaces and solar energy panels** Provisional, 2015
Gal A. Kaminka, Assaf Friedler, Ari Yakir, Dan Erusalimchik, Yehuda Elmaliach. U.S. Provisional Patent Application No. 62/247,212.
- Location-Based Image Retrieval** Pending, 2014
Shahar Kosti, Gal A. Kaminka, and David Sarne. International application #PCT/IL2014/050042. US Provisional filed 2013.
- Anomaly Detection Methods, Devices and Systems** **Granted**, 2011
Eliyahu Khalastchi, Gal A. Kaminka, Raz Lin, and Meir Kalech. US Patent 9,218,232.
- Flexible Computer Vision** **Granted**, 2011
Gal A. Kaminka and Eran Sadeh-Or. US Patent 8,965,130.
- Voting by Peers with Limited Resources** **Granted**, 2007
Meir Kalech, Sarit Karus, Gal A. Kaminka, and Claudia V. Goldman-Shenhar. US Patent 8,038,061.
- A Method and a System for Matching between Network Nodes** **Granted**, 2007
Victor Shufrun, Gal A. Kaminka, Sarit Kraus, and Claudia V. Goldman-Shenhar. US Patent 7,808,909.
-

Publications

Books, Edited Books, Proceedings, and Dissertation

- [1] Gal A. Kaminka. *No Robot is an Island: Cooperative Multi-Robot Teams (tentative title)*. Cambridge University Press, Under contract. Forthcoming.

- [2] Gal A. Kaminka, Maria Fox, Paolo Bouquet, Eyke Hüllermeier, Virginia Dignum, Frank Dignum, and Frank van Harmelen, editors. *22nd European Conference on Artificial Intelligence (ECAI 2016)*, volume 285 of *Frontiers in Artificial Intelligence and Applications*. IOS Press, 2016.
- [3] Jörg P. Müller, Wolf Ketter, Gal Kaminka, Gerd Wagner, and Nils Bulling, editors. *Multiagent System Technologies: 13th German Conference (MATES 2015), Cottbus, Germany, September 28 - 30, 2015, Revised Selected Papers*. Number 9433 in *Lecture Notes in Artificial Intelligence*. Springer, 2015.
- [4] Wiebe van der Hoek, Gal A. Kaminka, Yves Lespérance, Michael Luck, and Sandip Sen, editors. *AAMAS 2010: Proceedings of the Ninth International Conference on Autonomous Agents and Multi-Agent Systems*. IFAAMAS: International Foundation for Autonomous Agents and Multiagent Systems, Toronto, Canada, May 2010.
- [5] Marie Pierre Gleizes, Gal A. Kaminka, Ann Nowé, Sascha Ossowski, Karl Tuyls, and Katja Verbeeck, editors. *EU-MAS 2005: Proceedings of the Third European Workshop on Multi-Agent Systems*. Koninklijke Vlaamse Academie van Belie voor Wetenschappen en Kunsten, Brussels, Belgium, 2005.
- [6] Gal A. Kaminka, Pedro U. Lima, and Raul Rojas, editors. *RoboCup 2002: Robot Soccer World Cup VI*. Number 2752 in *Lecture Notes in Artificial Intelligence*. Springer, 2003.
- [7] Gal A. Kaminka. *Execution Monitoring in Multi-Agent Environments*. PhD thesis, Computer Science Department—University of Southern California, 2000.

Journal Publications

- [1] Gal A. Kaminka, Rachel Spokoini-Stern, Yaniv Amir, Noa Agmon, and Ido Bachelet. Molecular robots obeying Asimov’s three laws of robotics. *Artificial Life*, 2017. In press.
- [2] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Robotic adversarial coverage of known environments. *International Journal of Robotics Research*, 2016. In press.
- [3] Eliahu Khalastchi, Meir Kalech, Gal A. Kaminka, and Raz Lin. Online data driven anomaly detection in autonomous robots. *Knowledge and Information Systems*, 43(3):657–688, 2015.
- [4] Ariella Richardson, Gal A. Kaminka, and Sarit Kraus. REEF: Resolving length bias in frequent sequence mining using sampling. *International Journal On Advances in Intelligent Systems*, 7(1–2):208–222, 2014.
- [5] Elisheva Bonchek-Dokow and Gal A. Kaminka. Towards computational models of intention detection and intention prediction. *Cognitive Systems Research*, 28(1):44–79, 2014.
- [6] Matan Keidar and Gal A. Kaminka. Efficient frontier detection for robot exploration. *International Journal of Robotics Research*, 33(2):215–236, 2014.
- [7] Peter Stone, Gal A. Kaminka, Sarit Kraus, Jeff Rosenschein, and Noa Agmon. Teaching and leading an ad hoc teammate: Collaboration without pre-coordination. *Artificial Intelligence*, 203:35–65, 2013.
- [8] Natalie Fridman and Gal A. Kaminka. Using qualitative reasoning for social simulation of crowds. *ACM Transactions on Intelligent Systems and Technology*, 4(3):54:1–54:21, 2013.
- [9] Noa Agmon, Sarit Kraus, and Gal A. Kaminka. Multi-robot adversarial patrolling: Facing a full-knowledge opponent. *Journal of Artificial Intelligence Research*, 42:887–916, December 2011.
- [10] Asaf Shiloni, Noa Agmon, and Gal A. Kaminka. Of robot ants and elephants: A computational comparison. *Theoretical Computer Science*, 412(41):5771–5788, 2011.
- [11] José A. Iglesias, Agapito Ledezma, Araceli Sanchis, and Gal A. Kaminka. A plan classifier based on chi-square distribution tests. *Intelligent Data Analysis*, 15(2):131–149, 2011.
- [12] Natalie Fridman and Gal A. Kaminka. Towards a computational model of social comparison: Some implications for the cognitive architecture. *Cognitive Systems Research*, 12(2):186–197, 2011.

