Prof Michael Rovatsos

School of Informatics
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Research Interests

Artificial Intelligence, Multiagent Systems, Ethical AI, Algorithmic Fairness

Experience

Professor of AI, School of Informatics, The University of Edinburgh *since Aug 2019*
Previously Lecturer (2004–13), Senior Lecturer (2013–17), Reader (2017–19)

Director, The Bayes Centre, The University of Edinburgh *Jan 2018–Jul 2023*
Academic lead for Data Science and AI Innovation Centre

Deputy Vice Principal of Research (AI), The University of Edinburgh *Sep 2020–Aug 2022*
Strategic University-wide management role with specific focus on AI

Pre-Doctoral Research Assistant *Sep 2000–Aug 2004*
Department of Informatics, Technical University of Munich

AI Software Engineer *Nov 1999–Aug 2000*
Knowbotic Systems, Frankfurt am Main, Germany

Education

PhD in Computer Science, *summa cum laude* *Sep 2000–Dec 2004*
Department of Informatics, Technical University of Munich, Germany

Diploma in Computer Science, *first class* *Sep 1994–Sep 1999*
Department of Informatics, University of Saarbrücken, Germany

Research

Grants

Co-Director, Centre for Innovation in Purpose-Driven Banking *Jun 2023–Dec 2024*
NatWest Group University of Edinburgh Partnership, £2,000,000

Co-Investigator, Making Systems Answer *Jan 2022–Jun 2024*
UKRI Trustworthy Autonomous Systems Award, £559,682

Principal Investigator, Advanced Autonomy and Human-AI Collaboration *Oct 2021–Sep 2022*
EPSRC Turing 2.0 Award and University of Edinburgh, £371,313 (Edinburgh share £325,677)

Co-Principal Investigator, Ethical Human-AI Reasoning in Law *Sep 2020–Aug 2023*
Cisco University Research Fund Award, $139,687

Co-Principal Investigator, ReEnTrust Project *Dec 2018–May 2021*
EPSRC Research Grant, £1,211,004 (Edinburgh share £440,878)

Co-Investigator (Co-Director), Creative Informatics Cluster *Oct 2018–Mar 2023*
AHRC/SFC Creative Industries Cluster Award, £5,999,090

Co-Investigator, Edinburgh Vishub Project *Oct 2018–Mar 2020*
EPSRC Capital Award, £200,000

Co-Principal Investigator, CyCAT Project   *Oct 2018–Sep 2021*
  H2020 Research Grant, €999,965 (Edinburgh share €219,296)

Co-Investigator, Research for Emergency Aftershock Response   *Nov 2016–Jul 2017*
  NERC Global Challenges Research Fund Project, £198,904

Co-Principal Investigator, UnBias Project   *Sep 2016–Aug 2018*
  EPSRC Research Grant, £1,139,110 (Edinburgh share £218,327)

Principal Investigator/Co-Ordinator, ESSENCE Project   *Nov 2013–Oct 2017*
  FP7 Marie Curie Initial Training Network, €3,990,183 (Edinburgh share €1,235,026)

Co-Principal Investigator, SmartSociety Project   *Jan 2013–Dec 2016*
  FP7 FET Integrated Project, €6,829,664 (Edinburgh share €841,142)

Co-Principal Investigator, BioNet Agents Project   *Sep 2006–Aug 2007*
  FP6 Marie Curie Transfer of Knowledge, €165,000 (Edinburgh share €58,348)

Further Knowledge Transfer and Consultancy Grants   *Jul 2009–Dec 2016*
  Funded by RSE, SFC, EPSRC, Sustainable Opportunities Scotland, Selex, the UK Cabinet Office,
  the University of Edinburgh, Queen Margaret University, FWP Park Brown, Global Partnership on AI,
  £93,200

Leadership

Member, Scottish AI Alliance Leadership Circle   *Jun 2021–Apr 2024*
  Contributing to senior advisory board for delivery of the Scottish Government's National AI Strategy

Turing University Lead and Turing Fellow, The Alan Turing Institute   *Sep 2018–Aug 2024*
  Representing Edinburgh at the national institute for Data Science and AI

Data Science and AI Lead, University Alliance Europe (UNA Europa)   *Jul 2019–Apr 2023*
  Thematic lead for alliance of seven leading European universities

