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# ***SOCIALLY INTELLIGENT AGENTS***

***Creating Relationships  
with Computers  
and Robots***

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*Edited by*  
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**Kluwer Academic Publishers**

# Socially Intelligent Agents

**Michael Brown**



## **Socially Intelligent Agents:**

**Socially Intelligent Agents** Kerstin Dautenhahn, Alan H. Bond, Lola Canamero, Bruce Edmonds, 2006-04-11 Socially situated planning provides one mechanism for improving the social awareness of agents. Obviously, this work is in the preliminary stages and many of the limitations and the relationship to other work could not be addressed in such a short chapter. The chief limitation of course is the strong commitment to defining social reasoning solely at the meta level which restricts the subtlety of social behavior. Nonetheless, our experience in some real world military simulation applications suggest that the approach even in its preliminary state is adequate to model some social interactions and certainly extends the state of the art found in traditional training simulation systems.

**Acknowledgments** This research was funded by the Army Research Institute under contract TAPC ARI BR.

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**Socially Intelligent Agents** Kerstin Dautenhahn, Chisato Numaoka, 1998

**Social Intelligence** Nathan Emery, Nicola Clayton, Christopher D. Frith, 2008

Why are humans so clever? The Social intelligence hypothesis explores the idea that this cleverness has evolved through the increasing complexity of social groups. Our ability to understand and control nature is a by-product of our ability to understand the mental states of others and to use this knowledge to co-operate or deceive. These abilities have not emerged out of the blue. They can be found in many social animals that co-operate and compete with one another: birds as well as mammals. This book brings together contributions from an impressive list of authorities in the field, appropriately concluding with a chapter by Nick Humphrey, one of the pioneers in this field. This volume examines social intelligence in many different animal species and explores its development, evolution, and the brain systems upon which it depends. Better understanding and further development of social intelligence is critical for the future of the human race and the world that we inhabit. Our problems will not be solved by mere cleverness but by increased social co-operation.

*Human Cognition and Social Agent Technology* Kerstin Dautenhahn, 2000-03-15 Human Cognition and Social Agent Technology is written for readers who are curious about what human social cognition is and whether and how advanced software programs or robots can become social agents. Topics addressed in 16 peer-reviewed chapters by researchers at the forefront of agent research include Narrative intelligence and implementations of story telling systems, socially situated avatars and conscious software agents, cognitive architectures for socially intelligent agents, agents with emotions, design issues for interactive systems, artificial life agents.

contributions to agent design from artistic practice and a Cognitive Technology view on living with socially intelligent agents The book addresses both software and robotic agents On the one hand justice is done to the scientific and technical aspects and on the other hand the reader will learn about pioneering technological developments which are necessary for a public discourse and critical evaluation on where social agent technology is leading us and how such a development can be shaped in order to meet the social cultural and cognitive needs of humans The book is suitable for students researchers and everyone interested in this emerging and quickly growing field it does not require any specialist background knowledge

Series B     **The Handbook on Socially Interactive Agents** Birgit Lugrin,Catherine Pelachaud,David Traum,2022-10-19

The Handbook on Socially Interactive Agents provides a comprehensive overview of the research fields of Embodied Conversational Agents Intelligent Virtual Agents and Social Robotics Socially Interactive Agents SIAs whether virtually or physically embodied are autonomous agents that are able to perceive an environment including people or other agents reason decide how to interact and express attitudes such as emotions engagement or empathy They are capable of interacting with people and one another in a socially intelligent manner using multimodal communicative behaviors with the goal to support humans in various domains Written by international experts in their respective fields the book summarizes research in the many important research communities pertinent for SIAs while discussing current challenges and future directions The handbook provides easy access to modeling and studying SIAs for researchers and students and aims at further bridging the gap between the research communities involved In two volumes the book clearly structures the vast body of research The first volume starts by introducing what is involved in SIAs research in particular research methodologies and ethical implications of developing SIAs It further examines research on appearance and behavior focusing on multimodality Finally social cognition for SIAs is investigated using different theoretical models and phenomena such as theory of mind or pro sociality The second volume starts with perspectives on interaction examined from different angles such as interaction in social space group interaction or long term interaction It also includes an extensive overview summarizing research and systems of human agent platforms and of some of the major application areas of SIAs such as education aging support autism and games     **Regulated Agent-Based Social Systems** Gabriela Lindemann,Daniel