- [13] Igor Vainer, Gal A. Kaminka, Sarit Kraus, and Hamutal Slovin. Obtaining scalable and accurate classification in large scale spatio-temporal domains. *Knowledge and Information Systems*, 29(3):527–564, 2011.
- [14] Meir Kalech, Sarit Kraus, Gal A. Kaminka, and Claudia V. Goldman. Practical voting rules with partial information. *Journal of Autonomous Agents and Multi-Agent Systems*, 22(1):151–182, 2011.
- [15] Meir Kalech and Gal A. Kaminka. Coordination diagnostic algorithms for teams of situated agents: Scaling-up. *Computational Intelligence*, 27(3):393–421, 2011.
- [16] Natalie Fridman and Gal A. Kaminka. Modeling pedestrian crowd behavior based on a cognitive model of social comparison theory. *Computational and Mathematical Organizational Theory*, 16(4):348–372, 2010. Special issue on Social Simulation from the Perspective of Artificial Intelligence.
- [17] Noa Agmon, Meytal Traub, Sarit Kraus, and Gal A. Kaminka. Task reallocation in multi-robot formations. *Journal of Physical Agents*, 4(2):1–10, 2010.
- [18] Yehuda Elmaliach, Noa Agmon, and Gal A. Kaminka. Multi-robot area patrol under frequency constraints. *Annals of Math and Artificial Intelligence*, 57(3–4):293–320, 2010.
- [19] Michael Lindner, Meir Kalech, and Gal A. Kaminka. A representation for coordination fault detection in large-scale multi-agent systems. *Annals of Math and Artificial Intelligence*, 56(2):153–186, 2009.
- [20] Gal A. Kaminka. Detecting disagreements in large-scale multi-agent teams. *Journal of Autonomous Agents and Multi-Agent Systems*, 18(3):501–525, 2009.
- [21] Avi Rosenfeld, Sarit Kraus, Gal A. Kaminka, and Claudia V. Goldman. PHIRST: A distributed architecture for P2P information retrieval. *Information Systems*, 34(2):290–303, 2009.
- [22] Einat Marhasev, Meirav Hadad, Gal A. Kaminka, and Uri Feintuch. The use of hidden semi-markov models in clinical diagnosis maze tasks. *Intelligent Data Analysis*, 13(6):943–967, 2009.
- [23] Yehuda Elmaliach and Gal A. Kaminka. Robust multi-robot formations under human supervision and control. *Journal of Physical Agents*, 2(1):31–52, 2008.
- [24] Noam Hazon and Gal Kaminka. On redundancy, efficiency, and robustness in coverage for multiple robots. *Robotics and Autonomous Systems*, 56(12):1102–1114, 2008.
- [25] Gal A. Kaminka and Amir Shapiro. Editorial: Annals of mathematics and artificial intelligence special issue on multi-robot coverage, search, and exploration. *Annals of Math and Artificial Intelligence*, 52(2–4):107–108, 2008.
- [26] Noa Agmon, Noam Hazon, and Gal A. Kaminka. The giving tree: Constructing trees for efficient offline and online multi-robot coverage. *Annals of Math and Artificial Intelligence*, 52(2–4):143–168, 2008.
- [27] Gal A. Kaminka, Ruti Schechter-Glick, and Vladimir Sadv. Using sensor morphology for multi-robot formations. *IEEE Transactions on Robotics*, pages 271–282, 2008.
- [28] Avi Rosenfeld, Gal A. Kaminka, Sarit Kraus, and Onn Shehory. A study of mechanisms for improving robotic group performance. *Artificial Intelligence*, 172(6–7):633–655, 2008.
- [29] Meir Kalech and Gal A. Kaminka. On the design of coordinated diagnosis algorithms for teams of situated agents. *Artificial Intelligence*, 171:491–513, 2007.
- [30] Yoav Horman and Gal A. Kaminka. Removing biases in unsupervised learning of sequential patterns. *Intelligent Data Analysis*, 11(5):457–480, 2007.
- [31] Yael Termin, Gal A. Kaminka, Sarit Semo, and Ari Z. Zivotofsky. Color stereoscopic images require only one color image. *Optical Engineering*, 46(8):087003–1–087003–11, 2007.
- [32] Gery Gutnik and Gal A. Kaminka. Representing conversations for scalable overhearing. *Journal of Artificial Intelligence Research*, 25:349–387, 2006.

- [33] Gal A. Kaminka, Ian Frank, Katsuto Arai, and Kumiko Tanaka-Ishii. Performance competitions as research infrastructure: Large scale comparative studies of multi-agent teams. *Journal of Autonomous Agents and Multi-Agent Systems*, 7(1–2):121–144, 2003.
- [34] Gal A. Kaminka, David V. Pynadath, and Milind Tambe. Monitoring teams by overhearing: A multi-agent plan recognition approach. *Journal of Artificial Intelligence Research*, 17:83–135, 2002.
- [35] Stacy C. Marsella, Jafar Adibi, Yaser Al-Onaizan, Gal A. Kaminka, Ion Muslea, M. Tallis, and Milind Tambe. On being a teammate: Experiences acquired in the design of robocup teams. *Journal of Autonomous Agents and Multi-Agent Systems*, 4(1–2), 2001.
- [36] Gal A. Kaminka and Milind Tambe. Robust multi-agent teams via socially-attentive monitoring. *Journal of Artificial Intelligence Research*, 12:105–147, 2000.
- [37] Milind Tambe, Jafar Adibi, Yaser Al-Onaizan, Ali Erdem, Gal A. Kaminka, Stacy C. Marsella, and Ion Muslea. Building agent teams using an explicit teamwork model and learning. *Artificial Intelligence*, 111(1):215–239, 1999.

Rigorously-Refereed Conference Publications

- [1] Mor Vered, Gal A. Kaminka, and Sivan Biham. Online goal recognition through mirroring: Humans and agents. In *Proceedings of the Annual Conference on Advances in Cognitive Systems*, 2016. A slightly modified version appears in Proceedings of the IJCAI 2016 workshop on Human-Agent Interaction Design and Models (HAIDM).
- [2] Inbal Wiesel-Kapah, Gal A. Kaminka, Guy Hachmon, Noa Agmon, and Ido Bachelet. Rule-based programming of molecular robot swarms for biomedical applications. In *Proceedings of the International Joint Conference on Artificial Intelligence*, pages 3505–3512, 2016.
- [3] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Frontier-based RTDP: A new approach to solving the robotic adversarial coverage problem. In *Proceedings of the Fourteenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-15)*, 2015.
- [4] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Safest path adversarial coverage. In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS-14)*, 2014.
- [5] Shahar Kostı, Gal A. Kaminka, and David Sarne. A novel user-guided interface for robot search. In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS-14)*, 2014.
- [6] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Towards efficient robot adversarial coverage. In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS-13)*, 2013.
- [7] Natalie Fridman, Gal A. Kaminka, and Avishay Zilka. The impact of culture on crowd dynamics: An empirical approach. In *Proceedings of the Twelfth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-13)*, 2013.
- [8] Gal A. Kaminka. Curing robot autism: A challenge. In *Proceedings of the Twelfth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-13)*, 2013.
- [9] Matan Keidar and Gal A. Kaminka. Fast frontier detection for robot exploration: Theory and experiments. In *Proceedings of the Eleventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-12)*, 2012.
- [10] Boštjan Kaluža, Gal A. Kaminka, and Milind Tambe. Detection of suspicious behavior from a sparse set of multi-agent interactions. In *Proceedings of the Eleventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-12)*, 2012.
- [11] Natalie Fridman, Tomer Zilberstein, and Gal A. Kaminka. Predicting demonstrations’ violence level using qualitative reasoning. In *International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP-2011)*, pages 42–50, 2011.

- [12] Meytal Traub, Gal A. Kaminka, and Noa Agmon. Who goes *there?* using social regret to select a robot to reach a goal. In *Proceedings of the Tenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-11)*, 2011.
- [13] Eliahu Khalastchi, Meir Kalech, Gal A. Kaminka, and Raz Lin. Online anomaly detection in unmanned vehicles. In *Proceedings of the Tenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-11)*, pages 115–122, 2011.
- [14] Jason Tsai, Natalie Fridman, Matthew Brown, Andrew Ogden, Inbal Rika, Xuezhi Wang, Shira Epstein, Avishay Zilka, Matthew Taylor, Milind Tambe, Emma Bowring, Stacy Marsella, Gal A. Kaminka, and Ankur Sheel. ES-CAPES - evacuation simulation with children, authorities, parents, emotions, and social comparison. In *Proceedings of the Tenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-11)*, 2011.
- [15] Peter Stone, Gal A. Kaminka, Sarit Kraus, and Jeffrey Rosenschein. Ad hoc autonomous agent teams: Collaboration without pre-coordination. In *Proceedings of the Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI-10)*, 2010.
- [16] Raz Lin, Eliyahu Khalastchi, and Gal A. Kaminka. Detecting anomalies in unmanned vehicles using the mahalanobis distance. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-10)*, 2010.
- [17] Gal A. Kaminka, Dan Erusalimchik, and Sarit Kraus. Adaptive multi-robot coordination: A game-theoretic perspective. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-10)*, 2010.
- [18] Igor Vainer, Sarit Kraus, Gal A. Kaminka, and Hamutal Slovin. Scalable classification in large scale spatiotemporal domains applied to voltage-sensitive dye imaging. In *Proceedings of the IEEE International Conference on Data Mining (ICDM 2009)*, 2009.
- [19] Natalie Fridman, Gal A. Kaminka, and Meytal Traub. First steps towards a social comparison model of crowds. In *International Conference on Cognitive Modeling (ICCM-09)*, 2009.
- [20] Natalie Fridman and Gal A. Kaminka. Comparing human and synthetic group behaviors: A model based on social psychology. In *International Conference on Cognitive Modeling (ICCM-09)*, 2009.
- [21] Elisheva Bonchek-Dokow, Gal A. Kaminka, and Carmel Domshlak. Distinguishing between intentional and unintentional sequences of actions. In *International Conference on Cognitive Modeling (ICCM-09)*, 2009.
- [22] Noa Agmon, Sarit Kraus, Gal A. Kaminka, and Vladimir Sadov. Adversarial uncertainty in multi-robot patrol. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI-09)*, 2009.
- [23] Asaf Shiloni, Noa Agmon, and Gal A. Kaminka. Of robot ants and elephants. In *Proceedings of the Eighth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-09)*, 2009.
- [24] Noa Agmon, Vladimir Sadov, Gal A. Kaminka, and Sarit Kraus. The impact of adversarial knowledge on adversarial planning in perimeter patrol. In *Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-08)*, volume 1, pages 55–62, 2008.
- [25] Yehuda Elmaliach, Asaf Shiloni, and Gal A. Kaminka. A realistic model of frequency-based multi-robot fence patrolling. In *Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-08)*, volume 1, pages 63–70, 2008.
- [26] Victor Shafran, Gal A. Kaminka, Sarit Kraus, and Claudia Goldman. Towards multidirectional distributed match-making (short paper). In *Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-08)*, volume 3, pages 1437–1440, 2008.
- [27] Noa Agmon, Sarit Kraus, and Gal A. Kaminka. Multi-robot perimeter patrol in adversarial settings. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-08)*, 2008.
- [28] Dorit Avrahami-Zilberbrand and Gal A. Kaminka. Utility-based plan recognition: An extended abstract (short paper). In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.