Director, Centre for Intelligent Systems and their Applications   *Aug 2014–Jul 2017*
  Leading one of the seven research institutes of the School of Informatics

Conference Coordination Officer, ACM Special Interest Group for AI   *Aug 2016–Jul 2019*
  Managing conference sponsorship and support for major international AI association

Leader, Agents Research Group, School of Informatics   *Aug 2004–Jul 2017*
  Leading research group that has hosted over 40 members

Major Organisation Roles at International Conferences   *since 2005*
  Organiser, Dagstuhl Seminar on Algorithmic Transparency, Dagstuhl, June 2021
  Programme Co-Chair, AAMAS 2018 Blue Sky Ideas Track, Stockholm, July 2018
  Steering Committee Member, AAAI/ACM Conference on AI, Ethics, and Society, Feb 2018
  Programme Co-Chair, EUMAS 2015, Athens, Dec 2015
  Publications Chair, AAMAS 2011, Taipei, May 2011
  Local Arrangements Committee Member, IJCAI 2005, Edinburgh, Aug 2005

Workshop and Other Event Organisation   *since 2003*
  Demonstrations Chair, Turing Presents: AI UK, London, Mar 2020 (cancelled)
  Co-Chair, Workshop on Hybrid Human-Machine Computing, Guildford, Sep 2017
  Co-Chair, Taboo Challenge Workshop at IJCAI 2017, Melbourne, Aug 2017
  Co-Chair, DIVERSITY 2016 Workshop at ECAI 2016, The Hague, Aug 2016
  Co-Chair, ESSENCE Summer Schools, Ischia, Oct 2014 and Edinburgh, Aug 2015
  Co-Chair, ESSENCE Workshops, Edinburgh 2014, Ischia 2014, Barcelona 2015
  Scientific Committee Member, EASSS 2014 Summer Scool, Chania, Jul 2014
  Organizing Committee Member, COREDEM 2013 at PAAMS 2013, Salamanca, May 2013
  Program Co-Chair/Local Arrangements Chair, CIA 2006 Workshop, Edinburgh, Sep 2006
  Co-chair, CCRMAS 2004 Workshop at KI 2004, Ulm, Sep 2004
  Scientific Committee Member, AgentLink III Technical Forum, Rome, Jun 2004
  Co-chair, AUTONOMY 2003 Workshop at AAMAS 2003, Melbourne, Jul 2003

Community Service

Conference and Workshop Programme Committee Membership *since 2003*
110 events including many editions of top-tier conferences IJCAI, AAAI, AAMAS, AIES, and CHI

Editorial Responsibilities *since 2016*
Associate Editor, Journal of Autonomous Agents and Multi-Agent Systems (2020–)
Associate Editor, Knowledge and Information Systems Journal (2016–2019)

Journal Reviewing *since 2000*
34 international journals including Nature MI, AIJ, JAIR, JAAMAS, JMLR, ACM and IEEE journals

Grant Application Reviewing *since 2006*
Engineering and Physical Sciences Research Council, Medical Research Council,
Royal Academy of Engineering (UK), Netherlands Organization for Scientific Research,
Natural Sciences and Engineering Research Council Canada, Research Council of
Norway, Israel Science Foundation, Singapore Advanced Research Council, European
Science Foundation, European Research Area Network, Max-Planck Society

Research Visits

Department of Computer Science, University of Southern California *Nov 2017–Dec 2017*
Visitor at the Intelligent Decision Making Lab (Prof Sven Koenig)

Media Lab, Massachusetts Institute of Technology *Oct 2017–Nov 2017*
Visitor at the Scalable Cooperation Lab (Prof Iyaf Rahwan)

School of Engineering and Applied Sciences, Harvard University *Jul 2010–Aug 2010*
Visitor at the EconCS & AI Research Groups (Prof David Parkes, Dr Kobi Gal)

Department of Computer Science, RWTH Aachen University *Jan 2010*
Visitor at the Knowledge-Based Systems Group (Prof Gerhard Lakemeyer)

Department of IT & Communications, Universitat Pompeu Fabra, Barcelona *Nov 2009*
Visitor ar the Artificial Intelligence Group (Prof Hector Geffner)

Department of Cybernetics, Czech Technical University Prague *Jun 2006 and Oct 2014*
Visitor at the Agent Technology Group (Dr Michal Pechoucek)

Institute of Informatics, The British University in Dubai *May 2005*
Visitor at the DAMAS Group (Dr Iyad Rahwan)