Moldt,2004-02-10 This book presents selected extended and reviewed versions of the papers accepted for the First International Workshop on Regulated Agent Systems Theory and Applications RASTA 2002 held in Bologna Italy in July 2002 as part of AAMAS 2002 In addition several new papers on the workshop theme are included as well these were submitted and reviewed in response to a further call for contributions The construction of artificial agent societies deals with questions and problems that are already known from human societies The 16 papers in this book establish an interdisciplinary community of social scientists and computer scientists devoting their research interests to exploiting social theories for the construction and regulation of multi agent systems     Intelligent Agent Technology Ning Zhong,2001 This volume is an

attempt to capture the essence of the state of the art of intelligent agent technology and to identify the new challenges and opportunities that it is or will be facing The most important feature of the volume is that it emphasizes a multi faceted holistic view of this emerging technology from its computational foundations in terms of models methodologies and tools for developing a variety of embodiments of agent based systems to its practical impact on tackling real world problems

Human Cognition and Social Agent Technology Kerstin Dautenhahn,2000 This text discusses design issues of social agent technology with the perspective of human cognition It combines the disciplines of computer science social science and psychology but seeks to avoid being overly technical and is written for an interdisciplinary audience

**Intelligent Agents V: Agents Theories, Architectures, and Languages** Jörg Müller,Munindar P. Singh,Anand S. Rao,2007-04-29 The leading edge of computer science research is notoriously ckle New trends come and go with alarming and unfailing regularity In such a rapidly changing eld the fact that research interest in a subject lasts more than a year is worthy of note The fact that after ve years interest not only remains but actually continues to grow is highly unusual As 1998 marked the fth birthday of the International Workshop on Agent Theories Architectures and Languages ATAL it seemed appropriate for the organizers of the original workshop to comment on this remarkable growth and re ect on how the eld has developed and matured The rst ATAL workshop was co located with the Eleventh European Conference on Arti cial Intelligence ECAI 94 which was held in Amsterdam The fact that we chose an AI conference to co locate with is telling at that time we expected most researchers with an interest in agents to come from the AI community The workshop whichwasplannedoverthesummerof1993 attracted32submissions andwasattended by 55 people ATAL was the largest workshop at ECAI 94 and the clear enthusiasm on behalfofthecommunitymadethedecisiontoholdanotherATALworkshopsimple The ATAL

94proceedingswereformallypublishedinJanuary1995underthetitleIntelligent Agents and included an extensive review article a glossary a list of key agent systems and unusually for the proceedings of an academic workshop a full subject index

Thehighscienti candproductionvaluesembodiedbytheATAL 94proceedingsappear to have been recognized by the community and resulted inATAL proceedings being the most successful sequence of books published in Springer Verlag s Lecture Notes in Arti cial Intelligence series

**Intelligent Agents VI. Agent Theories, Architectures, and Languages** Nicholas R. Jennings,Yves Lesperance,2000-02-16 Intelligent agents are one of the most important developments in computer science in the 1990s Agents are of interest in many important application areas ranging from human computer interaction to industrial process control The ATAL workshop series aims to bring together researchers interested in the core aspects of agent technology Speci cally ATAL addresses issues such as th ries of agency software architectures for intelligent agents methodologies and programming languages for realizing agents and software tools for developing and evaluating agent systems One of the strengths of the ATAL workshop series is its emphasis on the synergies between theories infrastructures architectures methodologies formal methods and languages This year s workshop continued the ATAL trend of attracting a

large number of high quality submissions In more detail 75 papers were submitted to the ATAL 99 workshop from 19 countries After stringent reviewing 22 papers were accepted for presentation at the workshop After the workshop these papers were revised on the basis of comments received both from the original reviewers and from discussions at the workshop itself This volume contains these revised papers

**Design and Applications of Intelligent Agents** Chengqui Zhang, Von-Wun Soo, 2003-05-15 PRIMA 2000 was the third in the series of Pacific Rim International Workshops on Multi Agents It was held on August 28-29 2000 in Melbourne Australia in conjunction with the Pacific Rim International Conference on Artificial Intelligence 2000 PRIMA is the main forum for the agent or multi agent researchers in Pacific Rim countries to exchange and discuss their research results This volume contains selected papers from PRIMA 2000 It covers theory design and applications of intelligent agents The specific aspects include coordination negotiation learning architecture specification allocation and application of intelligent agents All papers are of high quality because each of them was reviewed and recommended by at least two international renowned program committee members Many people contributed to this volume We would like to thank all the authors who submitted papers to the workshop Many thanks also to the members of the program committee who diligently reviewed all the papers Finally we thank the editorial staff of Springer Verlag for publishing this volume in the Lecture Notes in Artificial Intelligence series

**Artificial Intelligence, Social Computing and Wearable Technologies** Waldemar Karwowski and Tareq Ahram, 2023-12-04 Proceedings of the AHFE International Conference on Human Factors in Design Engineering and Computing AHFE 2023 Hawaii Edition Honolulu Hawaii USA 4-6 December 2023