- [29] Gal A. Kaminka and Natalie Fridman. Social comparison in crowds: A short report (short paper). In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.
- [30] Natalie Fridman and Gal A. Kaminka. Towards a cognitive model of crowd behavior based on social comparison theory. In *Proceedings of the Twenty-Second National Conference on Artificial Intelligence (AAAI-07)*, 2007.
- [31] Dorit Avrahami-Zilberbrand and Gal A. Kaminka. Incorporating observer biases in keyhole plan recognition (efficiently!). In *Proceedings of the Twenty-Second National Conference on Artificial Intelligence (AAAI-07)*, pages 944–949, 2007.
- [32] Ari Yakir and Gal A. Kaminka. An integrated development environment and architecture for Soar-based agents. In *Innovative Applications of Artificial Intelligence (IAAI-07)*, 2007.
- [33] Zinovi Rabinovich, Jeffrey S. Rosenschein, and Gal A. Kaminka. Dynamics based control with an application to area-sweeping problems. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.
- [34] Inon Zuckerman, Sarit Kraus, Jeffrey S. Rosenschein, and Gal A. Kaminka. An adversarial environment model for bounded rational agents in zero-sum interactions. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.
- [35] Gal A. Kaminka, Ari Yakir, Dan Erusalimchik, and Nirom Cohen-Nov. Towards collaborative task and team maintenance. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.
- [36] Ariel D. Procaccia, Jeffrey S. Rosenschein, and Gal A. Kaminka. On the robustness of preference aggregation in noisy environments. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.
- [37] Meir Kalech, Michael Lindner, and Gal A. Kaminka. Matrix-based representation for coordination fault detection: A formal approach. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07)*, 2007.
- [38] Yehuda Elmaliach, Noa Agmon, and Gal A. Kaminka. Multi-robot area patrol under frequency constraints. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-07)*, 2007.
- [39] Gal A. Kaminka and Inna Frenkel. Integration of coordination mechanisms in the BITE multi-robot architecture. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-07)*, 2007.
- [40] Meir Kalech, Gal A. Kaminka, Amnon Meisels, and Yehuda Elmaliach. Diagnosis of multi-robot coordination failures using distributed CSP algorithms. In *Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI-06)*, 2006.
- [41] Gery Gutnik and Gal A. Kaminka. From centralized to distributed selective overhearing. In *Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI-06)*, 2006.
- [42] Gal A. Kaminka and Ruti Glick. Towards robust multi-robot formations. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-06)*, 2006.
- [43] Gal A. Kaminka and Yehuda Elmaliach. Experiments with an ecological interface for monitoring tightly-coordinated robot teams. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-06)*, 2006.
- [44] Noam Hazon, Fabrizio Miele, and Gal A. Kaminka. Towards robust on-line multi-robot coverage. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-06)*, 2006.
- [45] Noa Agmon, Noam Hazon, and Gal A. Kaminka. Constructing spanning trees for efficient multi-robot coverage. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-06)*, 2006.
- [46] Yoav Horman and Gal A. Kaminka. Removing statistical biases in unsupervised sequence learning. In *Proceedings of Intelligent Data Analysis (IDA-05)*, Madrid, Spain, 2005.

- [47] Gal A. Kaminka and Inna Frenkel. Flexible teamwork in behavior-based robots. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)*, 2005.
- [48] Noa Agmon, Gal A. Kaminka, and Sarit Kraus. Team member-reallocation via tree pruning. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)*, 2005.
- [49] Merav Hadad, Gilad Armon-Kest, Gal A. Kaminka, and Sarit Kraus. Supporting collaborative activity. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)*, 2005.
- [50] Dorit Avrahami-Zilberbrand and Gal A. Kaminka. Fast and complete symbolic plan recognition. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI-05)*, pages 653–658, 2005.
- [51] Meir Kalech and Gal A. Kaminka. Towards model-based diagnosis of coordination failures. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)*, 2005.
- [52] Meir Kalech and Gal A. Kaminka. Diagnosing a team of agents: Scaling-up. In *Proceedings of the Fourth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, 2005.
- [53] Milind Tambe, E. Bowring, H. Jung, Gal A. Kaminka, R. Maheswaran, J. Marecki, P.J. Modi., R. Nair, S. Okamoto, J.P. Pearce, P. Paruchuri, David V. Pynadath, P. Scerri, N. Schurr, and P. Varakantham. Conflicts in teamwork: Hybrids to the rescue. In *Proceedings of the Fourth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, 2005. Milind Tambe’s Agents Research Award Invited Paper.
- [54] Noam Hazon and Gal A. Kaminka. Redundancy, efficiency, and robustness in multi-robot coverage. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA-05)*, 2005.
- [55] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. Adaptive robot coordination using interference metrics. In *Proceedings of the European Conference on Artificial Intelligence (ECAI-2004)*, pages 910–916, 2004.
- [56] Gery Gutnik and Gal A. Kaminka. Towards a formal approach to overhearing: Algorithms for conversation identification. In *Proceedings of the Third International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-04)*, pages 78–85, 2004.
- [57] Meir Kalech and Gal A. Kaminka. On the design of social diagnosis algorithms for multi-agent teams. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI-03)*, 2003.
- [58] Thuc D.Vu, Jared Go, Gal A. Kaminka, Manuela M. Veloso, and Brett Browning. MONAD: A flexible architecture for multi-agent control. In *Proceedings of the Second International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-03)*, 2003.
- [59] Gal A. Kaminka and Michael Bowling. Towards robust teams with many agents. In *Proceedings of the First International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-02)*, 2002.
- [60] Gal A. Kaminka, David V. Pynadath, and Milind Tambe. Monitoring deployed agent teams. In *Proceedings of the Fifth International Conference on Autonomous Agents (Agents-01)*, pages 308–315, 2001.
- [61] Milind Tambe, David V. Pynadath, Nicholas Chauvat, Abhimanyu Das, and Gal A. Kaminka. Adaptive agent integration architectures for heterogeneous team members. In *Proceedings of the Fourth International Conference on Multiagent Systems (ICMAS-00)*, pages 301–308, Boston, MA, 2000.
- [62] Stacy C. Marsella, Jafar Adibi, Yaser Al-Onaizan, Gal A. Kaminka, Ion Muslea, Marcello Tallis, and Milind Tambe. On being a teammate: Experiences acquired in the design of robocup teams. In *Proceedings of the Third International Conference on Autonomous Agents (Agents-99)*, pages 221–227, Seattle, WA, 1999. ACM Press.
- [63] Milind Tambe, Gal A. Kaminka, Stacy C. Marsella, Ion Muslea, and Taylor Raines. Two fielded teams and two experts: A robocup challenge response from the trenches. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI-99)*, volume 1, pages 276–281, August 1999.