Department of Information Systems, University of Melbourne *Jul 2003–Sep 2003*
Visitor at the Agents Group (Prof Liz Sonenberg)

Teaching

School of Informatics, The University of Edinburgh

Entrepreneurship and Innovation Project (3rd year course) *2024/25*
Lecturer

Data Ethics, AI, and Responsible Innovation MOOC *2019–*
Co-led design and delivery of free online course with over 10,000 participants to date

Agent-Based Systems (3rd/4th year course) *2005/06–2016/17 (except 2009/10)*
Designed course in 2005, revised in 2010, and again for online delivery in 2016/17

Informatics 2D: Reasoning and Agents (2nd year course) *2005/06–2008/09, 2014/15, 2015/16*
Lecturer; co-developed content of new course in 2005

Multi-Agent Semantic Web Systems (MSc course) *2010/11, 2011/12*
Lecturer

Knowledge Engineering (MSc course)
2004/05
Lecturer; significantly revised course content

International School for New Media, University of Lübeck (Germany)

Artificial Intelligence (MSc course)
2006/07
Invited Guest Lecturer; taught 30-hour short intensive foundations course

Department of Informatics, Technical University of Munich

Socionics (3rd/4th year and MSc course)
2000/01
Co-developed and delivered new interdisciplinary seminar-style course

Formal Methods in Distributed Intelligent Systems (3rd/4th year and MSc course)
2000/01
Co-developed and delivered new seminar-style course

Introduction to Artificial Intelligence (2nd year course)
2001/02, 2002/03
Organised seminar-style course three times

Methods in Artificial Intelligence (2nd year course)
2002/03
Developed and delivered new programming practical course twice

Unix Tools (1st/2nd year course)
2000/01, 2002/03
Co-organised seminar-style course five times

Taught student project supervision

MSc Projects, The University of Edinburgh
since 2004
Supervised a total of 48 MSc dissertation projects

Undergraduate Projects, The University of Edinburgh
since 2004
Supervised a total of 28 final-year individual projects

System Development Projects, Technical University of Munich
2001–2003
Students: Stanislavs Bardins, Johann Duscher, Christian Pacher

Diploma Theses, Technical University of Munich
2001–2003
Marco Wolf: *Strategic Opponent Classification in Multiagent Systems*
Felix Fischer: *Frame-based Learning and Generalisation for Multiagent Communication*

Research Student Supervision & Examination

Principal Supervision Duties

8. Claire Barale (PhD candidate)
since 2021
Enabling Human-AI Collaboration in International Law

7. Savina Kim (PhD candidate, completed)
2020 – 2024
Fairness and bias in credit decisioning (jointly supervised with Galina Andreeva)

6. Matei Craciun (MSc by Research, completed)
2014 – 2015
Coalition Formation under Uncertainty

5. Matthew Crosby (PhD candidate, completed)
2009 – 2013
Strategic Multiagent Planning

4. Alexandros Belesiotis (PhD, completed)
2007 – 2012
Argumentation-Based Conflict Resolution in Planning

3. George Christelis (PhD, completed)
2007 – 2011
Automated Norm Synthesis

2. Iain Wallace (PhD, completed)
2006 – 2010
Practical Social Reasoning

1. Xavier Rafael Palou (MSc by Research, completed)   *2006 – 2008*
Distributed Collaborative Learning

Second Supervisor Duties

Assistant supervisor for PhD projects   *since 2004*
17 PhD projects overall, 13 of which have been successfully completed

External Examiner Appointments

11. Zheng Tian (PhD, University College London)   *Sep 2021*
Deep Opponent Modelling in Multi-Agent Systems (supervisor: Jun Wang)

10. Satyendra Singh Chouhan (PhD, IIT Roorkee)   *Jun 2017*
Multiagent Planning with Interacting Actions (supervisor: Rajdeep Niyogi)

9. Jack Hargreaves (PhD, University of Birmingham)   *Apr 2017*
Planning and Acting in Multi-Agent Environments (supervisor: Nick Hawes)

8. Andrew Larkham (PhD, University of Surrey)   *Jun 2016*
Application of Agent-Based Models to Carbon Taxes on ICT (supervisor: Paul Krause)

7. Sergio Pajares (PhD, UPV Valencia)   *Jan 2016*
Defeasible Argumentation for Cooperative Multi-Agent Planning (supervisor: Eva Onaindia)