**Intelligent Agents IV: Agent Theories, Architectures, and Languages** Munindar P. Singh, Anand Rao, Michael J. Wooldridge, 1998-02-18 This carefully edited book constitutes the strictly refereed post workshop proceedings of the 4th International Workshop on Agent Theories Architectures and Languages ATAL 97 held in Providence Rhode Island USA in July 1997 The 25 revised full papers presented were selected from a total of 76 submissions The book is divided into sections on methodologies architectures and infrastructures coordination planning and monitoring formal methods theories and architectures and methodologies Like its predecessors published in the Intelligent Agents series this volume specifically focuses on the relationships between the theory and the applications of agents

**Socially Intelligent Agents** Kerstin Dautenhahn, 2000-11-01

Converging Technologies for Improving Human Performance Mihail C. Roco, William Sims Bainbridge, 2013-04-17 M C Roco and W S Bainbridge In the early decades of the 21st century concentrated efforts can unify science based on the unity of nature thereby advancing the combination of nanotechnology biotechnology information technology and new technologies based in cognitive science With proper attention to ethical issues and societal needs converging in human abilities societal technologies could achieve a tremendous improvement outcomes the nation's productivity and the quality of life This is a broad cross cutting emerging and timely opportunity of interest to individuals society and humanity in the long term The phrase convergent technologies refers to the synergistic combination of four major

NBIC nano bio info cogno provinces of science and technology each of which is currently progressing at a rapid rate a nanoscience and nanotechnology b biotechnology and biomedicine including genetic engineering c information technology including advanced computing and communications d cognitive science including cognitive neuroscience Timely and Broad Opportunity Convergence of diverse technologies is based on material unity at the nanoscale and on technology integration from that scale

*Agent Culture* Sabine Payr, Robert Trappl, 2004-06-11 This volume began with a workshop of the Austrian Research Institute for Artificial Intelligence held in 2001 Concerned with embodied agents as cultural objects and subjects the book is divided into three parts It begins by drawing attention to the cultural embeddedness of technology in general and agent design in particular as a reminder that

**Autonomous Systems and Intelligent Agents in Power System Control and Operation** Christian Rehtanz, 2003-07-15 Autonomous systems are one of the most important trends for the next generation of control systems This book is the first to transfer autonomous systems concepts and intelligent agents theory into the control and operation environment of power systems The focus of this book is to design a future control system architecture for electrical power systems which copes with the changed requirements concerning complexity and flexibility and includes several applications for power systems This book draws the whole circle from the theoretical and IT concept of autonomous systems for power system control over the required knowledge based methods and their capabilities to concrete applications within this field

**Social Robotics** Haizhou Li, Shuzhi Sam Ge, Yan Wu, Agnieszka Wykowska, Hongsheng He, Xiaorui Liu, Dongyu Li, Jairo Perez-Osorio, 2021-11-01 This book constitutes the refereed proceedings of the 13th International Conference on Social Robotics ICSR 2021 held in Singapore Singapore in November 2021 The conference was held as a hybrid event The 64 full papers and 15 short papers presented were carefully reviewed and selected from 114 submissions The conference presents topics on humans and intelligent robots and on the integration of robots into the fabric of our society The theme of the 2021 edition was Robotics in our everyday lives emphasizing on the increasing importance of robotics in human daily living

Issues in Multi-Agent Systems Antonio Moreno, Juan Pavón, 2007-12-22 Discover the latest developments and issues in multi agent systems by exploring their applications in various domains such as electronic markets e tourism ambience intelligence and complex system analysis The book is written by two researchers with hands on experience in technology transfer With their practical focus they help you see how agent technology can be applied in many new services and environments

**Intelligent Virtual Agents** Ruth Aylett, Brigitte Krenn, Catherine Pelachaud, Hiroshi Shimodaira, 2013-08-16 This book constitutes the proceedings of the 13th International Conference on Intelligent Virtual Agents IVA 2013 held in Edinburgh UK in August 2013 There was a total of 94 submissions The 18 full and 18 short papers presented in this volume were carefully reviewed and selected for inclusion in the book In addition the volume lists the 34 posters which were on display during the conference The papers are organized in topical sections named cognitive models applications dialogue language speech non verbal behaviour and social cultural models and

agents

## The Enigmatic Realm of **Socially Intelligent Agents**: Unleashing the Language is Inner Magic

In a fast-paced digital era where connections and knowledge intertwine, the enigmatic realm of language reveals its inherent magic. Its capacity to stir emotions, ignite contemplation, and catalyze profound transformations is nothing short of extraordinary. Within the captivating pages of **Socially Intelligent Agents** a literary masterpiece penned with a renowned author, readers embark on a transformative journey, unlocking the secrets and untapped potential embedded within each word. In this evaluation, we shall explore the book's core themes, assess its distinct writing style, and delve into its lasting impact on the hearts and minds of those that partake in its reading experience.

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