- [64] Gal A. Kaminka and Milind Tambe. I'm OK, You're OK, We're OK: Experiments in distributed and centralized social monitoring and diagnosis. In *Proceedings of the Third International Conference on Autonomous Agents (Agents-99)*, pages 213–220, Seattle, WA, 1999. ACM Press. A slightly different version appears in proceedings of the IJCAI-99 workshop on team behavior and plan recognition.
- [65] Gal A. Kaminka and Milind Tambe. What's wrong with us? Improving robustness through social diagnosis. In *Proceedings of the Fifteenth National Conference on Artificial Intelligence (AAAI-98)*, pages 97–104, Madison, WI, 1998. AAAI Press.

Periodical Publications

- [1] Gal A. Kaminka. I have a robot, and I'm not afraid to use it! *AI Magazine*, 33(3):66–78, 2012.
- [2] Sarabjot Singh Anand, Daniel Bahls, Catherina R. Burghart, Mark Burstein, Huajun Chen, John Collins, Tom Dietterich, Jon Doyle, Chris Drummond, William Elazmeh, Christopher Geib, Judy Goldsmith, Hans W. Guesgen, Jim Hendler, Dietmar Jannach, Nathalie Japkowicz, Ulrich Junker, Gal A. Kaminka, Alfred Kobsa, Jerome Lang, David B. Leake, Lundy Lewis, Gerard Ligozat, Sofus Macskassy, Drew McDermott, Ted Metzler, Bamshad Mobasher, Ullas Nambiar, Zaiqing Nie, Klas Orsvan, Barry O'Sullivan, David Pynadath, Jochen Renz, Rita V. Rodriguez, Thomas Roth-Berghofer, Stefan Schulz, Rudi Studer, Yimin Wang, and Michael Wellman. AAAI-07 workshop reports. *AI Magazine*, 28(4):119–128, 2007. With Catherina Burghart, a report on the AAAI-2007 workshop on Evaluating Architectures for Intelligence.
- [3] Wolfgang Achtner, Esmá Aimeur, Sarabjot Singh Anand, Doug Appelt, Naveen Ashish, Tiffany Barnes, Joseph E. Beck, M. Bernardine Dias, Prashant Doshi, Chris Drummond, William Elazmeh, Ariel Felner, Dayne Freitag, Hector Geffner, Christopher W. Geib, Richard Goodwin, Robert C. Holte, Frank Hutter, Fair Isaac, Nathalie Japkowicz, Gal A. Kaminka, Sven Koenig, Michail G. Lagoudakis, David Leake, Lundy Lewis, Hugo Liu, Ted Metzler, Rada Mihalcea, Bamshad Mobasher, Pascal Poupert, David V. Pynadath, Thomas Roth-Berghofer, Wheeler Ruml, Stefan Schulz, Sven Schwarz, Stephanie Seneff, Amit Sheth, Ron Sun, Michael Thielscher, Afzal Upal, Jason Williams, Steve Young, and Dmitry Zelenko. Reports on the twenty-first national conference on artificial intelligence (AAAI-06) workshop program. *AI Magazine*, 27(4):92–102, 2006. With Christopher W. Geib and David V. Pynadath, a report on the AAAI-06 workshop on Modeling Others from Observations (MOO-2006).
- [4] Gal A. Kaminka. Robots are agents, too! *AgentLink News*, 16:16–17, December 2004.
- [5] M. Asada, Obst. O., D. Polani, Brett Browning, A. Bonarini, M. Fujita, T. Christaller, T. Takahashi, S. Tadokoro, E. Sklar, and Gal A. Kaminka. An overview of RoboCup 2002 Fukuoka/Busan. *AI Magazine*, 24(2):21–40, 2003.
- [6] Gal A. Kaminka, Manuela M. Veloso, Steve Schaffer, Chris Sollitto, Rogelio Adobbati, Andrew N. Marshall, Andrew Scholer, and Sheila Tejada. GameBots: A flexible test bed for multiagent team research. *Communications of the ACM*, 45(1):43–45, January 2002.
- [7] Milind Tambe, Jafar Adibi, Yaser Al-Onaizan, Ali Erdem, Gal A. Kaminka, Stacy C. Marsella, Ion Muslea, and Marcelo Tallis. ISIS: An explicit model of teamwork at robotcup-97. *AI Magazine*, 19(3):56 (Sidebar), 1998.
- [8] Weimin Shen, Jafar Adibi, Bonghan Cho, Gal A. Kaminka, Jihie Kim, Behnam Salemi, and Sheila Tejada. YODA: The young observant discovery agent. *AI Magazine*, 18(1):37–45, 1997.

Refereed Book Chapters

- [1] Yinon Douchan and Gal A. Kaminka. The effectiveness index intrinsic reward for coordinating service robots. In Spring Berman, Melvin Gauci, Emilio Frazzoli, Andreas Kolling, Roderich Gross, Alcherio Martinoli, and Fumitoshi Matsuno, editors, *13th International Symposium on Distributed Autonomous Robotic Systems (DARS-2016)*. Springer, November 2016.
- [2] Gal A. Kaminka, Ilan Lupu, and Noa Agmon. Construction of optimal control graphs in multi-robot systems. In Spring Berman, Melvin Gauci, Emilio Frazzoli, Andreas Kolling, Roderich Gross, Alcherio Martinoli, and Fumitoshi Matsuno, editors, *13th International Symposium on Distributed Autonomous Robotic Systems (DARS-2016)*. Springer, November 2016.