6. Kleanthis Malialis (PhD, University of York)   *Oct 2014*
Reinforcement learning for intrusion detection (supervisor: Dan Kudenko)

5. Sofia Panagiotidi (PhD, UPC Barcelona)   *Sep 2014*
Introducing Norms into Practical Reasoning Agents (supervisor: Javier Vasquez)

4. José Such (PhD, UPV Valencia)   *Nov 2011*
Security and privacy in multiagent systems (supervisor: Ana García)

3. Leonidas Georgopoulos (PhD, EPF Lausanne)   *Mar 2011*
Consensus-finding in networks using distributed learning (supervisor: Martin Hasler)

2. Manuel Atencia (PhD, CSIC/UAB Barcelona)   *May 2010*
Semantic Alignment in the Context of Agent Interaction (supervisor: Marco Schorlemmer)

1. Tshiamo Motshegwa (PhD, City University London)   *Sep 2009*
Distributed Termination Detection for Multiagent Protocols (supervisor: Eduardo Alonso)

Internal Examiner Appointments

Internal examiner for PhD, DSc, and MSc by Research theses   *2006–2018*
Examined eleven research theses at the School of Informatics

Academic Administration

Teaching Administration

Convenor, DSTI Programme Oversight Committee   *Jun 2018–Dec 2020*
Chairing University-wide online data science education programme management committee

PhD Student Selector, School of Informatics   *Aug 2014 – Jul 2017*
Responsible for PhD applications to Centre for Intelligent Systems and their Applications

Coordinator of Taught Programme Review, School of Informatics   *Jun 2014–Feb 2015*
Coordinated the 5-year external review of all our teaching for QA purposes

Director of Teaching, School of Informatics   *Aug 2013–Jul 2014*
Responsible for the organisation and delivery of all teaching at the School of Informatics

Deputy Director of Teaching, School of Informatics *Aug 2012–Jul 2013*
Convenor of Teaching Committee, School Curriculum Approval Officer

Programme Director, School of Informatics MSc Programmes *Aug 2010–Jul 2012*
Course Organiser for five taught postgraduate programmes and up to 200 students per year

Co-Ordinator, European Masters in Informatics *Nov 2004–Aug 2009*
Managed Erasmus Mundus-funded collaborative international postgraduate programme

Director of Studies, School of Informatics Informatics MSc Programmes *Aug 2005–Jul 2009*
Advising and supporting 50 to 100 taught postgraduate students each year

Academic Committees

Member, Centre for Technomoral Futures Steering Committee *since Sep 2023*
Contributing to steering committee of University AI and Data Ethics research centre

Chair, University IT Committee *since Sep 2021*
Chairing the University's IT Planning and Resourcing Committee

Lead, Digital Strategy Research Workstream *May 2021–Apr 2024*
Leading the development of the University's Digital Strategy for research

Member, Edinburgh Centre for Design Informatics Steering Board *since Oct 2019*
Contributing to steering committee of interdisciplinary University research centre

Member, AI and Data Ethics Committee *since Jan 2019*
Member of University-wide committee supporting ethical governance of data and AI

Member, Centre for Statistics Steering Committee *Oct 2018–Sep 2023*
Advising new University-wide research centre

Member, Data-Driven Innovation Programme Board *Jan 2018–Jul 2023*
Representing Bayes at management board for ESES City Region Deal funding programme

Member, Centre for Data, Culture, and Society Steering Committee *Aug 2018–May 2023*
Contributing to oversight committee for new University-wide research centre

Chair, Bayes Innovation Project Board, Scottish Entreprise *Jan 2018–Dec 2021*
Representing Bayes Directorate at Board for £3m externally startup project for the Centre

Member, Festivals Digital Task Group, Scottish Entreprise *May 2018–May 2019*
Representing the University at digital innovation group for the Edinburgh festivals

Member, Near Future Teaching Group, University of Edinburgh *Oct 2016 – Sep 2018*
Contributing to development of visions for future teaching and learning across the University

Internal Expert, School of GeoSciences, University of Edinburgh *Mar 2016*
Internal expert for 5-year Postgraduate Programme Review

Member, Research Committee, School of Informatics *Aug 2014–Jul 2023*
Institute representative in committee advising Head of Research