- [3] Luca Giuggioli, Idan Arye, Alexandro Heiblum Robles, and Gal A. Kaminka. From ants to birds: A novel bio-inspired approach to online area coverage. In Spring Berman, Melvin Gauci, Emilio Frazzoli, Andreas Kolling, Roderich Gross, Alcherio Martinoli, and Fumitoshi Matsuno, editors, *13th International Symposium on Distributed Autonomous Robotic Systems (DARS-2016)*. Springer, November 2016.
- [4] Dorit Avrahami-Zilberbrand and Gal A. Kaminka. Keyhole adversarial plan recognition for recognition of suspicious and anomalous behavior. In Gita Sukthankar, Robert P. Goldman, Christopher Geib, David V. Pynadath, and Hung Bui, editors, *Plan, Activity, and Intent Recognition*, pages 87–121. Morgan Kaufmann, 2014.
- [5] Natalie Fridman, Gal A. Kaminka, and Avishay Zilka. Towards qualitative reasoning for policy decision support in demonstrations. In Francien Dechesne, Hiromitsu Hattori, Adriaan ter Mors, Jose M. Such, Danny Weyns, and Frank Dignum, editors, *Advanced Agent Technology: AAMAS 2011 Workshops. Revised Selected Papers*, volume 7068 of *Lecture Notes in Computer Science (LNCS)*, pages 19–34. Springer, 2012. Originally appeared in AMPLE 2011: First Workshop on Agent-based Modeling for Policy Engineering at AAMAS 2011.
- [6] Matan Keidar, Eran Sadeh-Or, and Gal A. Kaminka. Fast frontier detection for robot exploration. In Francien Dechesne, Hiromitsu Hattori, Adriaan ter Mors, Jose M. Such, Danny Weyns, and Frank Dignum, editors, *Advanced Agent Technology: AAMAS 2011 Workshops. Revised Selected Papers*, volume 7068 of *Lecture Notes in Computer Science (LNCS)*, pages 281–294. Springer, 2012. Originally appeared in the Autonomous Robots and Multirobot Systems (ARMS) workshop at AAMAS 2011. This is an early (and incorrect) version of the later AAMAS 2012 paper with a similar title.
- [7] Eran Sadeh-Or and Gal A. Kaminka. AnySURF: Flexible local features computation. In Thomas Röfer, Norbert Michael Mayer, and Jesus Savage, editors, *RoboCup-2011: Robot Soccer World Cup XV*, LNAI. Springer, 2012. This is the full version of the abstract published in the AAMAS 2011 workshop proceedings.
- [8] Jose Antonio Iglesias, Agapito Ledezma, Araceli Sanchis, and Gal A. Kaminka. Classifying efficiently the behavior of a soccer team. In *Proceedings of the Tenth Conference on Intelligent Autonomous Systems (IAS-10)*. IOS Press, 2008.
- [9] Dan Erusalimchik and Gal A. Kaminka. Towards adaptive multi-robot coordination based on resource expenditure velocity. In *Proceedings of the Tenth Conference on Intelligent Autonomous Systems (IAS-10)*. IOS Press, 2008.
- [10] Noa Agmon, Gal A. Kaminka, and Sarit Kraus. Multi-robot fence patrol in adversarial domains. In *Proceedings of the Tenth Conference on Intelligent Autonomous Systems (IAS-10)*. IOS Press, 2008.
- [11] Natalie Fridman and Gal A. Kaminka. Modeling imitational behavior via social comparison theory (extended abstract). In C. Pelachaud, J. Martin, E. Andre, G. Chollet, K. Karpouzis, and D. Pele, editors, *Intelligent Virtual Agents 2007*, volume 4722 of *LNAI*, pages 377–378. Springer-Verlag, 2007.
- [12] Avi Rosenfeld, Claudia V. Goldman, Gal A. Kaminka, and Sarit Kraus. An agent architecture for hybrid p2p free-text search. In *Cooperative Information Agents (CIA) 2007*, LNCS. Springer-Verlag, 2007. This paper won the Best Paper award.
- [13] Natalie Fridman and Gal A. Kaminka. Modeling crowd behavior based on social comparison theory: Extended abstract. In S. El Yacoubi, B. Chopard, and S. Bandini, editors, *ACRI 2006*, volume 4173 of *LNCS*, pages 694–698. Springer-Verlag, 2006.
- [14] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. Adaptive robotic communication using coordination costs. In *Distributed Autonomous Robotic Systems 7*. Springer-Verlag, 2006.
- [15] Gal A. Kaminka and Yehuda Elmaliach. Single operator, multiple robots: Call-request handling in tight-coordination tasks. In *Distributed Autonomous Robotic Systems 7*. Springer-Verlag, 2006.
- [16] Gery Gutnik and Gal A. Kaminka. Experiments in selective overhearing of hierarchical organizations. In R. M. van Eijk, R. Flores, and M. P. Huget, editors, *Agent Communication II*, number 3859 in LNAI. Springer-Verlag, 2006.
- [17] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. A study of scalability properties in robotic teams. In Paul Scerri, Régis Vincent, and Roger Mailler, editors, *Challenges in the Coordination of Large-Scale Multiagent Systems*, pages 27–51. Springer-Verlag, 2005.

- [18] Gal A. Kaminka. Failure detection in large-scale multi-agent systems. In Paul Scerri, Régis Vincent, and Roger Mailler, editors, *Challenges in the Coordination of Large-Scale Multiagent Systems*, pages 273–286. Springer-Verlag, 2005.
- [19] Gery Gutnik and Gal A. Kaminka. A scalable petri-net representation of interaction protocols for overhearing. In R. van Eijk, M. P. Huget, and F. Dignum, editors, *Developments in Agent Communication*, number 3396 in LNAI. Springer-Verlag, 2005.
- [20] Gal A. Kaminka, Yehuda Elmaliach, Inna Frenkel, Ruti Glick, Meir Kalech, and Tom Shpigelman. Towards a comprehensive framework for teamwork in behavior-based robots. In Frans Groen, Nancy Amato, Andrea Bonarini, Eiichi Yoshida, and Ben Kröse, editors, *Proceedings of the Eighth Conference on Intelligent Autonomous Systems (IAS-8)*, pages 217–226. IOS Press, 2004.
- [21] Gal A. Kaminka. Multi-agent systems. In *Encyclopedia of Human-Computer Interaction*. Berkshire Publishing, 2004.
- [22] Paul Carpenter, Patrick Riley, Manuela Veloso, and Gal A. Kaminka. Integration of advice in an action-selection architecture. In Gal A. Kaminka, Pedro U. Lima, and Raul Rojas, editors, *RoboCup-2002: Robot Soccer World Cup VI*, number 2752 in LNAI, pages 195–205. Springer Verlag, Berlin, 2003.
- [23] Minoru Asada and Gal A. Kaminka. An overview of robocup 2002 Fukuoka/Busan. In Gal A. Kaminka, Pedro U. Lima, and Raul Rojas, editors, *RoboCup 2002: Robot Soccer World Cup VI*, number 2752 in LNAI, pages 1–7. Springer-Verlag, Berlin, 2003.
- [24] Gal A. Kaminka, M. Fidanboylu, A. Chang, and Manuela M. Veloso. Learning the sequential behavior of teams from observations. In Gal A. Kaminka, Pedro U. Lima, and Raul Rojas, editors, *RoboCup 2002: Robot Soccer World Cup VI*, number 2752 in LNAI, pages 111–125. Springer-Verlag, Berlin, 2003.
- [25] Brett Browning, Gal A. Kaminka, and Manuela Veloso. Principled monitoring of distributed agents for detection of coordination failures. In *Distributed Autonomous Robotic Systems 5*, pages 319–328. Springer-Verlag, 2002.
- [26] Patrick Riley, Manuela Veloso, and Gal A. Kaminka. An empirical study of coaching. In H. Asama, T. Arai, T. Fukuda, and T. Hasegawa, editors, *Distributed Autonomous Robotic Systems 5*, pages 215–224. Springer-Verlag, 2002.
- [27] Paul Carpenter, Patrick Riley, Gal A. Kaminka, Manuela Veloso, Ignacio Thayer, and Robert Wang. ChaMeleons-01 team description. In Andreas Birk, Silvia Coradeschi, and Satoshi Tadokoro, editors, *RoboCup-2001: Robot Soccer World Cup V*, number 2377 in Lecture Notes in Artificial Intelligence, pages 503–506. Springer-Verlag, Berlin, 2002.
- [28] David V. Pynadath, Milind Tambe, and Gal A. Kaminka. Adaptive infrastructures for agent integration. In Tom Wagner and Omer Rana, editors, *Infrastructure for Agents, Multi-Agent Systems, and Scalable Multi-Agent Systems*, volume 1887 of *Lecture Notes in Computer Science*, pages 80–93. Springer Berlin / Heidelberg, 2001.
- [29] Gal A. Kaminka. Preliminary short report on the robocup 1998 adaptive teamwork evaluation. In Manuela Veloso, Enrico Pagello, and Hiroaki Kitano, editors, *RoboCup-99: Robot Soccer World Cup III (LNAI 1856)*, pages 345–356. Springer-Verlag, 2000.
- [30] Stacy C. Marsella, Jafar Adibi, Yaser Al-Onaizan, Ali Erdem, Randy Hill, Gal A. Kaminka, Zhun Qiu, and Milind Tambe. Using an explicit teamwork model and learning in robocup: An extended abstract. In Minoru Asada and Hiroaki Kitano, editors, *RoboCup'98: Robot Soccer World Cup II*, number 1604 in Lecture Notes in Artificial Intelligence, pages 237–245. Springer Verlag, 1999.
- [31] Milind Tambe, Jafar Adibi, Yaser Al-Onaizan, Ali Erdem, Gal A. Kaminka, Stacy C. Marsella, Ion Muslea, and Marcelo Tallis. ISIS: Using an explicit model of teamwork in robocup-97. In *RoboCup'97: Robot Soccer World Cup I*, Lecture Notes in Artificial Intelligence, pages 123–131. Springer Verlag, 1998.
- [32] Gal A. Kaminka and Milind Tambe. Social comparison for failure detection and recovery. In *Intelligent Agents IV: Agents, Theories, Architectures and Languages (ATAL-97)*, number 1365 in Lecture Notes in Artificial Intelligence, pages 127–141. Springer Verlag, 1998.