Member, Strategy Committee, School of Informatics *Aug 2014–Jul 2017*
Institute representative in committee advising Head of School

Member, Equality and Diversity Committee, School of Informatics *Nov 2015–Jul 2017*
Contributing to School's Equality and Diversity Policies and Activities

Member, PhD Selection Committee, School of Informatics *Aug 2014–Jul 2017*
Responsible for PhD applications to Centre for Intelligent Systems and their Applications

Member, Senatus Academicus of the University of Edinburgh *Aug 2013–Jul 2017*
Non-professorial representative of the College of Science and Engineering

Member, College Learning and Teaching Committee *Aug 2013–Jul 2014*
School representative on College of Science and Engineering committee

External Appointments

External Evaluator for Department of Computer Science Faculty Appointments   *Feb 2023*
University of Helsinki

External Examiner for MSc Artificial Intelligence   *Sep 2017–Aug 2021*
University of Aberdeen

Advisory Board Member of Computer Science Department   *since Jul 2016*
Czech Technical University in Prague

External Evaluator for Faculty Promotions   *Jan 2016*
University of Macedonia, Thessaloniki, Greece

External Evaluator for Faculty Appointments   *Nov 2015*
University of the Aegean, Greece

Panel Member, School of Engineering and Informatics, University of Sussex   *Apr 2014*
External expert for validation of new undergraduate and postgraduate courses

External Evaluation Committee Member, Hellenic QAA Agency   *Dec 2013*
Dept. of Information and Communication Systems Engineering, University of the Aegean

Talks and Presentations

Invited talks at scientific events

7. Symposium on Biases in Human Computation & Crowdsourcing, Sheffield, UK   *Oct 2019*
Invited talk on *Algorithmic Fairness*

6. Computational Decision Making and Data Science Workshop, Belgrade, Serbia   *Jul 2017*
Invited talk on *Making Smart Societies Fair*

5. AMEC/TADA Workshop at AAMAS 2015, Istanbul, Turkey   *May 2015*
Invited talk on *Mechanism Design in the Wild*

4. SAGES Modelling Human Behaviour Workshop, Dundee, UK   *Dec 2012*
Invited talk on *Cognitive Modelling of Human Behaviour*

3. SICSA Conference 2011, Edinburgh, UK   *May 2011*
Invited talk, *Collective Intelligence – A Multiagent Systems Perspective*

2. AAMAS 2011 Doctoral Consortium, Taipei, Taiwan   *May 2011*
Invited talk, *Representations and Reasoning*

1. Fifth Symposium on Adaptive Agents and Multiagent Systems, Paris, France   *Mar 2005*
Invited keynote, *Multiagent Learning: Towards an New Synthesis*

Invited Talks at other Universities and Research Institutes

31. University of Piraeus/NCSR Demokritos, Greece (online)   *Apr 2022*
AI Seminar Series, *Multiagent Systems Perspectives on Safe and Trusted AI*

30. University of Sheffield, United Kingdom (online)   *May 2021*
Information School Seminar, *Towards Safe and Trusted AI*

29. University of Trento, Italy (online)   *Jul 2020*
Knowdive Group Research Seminar, *Biased humans – biased systems?*

28. King's College London, United Kingdom (online)   *Jun 2020*
Department of Informatics Research Seminar, *The Road to Safe and Trusted AI*

27. Edinburgh Napier University, United Kingdom   *Nov 2019*
School of Computing Seminar, *Democratic self-regulation and fairness in future cyber societies*

26. University of Muenster, Germany *May 2019*
Situated Computing and Interaction Lab, *Toward Ethical AI (not more AI ethics)*

25. Örebro University, Sweden *May 2019*
Centre for Applied Autonomous Sensor Systems, *Anticipatory AI*

24. The Alan Turing Institute, London, United Kingdom *Mar 2019*
Fairness, Transparency, and Privacy Seminar *From AI ethics to ethical AI*

23. Open University of Cyprus, Nicosia, Cyprus *Oct 2018*
CyCAT Opening Event, *Towards Ethical AI (no more AI ethics, please)*

22. University of Southern California, Los Angeles, CA, USA *Nov 2017*
Intelligent Decision Making Lab, Seminar, *Fairness in Multiagent Coordination*

21. MIT, Cambridge, MA, USA *Oct 2017*
Scalable Cooperation Seminar, *Algorithmic Fairness*

20. University of Leeds, Leeds, United Kingdom *Jun 2016*
School of Computing Colloquium, *Diversity in Action: The SmartSociety perspective*