Other Refereed Publications

- [1] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Frontier-based RTDP: A new approach to solving the robotic adversarial coverage problem. In *ICAPS 2015 Workshop on Planning and Robotics (PlanRob)*, 2015. A slightly revised version of the AAMAS 2015 paper of the same title.
- [2] Gal A. Kaminka. No robot is an island, no team an archipelago: Plan execution for cooperative multi-robot teams. In *ICAPS 2015 Workshop on Planning and Robotics (PlanRob)*, 2015.
- [3] Mor Vered and Gal A. Kaminka. If you can draw it, you can recognize it: Mirroring for sketch recognition. In *Proceedings of the AAMAS Workshop on Human-Agent Interaction Design and Models*, 2015.
- [4] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Safest path adversarial coverage. In *AAMAS workshop on Autonomous Robots and Multirobot Systems (ARMS)*, 2014. This is an early version of the IROS-14 paper of same title.
- [5] Shahar Kostı, Gal A. Kaminka, and David Sarne. A novel user-guided interface for robot search. In *AAMAS workshop on Autonomous Robots and Multirobot Systems (ARMS)*, 2014. This is an early version of the IROS-14 paper of same title.
- [6] Ariella Richardson, Gal A. Kaminka, and Sarit Kraus. REEF: Resolving length bias in frequency sequence mining. In *The Third International Conference on Advances in Information Mining and Management (IMMM-2013)*, 2013. **Winner: Best paper award.**
- [7] Gal A. Kaminka, Meytal Traub, Dan Erusalimchik, and Yehuda Elmaliach. On the use of teamwork software for multi-robot formation control. In *AAMAS workshop on Autonomous Robots and Multirobot Systems (ARMS)*, 2013.
- [8] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Towards efficient robot adversarial coverage. In *AAAI Workshop on Intelligent Robotic Systems*, 2013. This is a slightly revised version of the IROS-2013 of the same title.
- [9] Shahar Kostı, David Sarne, and Gal A. Kaminka. An effective collaborative interface for multi-robot search. In *IsraHCI 2013: The First Israeli Human-Computer Interaction Research Conference*, 2013.
- [10] Gal A. Kaminka. Autonomous agents research in robotics: A report from the trenches. In *AAAI Spring Symposium on Designing Intelligent Robots: Reintegrating AI*, 2012.
- [11] Gal A. Kaminka and Natalie Fridman. Using qualitative reasoning for social simulation of crowds: A preliminary report. In *25th International Workshop on Qualitative Reasoning*, 2011.
- [12] Eran Sadeh-Or and Gal A. Kaminka. AnySURF: Flexible local features computation. In *The Autonomous Robots and Multirobot Systems (ARMS) workshop at AAMAS 2011*, 2011. A slightly modified version appears in the RoboCup 2011 Proceedings.
- [13] Boštjan Kaluža, Gal A. Kaminka, and Milind Tambe. Towards detection of suspicious behavior from multiple observations. In *AAAI 2011 Workshop on Plan, Activity, and Intent Recognition (PAIR 2011)*, 2011.
- [14] Ariella Richardson, Gal A. Kaminka, and Sarit Kraus. CUBS: Multivariate sequence classification using bounded z-score with sampling. In *Proceedings of the 4th workshop on Mining Multiple Information Sources (MMIS 2010), at ICDM 2010*, pages 72–79, 2010.
- [15] Vladimir Sadov, Eliahu Khalastchi, Meir Kalech, and Gal A. Kaminka. Towards partial (and useful) model identification for model-based diagnosis. In *The Eighteenth International Workshop on Principles of Diagnosis (DX-10)*, 2010.
- [16] Jason Tsai, Emma Bowring, Shira Epstein, Natalie Fridman, Prakhar Garg, Gal Kaminka, Andrew Ogden, Milind Tambe, and Matthew Taylor. Agent-based evacuation modeling: Simulating the los angeles international airport. In *Workshop on Emergency Management: Incident, Resource, and Supply Chain Management EMWS-09*. Center for Emergency Response Technologies, University of California, Irvine, 2009.
- [17] Raz Lin, Eliyahu Khalastchi, and Gal A. Kaminka. Detecting anomalies in unmanned vehicles using the mahalanobis distance. In *European Workshop on Multi-Agent Systems (EUMAS-09)*, 2009.

- [18] Noa Agmon, Sarit Kraus, and Gal A. Kaminka. Uncertainties in adversarial patrol. In *Proceedings of the IJCAI 2009 workshop on Quantitative Risk Analysis for Security Applications (QRASA)*, 2009.
- [19] Victor Shafraan, Gal A. Kaminka, Sarit Kraus, and Alcherio Martinoli. Coverage under dead reckoning errors: A hybrid approach. In *Proceedings of the IJCAI 2009 International Workshop on Hybrid Control of Autonomous Systems (HYCAS)*, 2009.
- [20] Elisheva Bonchek-Dokow, Gal A. Kaminka, and Carmel Domshlak. Distinguishing between intentional and unintentional sequences of actions. In *Proceedings of the IJCAI-09 workshop on Plan, Activity, and Intention Recognition (PAIR-09)*, 2009.
- [21] Natalie Fridman, Gal A. Kaminka, and Meytal Traub. First steps towards a social comparison model of crowds. In *Proceedings of the IJCAI 2009 workshop on Social Simulation*, 2009.
- [22] Gal A. Kaminka, Dan Erusalimchik, and Sarit Kraus. Adaptive multi-robot coordination: A new perspective. In *Proceedings of the AAMAS 2009 workshop on Adaptive and Learning Agents (ALA)*, 2009.
- [23] Peter Stone, Gal A. Kaminka, and Jeff S. Rosenschein. Leading a best-response teammate in an ad hoc team. In *Proceedings of the AAMAS 2009 workshop on Agent-Mediated Electronic Commerce (AMEC)*, 2009.
- [24] Natalie Fridman and Gal A. Kaminka. Comparing human and synthetic group behaviors: A model based on social psychology. In *Proceedings of the AAMAS 2009 workshop on Multi-Agent Based Simulation (MABS)*, 2009.
- [25] Adrian Perreau de Pinninck, Gery Gutnik, and Gal A. Kaminka. Reducing communication cost via overhearing. In *Proceedings of the European Workshop on Multi-Agent Systems (EUMAS-2008)*, 2008.
- [26] Meir Kalech, Michael Lindner, and Gal A. Kaminka. Diagnosis of coordination faults: A matrix-based formulation. In *Proceedings of the International Workshop on Principles of Diagnosis (DX-2008)*, 2008.
- [27] Zahy Bnaya, Ariel Felner, Solomon Eyal Shimony, Gal A. Kaminka, and Efi Merdler. A fresh look at sensor-based navigation, navigation with sensing costs. In *Proceedings of the First International Symposium on Search Techniques in Artificial Intelligence and Robotics*, 2008.
- [28] Asaf Shiloni, Noa Agmon, and Gal A. Kaminka. On ants and elephants. In *Proceedings of the AAMAS-08 Workshop on Formal Models and Methods for Multi-Robot Systems*, 2008.
- [29] Dorit Avrahami-Zilberbrand and Gal A. Kaminka. Towards dynamic tracking of multi-agents teams: An initial report. In *Proceedings of the AAI Workshop on Plan, Activity, and Intent Recognition (PAIR-07)*, 2007.
- [30] Ariel D. Procaccia, Jeff S. Rosenschein, and Gal A. Kaminka. On the robustness of preference aggregation in noisy environments. In *Proceedings of the 1st International Workshop on Computational Social Choice*, Amsterdam, December 2006.
- [31] Meir Kalech, Gal A. Kaminka, Amnon Meisels, and Yehuda Elmaliach. Diagnosis of multi-robot coordination failures using distributed csp algorithms. In *Proceedings of the ECAI workshop on Model-Based Systems*, 2006. A slightly modified version appears in AAI 2006.
- [32] Dorit Avrahami-Zilberbrand and Gal A. Kaminka. Hybrid symbolic-probabilistic plan recognizer: Initial steps. In *Proceedings of the AAI Workshop on Modeling Others from Observations (MOO-06)*, 2006.
- [33] Einat Marhasev, Meirav Hadad, and Gal A. Kaminka. Non-stationary hidden semi markov models in activity recognition. In *Proceedings of the AAI Workshop on Modeling Others from Observations (MOO-06)*, 2006.
- [34] Ari Yakir, Gal A. Kaminka, and Nirom Cohen-Nov. Towards flexible task and team maintenance. In *Proceedings of the AAI-2006 workshop on cognitive modeling*, 2006.
- [35] Gal A. Kaminka and Natalie Fridman. A cognitive model of crowd behavior based on social comparison theory. In *Proceedings of the AAI-2006 workshop on cognitive modeling*, 2006.