19. University of Aberdeen, Aberdeen, United Kingdom *Mar 2016*
Computing Science Seminar, *Diversity-Aware AI – The Next Frontier?*

18. University of Durham, Durham, United Kingdom *Nov 2015*
ACiD Group Seminar, *Algorithms for the Sharing Economy*

17. Heriot-Watt University, Edinburgh, United Kingdom *Oct 2015*
SWeL Group Seminar, *The ESSENCE Project – Toward 'Meaning Computing'*

16. Czech Technical University, Prague *Oct 2014*
Agent Technology Group Lecture, *Some Interesting Problems in Social Computation*

15. Universidad Rey Juan Carlos, Madrid *Oct 2013*
CETINIA Invited Lecture *Multiagent Planning for Social Computation*

14. Technical University of Crete, Chania, Greece *Jul 2013*
Invited talk, *Multiagent Systems for Social Computation: The SmartSociety Approach*

13. King's College London *Jul 2013*
AIS Seminar Series, *Rationality in Communication: From Learning to Planning and Back*

12. University of Porto, Porto, Portugal *Jul 2012*
AI Seminar Series, *Multiagent Planning Problems in Next-Generation Transportation Systems*

11. Harvard University, Cambridge, MA *Jul 2010*
EconCS/AI Research Group Seminar, *Towards Knowledge-Based Strategic Planning*

10. Maastricht University, Maastricht, The Netherlands *Jan 2010*
Department of Knowledge Engineering Seminar, *Towards a "Strategic" Web*

9. RWTH Aachen University, Aachen, Germany *Jan 2010*
Knowledge-Based Systems Group Seminar, *Strategic Knowledge-Based Technologies*

8. Universitat Politecnica de Catalunya, Barcelona, Spain *Nov 2009*
Multiagent Systems Group Seminar, *Towards a Strategic Web*

7. Artificial Intelligence Research Institute (IIIA), Bellaterra, Spain *Nov 2009*
Multiagent Systems Group Seminar, *Current Research at the Agents Group in Edinburgh*

6. Universitat Pompeu Fabra, Barcelona, Spain *Nov 2009*
Artificial Intelligence Group Seminar, *Knowledge-Based Reasoning about Strategic Interaction*

5. University of Aberdeen, Aberdeen *Oct 2006*
CS Department Seminar, *Towards Practical Social Reasoning for Open Multiagent Systems*

4. University of Essex, Colchester — *Dec 2005*
CS Department Research Seminar, *Agents, Interaction & Learning: Advances and Perspectives*

3. British University in Dubai, Dubai, UAE — *May 2005*
Open Lecture Series, *Intelligent Agents on the Web – Some Ideas and Challenges*

2. Humboldt-University, Berlin, Germany — *May 2004*
Artificial Intelligence Group Seminar, *Interaction Frames in Multiagent Systems*

1. University of Melbourne & Royal Melbourne Institute of Technology — *Jul 2003*
AgentsVic Meeting, *Computational Interaction Frames*

Invited Tutorials at Research Schools

11. Safe and Trusted AI Centre for Doctoral Training Summer School — *Jul 2021*
Tutorial on *AI Ethics*

10. CyCAT Fairness, Accountability, Transparency and Ethics Winter School — *Jan 2021*
Tutorial on *AI Ethics*

9. Asser Institute Winter Academy AI and International Law, The Netherlands — *Jan 2020*
Tutorial on *Ethical Design of AI Systems*

8. International Joint Conference on AI (IJCAI 2019), Macau — *Aug 2019*
Tutorial on *AI Ethics*

7. Advanced Course on AI (ACAI 2019), Chania, Greece — *Jul 2019*
Tutorial on *AI Ethics*

6. Interdisciplinary College IK 2017, Günne, Germany — *Mar 2017*
Tutorial on *Evolution of Interaction and Meaning on the Web*

5. Third ESSENCE Summer School, Como, Italy — *Sep 2016*
Tutorial on *Evolution of Collective Adaptive Systems on the Web*

4. 16th European Agent Systems Summer School, Chania, Greece — *Jul 2014*
Tutorial on *Introduction to Agents and Multiagent Systems*

3. 15th European Agent Systems Summer School, London, UK — *Jul 2013*
Tutorial on *Agent and Multiagent Systems Research Methodologies*

2. First Creta Multiagent Systems Summer School, Chania, Greece — *Jul 2013*
Tutorial on *Introduction to Multiagent Systems Research*

1. First Dubai Agents & Multi-Agent Systems School, Dubai, UAE — *Jan 2007*
Tutorial on *Learning in Multiagent Systems*

Public and Industry Engagement Events

31. People's AI Stewardship Summit, Glasgow, UK — *Sep 2024*
Keynote on AI Stewardship

30. God in the Machine? Albertus Annual Lecture, Edinburgh, UK — *Jan 2024*
Public lecture on AI, faith, and religious experience

29. AI Assurance Workshop, Validate.AI, Edinburgh, UK — *Sep 2023*
Co-organised workshop and chaired panel on challenges in AI procurement

28. Shaping our AI Futures, Edinburgh Futures Conversations, Edinburgh, UK — *Mar 2023*
Chaired high-profile event with internationally leading experts

27. Building Ethical AI Solutions, Digital Scotland 2022, Edinburgh, UK — *Oct 2022*
Presentation at Industry and Public Sector ICT Conference

26. Artificial Intelligence: Unlocking the Opportunity, HTNG 2022, Edinburgh, UK — *Oct 2022*
Presentation at European Hospitality Technology Conference

25. Computation, Intelligence, and Society, Copernicus Festival, Kraków, Poland *May 2022*
Keynote lecture at major science festival

24. AI As Risk, EY AI Community Call, online *Apr 2022*
Invited talk to global AI community of major professional services firm

23. From the Brain to AI and Back Again, EFI Galvanised series, online *Mar 2022*
Invited talk at public event jointly presented with Prof Terry Sejnowski, Salk Institute

22. Business Opportunities in Scotland, online *Feb 2022*
Event organised by the Bavarian Chamber of Commerce and Scottish Development International

21. AI – Past, Present, and Future, NatWest Data Analytics Event, online *Dec 2021*
Invited keynote at NatWest Group Data Analytics community event

20. Scotland's Data and AI Landscape, online *May 2021*
Chaired panel organised by Connected Scotland for partners from France, Germany, and Hungary

19. AI: Vision and Future, Exploring Artificial Intelligence, online *Apr 2021*
Keynote at event jointly organised by Scottish and German economic development agencies

18. Multiagent AI, SAP Inspiration Sessions, online *Jan 2021*
Presentation to global technical audience of SAP and other business professionals

17. Data and Diversity, FCA Diversity Day, online *Dec 2020*
Presentation to leading financial services regulator

16. Data and AI Ethics, RBS NatWest, online *Nov 2020*
Presentation to marketing and consumer engagement teams

15. Data and AI Ethics, HSBC Compliance Week, online *Oct 2020*
Presentation to global compliance event

14. Multiagent Systems Perspectives for Future AI, Bitkom AI Network Seminar, Berlin *Oct 2020*
Presentation about advanced AI technologies to industrial research experts

13. Your Future in Data Science and AI, PiForum Student Conference *Sep 2020*
Introduction to career options in data science and AI to female mathematics PhD students

12. Interview with Prof. Michael Rovatsos, citiesABC.com *May 2020*
Online discussion on the future of AI

11. Demystifying Data, Scottish Investment Operations, Edinburgh *Oct 2019*
Presentation about Data and AI to financial sector experts

10. AI Ethics in the Financial Sector Conference, The Alan Turing Institute, London *Jul 2019*
Presentation of Algorithmic Wealth Allocation

9. Productforge Digital Health Hackathon, Edinburgh *Feb 2019*
Mentor for interdisciplinary Hackathon

8. AI and You, Bayes Centre, Edinburgh *Dec 2018*
Presentation to Institute of Practitioners in Advertising audience

7. AI: Past, Present, and Future, O2 Blue Door Conference, London, UK *Sep 2018*
Presentation at annual O2 business conference with 400 industry participants

6. Ethical AI Hackathon, Edinburgh *Jul 2018*
Organiser for interdisciplinary student Hackathon

5. AI & Law Student Hackathon, Edinburgh *Mar 2017*
Mentor and judge for interdisciplinary student Hackathon

4. Anthrobotics Initiative Cross-Disciplinary Lectures, Edinburgh *Sep 2016–Mar 2017*
Computational Thinking for Non-Computer Scientists (five lectures)