- [36] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. Adaptive robotic communication using coordination costs for improved trajectory planning. In *Proceedings of the AAAI Spring Symposium on Symposium on Distributed Plan and Schedule Management*, Stanford, CA, March 2006.
- [37] Meir Kalech and Gal A. Kaminka. Towards model-based diagnosis of coordination failures. In *Proceedings of the 16th International Workshop on Principles of Diagnosis (DX 2005)*, 2005. A slightly modified version appears in AAAI 2005.
- [38] Dorit Avrahami-Zilberbrand, Gal A. Kaminka, and Hila Zarosim. Fast and complete plan recognition: Allowing for duration, interleaved execution, and lossy observations. In *Proceedings of the IJCAI Workshop on Modeling Others from Observations (MOO-05)*, 2005.
- [39] Michael Lindner, Meir Kalech, and Gal A. Kaminka. Detecting coordination failures by observing groups: A formal approach. In *Proceedings of the IJCAI Workshop on Modeling Others from Observations (MOO-05)*, 2005.
- [40] Gery Gutnik and Gal A. Kaminka. An empirical study of selective overhearing in hierarchical organizations. In *Proceedings of the IJCAI Workshop on Modeling Others from Observations (MOO-05)*, 2005.
- [41] Meir Kalech and Gal A. Kaminka. Diagnosing a team of agents: Scaling-up. In *Proceedings of the 15th International Workshop on Principles of Diagnosis (DX 2004)*, 2004. A revised version appears in AAMAS 2005.
- [42] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. Adaptive robot coordination using interference metrics. In *Proceedings of the AAMAS 2004 Workshop on Learning and Evolution in Agent-Based Systems*, 2004.
- [43] Yoav Horman and Gal A. Kaminka. Improving sequence learning for modeling other agents. In *Proceedings of the AAMAS 2004 Workshop on Learning and Evolution in Agent-Based Systems*, 2004.
- [44] Onn Shehory, Gal A. Kaminka, and Eran Shoham. Multi-agent coalition reformation and league ranking. In *Proceedings of the AAMAS 2004 workshop on coalitions and teams*, 2004.
- [45] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. A study of marginal performance properties in robotic groups. In *Proceedings of the AAMAS 2004 Workshop on Coalitions and Teams*, 2004.
- [46] Yehuda Elmaliach and Gal A. Kaminka. Towards single-operator control of tightly-coordinated robot teams. In *Proceedings of the AAMAS 2004 Workshop on Coalitions and Teams*, 2004.
- [47] Gal A. Kaminka and Dorit Avrahami-Zilberbrand. Symbolic behavior recognition. In *Proceedings of the AAMAS Workshop on Modeling Other Agents from Observations (MOO-04)*, 2004.
- [48] Gal A. Kaminka and Danny Shimoni. Infrastructure for tracking users in open collaborative applications: A preliminary report. In *Proceedings of the UM-03 Workshop on Group Modeling in Web-Based Adaptive Collaborative Applications*, 2003.
- [49] Gal A. Kaminka, Jared Go, and Thuc D. Vu. Context-dependent joint-decision arbitration for computer games. In *Proceedings of the Agents in Computer Games Workshop*, 2002.
- [50] Gal A. Kaminka. On the monitoring selectivity problem. In *The Proceedings of the 1st NASA Workshop on Radical Agent Concepts*, 2001.
- [51] Jan Wendler, Gal A. Kaminka, and Manuela Veloso. Automatically improving team cooperation by applying coordination models. In *The AAAI Fall symposium on Intent Inference for Collaborative Tasks*. AAAI Press, November 2001.
- [52] Gal A. Kaminka, Jan Wendler, and Galit Ronen. New challenges in multi-agent intention recognition: Extended abstract. In *The AAAI Fall symposium on Intent Inference for Collaborative Tasks*. AAAI Press, November 2001.
- [53] R. Adobbati, A. N. Marshall, A. Scholer, Sheila Tejada, Gal A. Kaminka, S. Schaffer, and C. Sollitto. Gamebots: a 3d virtual world test-bed for multi-agent research. In Omer Rana and Tom Wagner, editors, *Proceedings of 2nd International Workshop on Infrastructure, MAS and MAS Scalability*, May 2001.

- [54] Gal A. Kaminka, David V. Pynadath, and Milind Tambe. A fly on the wall: Monitoring agent organizations by eavesdropping. In *Working Notes of the AAI-2000 Workshop on Agent-Oriented Information Systems (AOIS-2000)*, pages 71–77, 2000.
- [55] Gal A. Kaminka, Milind Tambe, and C. M. Hopper. The role of agent modeling in agent robustness. In *AI meets the real world: Lessons learned (AIMTRW-98)*, 1998.
- [56] Gal A. Kaminka and Milind Tambe. Towards social comparison for failure detection: An extended abstract. In *Proceedings of the AAI Fall Symposium on Socially Intelligent Agents*, 1997.
- [57] Gal A. Kaminka. On problems of knowledge in fuzzy control. In *Proceedings of the AAI Fall Symposium on Frontiers in Soft Computing and Decision Systems*, 1997.
- [58] Gal A. Kaminka. Real world robot navigation using fuzzy reaction and deliberation. In *Proceedings of the international conference on fuzzy logic and applications (Fuzzy-97)*, 1997.

Abstracts and Short Papers

- [1] Inbal Wiesel, Noa Agmon, and Gal A. Kaminka. A compiler for programming molecular robots. In *13th Annual Conference on Foundations of Nanoscience: Self-assembled architecture and devices (FNANO16)*, 2016.
- [2] Inbal Wiesel, Gal A. Kaminka, Guy Hachmon, Noa Agmon, and Ido Bachelet. Late-breaking: First steps towards automated implementation of molecular robot tasks. In *DNA Computing (DNA-21)*, 2015.
- [3] Mor Vered and Gal A. Kaminka. Towards sketch recognition by mirroring (extended abstract). In *Proceedings of the Fourteenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-15)*, 2015.
- [4] Gal A. Kaminka, Noa Agmon, and Ido Bachelet. On the tight coupling between molecular robots and their programming languages: Initial thoughts. In *IROS 2014 workshop on Micro-Nano Robotic Swarms for Biomedical Applications*, 2014.
- [5] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Towards safest path adversarial coverage (extended abstract). In *Proceedings of the Thirteenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-14)*, 2014.
- [6] Shahar Kost, Gal A. Kaminka, and David Sarne. Towards effective user-guided robot search (extended abstract). In *Proceedings of the Thirteenth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-14)*, 2014.
- [7] Mor Vered and Gal A. Kaminka. A computational cognitive model of mirroring processes: A position statement. In *Proceedings of the AAI-2013 workshop on Plan, Activity and Intent Recognition (PAIR)*, 2013.
- [8] Gal A. Kaminka, Meytal Traub, Yehuda Elmaliach, Dan Erusalimchik, and Alex Fridman. On the use of teamwork software for multi-robot formation control (an extended abstract). In *Proceedings of the Twelfth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-13)*, 2013.
- [9] Shahar Kost, David Sarne, and Gal A. Kaminka. Intelligent user interface for multi-robot search. In *HRI 2012 Workshop on Human-Agent-Robot-Teamwork (HART 2012)*, 2012.
- [10] Gal A. Kaminka, Ari Yakir, Dan Erusalimchik, Matan Keidar, Shahar Kost, and David Sarne. Rapid semi-autonomous multi-robot user and indoor clearing. In *AUVSI 2012*, 2012.
- [11] Natalie Fridman, Avishy Zilka, and Gal A. Kaminka. The impact of cultural differences on crowd dynamics in pedestrian and evacuation domains: An extended abstract. In *Proceedings of the Eleventh International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-12)*, 2012. Short Paper.
- [12] Eran Sadeh-Or and Gal A. Kaminka. AnySURF: Flexible local features computation (extended abstract). In Francien Dechesne, Hiromitsu Hattori, Adriaan ter Mors, Jose M. Such, Danny Weyns, and Frank Dignum, editors, *Advanced Agent Technology: AAMAS 2011 Workshops. Revised Selected Papers*, volume 7068 of *Lecture Notes in Computer Science (LNCS)*, pages 270–271. Springer, 2012.

- [13] Dan Erusalimchik, Gal A. Kaminka, Shai Shlomai, Dov Miron, and Sarit Kraus. Adaptive multi-robot coordination based on resource spending velocity (extended abstract). In *Proceedings of the Eighth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-09)*, 2009. Short Paper.
- [14] Noa Agmon, Sarit Kraus, and Gal A. Kaminka. Uncertainties in adversarial patrol (extended abstract). In *Proceedings of the Eighth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-09)*, 2009.
- [15] Jose Antonio Iglesias, Agapito Ledezma, Araceli Sanchis, and Gal A. Kaminka. An efficient behavior classifier based on distributions of relevant events. In *Proceedings of the European Conference on Artificial Intelligence (ECAI-2008)*, 2008. Poster.
- [16] Yael Termin, Gal A. Kaminka, S.R. Schrader, Sarit Semo, and Ari Z. Zivotofsky. Color perception in stereoscopic presentations with one monochrome image. In *Proceedings of ARVO Annual Meeting*, 2007. Poster.
- [17] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. Measuring the cost of robotic communication. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI-05)*, pages 1734–1735, 2005. Poster.
- [18] Gal A. Kaminka and Inna Frenkel. Towards flexible teamwork in behavior-based robots: Extended abstract. In *Proceedings of the Fourth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, 2005. Poster.
- [19] Meir Kalech and Gal A. Kaminka. Diagnosing a team of agents: Scaling up. In *Proceedings of the Third International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-04)*, 2004. Abstract. A full version appeared in AAMAS-2005.
- [20] Gery Gutnik and Gal A. Kaminka. A scalable petri-net representation of interaction protocols for overhearing. In *Proceedings of the Fourth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, 2004. Abstract. A full version appears in JAIR 2006.
- [21] Avi Rosenfeld, Gal A. Kaminka, and Sarit Kraus. A study of marginal performance properties in robotic groups. In *Proceedings of the Fourth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, 2004. Abstract.
- [22] Patrick Riley, Manuela Veloso, and Gal A. Kaminka. Towards any-team coaching in adversarial domains. In *Proceedings of the First International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-02)*, pages 1145–1146, 2002. Short Paper.
- [23] Gal A. Kaminka. Execution monitoring and diagnosis in multi-agent environments. In *Proceedings of the Sixteenth National Conference on Artificial Intelligence (AAAI-99)*, 1999. Doctoral Consortium Abstract.
- [24] Gal A. Kaminka and Milind Tambe. Agent component synergy: Social comparison. In *Proceedings of the Second International Conference on Autonomous Agents (Agents-98)*, 1998. Poster.
- [25] Gal A. Kaminka and Milind Tambe. Social comparison for failure detection and recovery. In *Proceedings of the Fourteenth National Conference on Artificial Intelligence (AAAI-97)*, 1997. Student Poster.
- [26] Weimin Shen, Jafar Adibi, Bonghan Cho, Gal Kaminka, Jihie Kim, Behnam Salemi, and Sheila Tejada. A robot demo description: See if YODA likes you? In *Proceedings of the Conference Companion to the First International Conference on Autonomous Agents*, 1997. Robot Demonstration Abstract.
- [27] Weimin Shen, Jafar Adibi, Bonghan Cho, Gal A. Kaminka, Jihie Kim, Behnam Salemi, and Sheila Tejada. YODA: The young observant discovery agents. In *Proceedings of the Thirteenth National Conference on Artificial Intelligence (AAAI-96)*, 1996. Robot Competition Abstract.
- [28] Gal A. Kaminka and Milind Tambe. The role of functional representation in building autonomous intelligent agents for dynamic environments. In *Proceedings of the AAAI-96 workshop on modeling and reasoning with function*, 1996. Poster.

Technical Reports and Other Unrefereed Publications

- [1] Roi Yehoshua, Noa Agmon, and Gal A. Kaminka. Safest path adversarial coverage: Proof and algorithm details. Technical Report SMART 2014/01, Bar Ilan University, Computer Science Department, SMART Group, 2014.
- [2] Natalie Fridman, Avishay Zilka, and Gal A. Kaminka. The impact of cultural differences on crowd dynamics in pedestrian and evacuation domains. Technical Report MAVERICK 2011/01, Bar Ilan University, Computer Science Department, MAVERICK Group, available at <http://www.cs.biu.ac.il/~galk/Publications/>, 2011.
- [3] Matan Keidar, Inbar Aharon, Danielle Barda, Or Kamara, Alon Levy, Eran Polosetski, Dikla Ramati, Lior Shlomov, Jeremy Shoshan, Ari Yakir, Avishay Zilka, Gal A. Kaminka, and Eli Kolberg. Robocup 2010 standard platform league team burst description. Technical report, Bar Ilan University, Computer Science Department, MAVERICK Group, 2010.
- [4] Dan Erusalimchik and Gal A. Kaminka. Towards adaptive multi-robot coordination based on resource expenditure velocity: Extended version. Technical Report MAVERICK 2008/02, Bar Ilan University, Computer Science Department, MAVERICK Group, available at <http://www.cs.biu.ac.il/~galk/Publications/>, 2008.
- [5] Yehuda Elmaliach, Asaf Shiloni, and Gal A. Kaminka. Frequency-based multi-robot fence patrolling. Technical Report MAVERICK 2008/01, Bar Ilan University, Computer Science Department, MAVERICK Group, 2008.
- [6] Gal A. Kaminka, Efi Merdler, and Dorit Avrahami. Advanced unsupervised spatial learning algorithm for the avnet37 consortium: Interim report (in hebrew). Technical Report MAVERICK 2006/01, Bar Ilan University, Computer Science Department, MAVERICK Group, 2006.
- [7] Gal A. Kaminka, Efi Merdler, and Dorit Avrahami. Advanced unsupervised spatial learning algorithm for the avnet37 consortium: Final report (in hebrew). Technical Report MAVERICK 2006/01, Bar Ilan University, Computer Science Department, MAVERICK Group, 2006.
- [8] Gal A. Kaminka and Michael Bowling. Towards robust teams with many agents. Technical Report CMU-CS-01-159, Carnegie Mellon University, 2001.
- [9] Gal A. Kaminka. The multi-agent systems evaluation repository. <http://www.cs.biu.ac.il/~galk/Eval/>, 1998.
- [10] MAVERICK. The MAVERICK Group movies page, Computer Science department, Bar Ilan University; last checked: Feb 24, 2008. <http://www.cs.biu.ac.il/~maverick/Movies/>, 2005.