3. National Endowment for Science, Technology and the Arts (Nesta), London, UK   *May 2015*
Invited talk on *Engineering Collective Intelligence*

2. Marie Curie Researchers' Night, National Museum of Scotland, Edinburgh, UK   *Sep 2014*
Meet the Experts: Common-Sense Reasoning (event for families)

1. TEDx University of Edinburgh, Edinburgh, UK   *Feb 2014*
The Society of Computation and the Computation of Society (talk)

Presentations at scientific events

19. eScience 2023 Conference, Limassol, Cyprus   *Oct 2023*
Building Lightweight Semantic Search Engines

18. Scottish Argumentation Day, University of Aberdeen, Aberdeen, UK   *Jun 2016*
The Future of Argumentation?

17. SICSA Mobility in the Future Workshop, University of Edinburgh, Edinburgh   *May 2016*
No Passenger Left Behind? Smart urban transportation between aggregation & personalisation

16. SICSA Transportation Workshop, University of Stirling, Stirling, UK   *Jan 2015*
Travelling collectives: The human side of transportation modelling

15. MFSC Workshop at AAMAS 2015, Istanbul, Turkey   *May 2015*
Agent Protocols for Social Computation

14. AAMAS 2014, Paris, France   *May 2014*
Multiagent Systems for Social Computation

13. Computer-Mediated Social Sense-Making Workshop, Edinburgh   *Feb 2013*
Challenges for Formal Modelling in Computer-Mediated Social Sense-Making

12. AAMAS 2007, Honolulu, Hawaii   *May 2007*
A Framework for Agent-Based Distributed Machine Learning and Data Mining

11. AAMAS 2007, Honolulu, Hawaii   *May 2007*
Dynamic Semantics for Agent Communication Languages

10. ArgMAS 2005 Workshop at AAMAS 2005, Utrecht, The Netherlands   *Jul 2005*
Adaptive Strategies for Practical Argument-Based Negotiation

9. MATES 2003 Conference, Erfurt, Germany   *Sep 2003*
Indicators for Self-Diagnosis: Communication-based Performance Measures

8. AAMAS 2003 Conference, Melbourne, Australia   *July 2003*
Interaction is Meaning: A New Model for Communication in Open Systems

7. ESAW 2002 Conference, Madrid, Spain   *Sep 2002*
A Schema for Specifying Computational Autonomy

6. AAMAS 2002 Conference, Bologna, Italy   *Jul 2002*
An Approach to the Analysis and Design of Multiagent Systems Based on Interaction Frames

5. AAAI Spring Symposium on Collaborative Learning Agents, Stanford, CA   *Mar 2002*
Social Complexity Reduction in Multiagent Learning: The Ad Hoc Approach

4. AOSE 2001 Workshop at Agents'01 Conference, Montreal, Canada   *May 2001*
Expectation-oriented analysis and design

3. ICMAS 2000 Conference, Boston, MA   *Jul 2000*
Hierarchical common-sense interaction learning

2. IJCAI 1999 Learning About, From and With Other Agents Workshop, Stockholm   *Aug 1999*
Learning from and about other agents in terms of social metaphors

1. IJCAI 1999 Learning About, From and With Other Agents Workshop, Stockholm   *Aug 1999*
Learning Cooperation in Repeated Games

Participation in Discussion Panels

21. The Impact of AI, Asia Scotland Institute, online *Sep 2023*
Panel on future predictions and opportunities around AI

20. AI – Human By Design, Women in Banking and Finance, Edinburgh *Sep 2023*
Panel on AI challenges and opportunities

19. Scottish AI Summit, Edinburgh *Mar 2022*
Panel discussion on responsible research and innovation

18. CMA Regulation of Digital Markets Event, online *Jan 2022*
Panel on recent developments and challenges in the regulation of digital markets

17. Cisco Higher Education Campaign Launch Event, online *May 2021*
Panel on challenges for higher education during the pandemic and the role of technology

16. Operationalising AI Ethics, The Algo2020 Conference, online *Oct 2020*
Panel on the challenges of making ethical requirements for AI concrete

15. Is Consent Broken?, DMA Webinar, online *May 2020*
Panel on problems around consent in online platforms

14. To Err is Machine, We Need to Talk About AI Talks, Edinburgh *Nov 2019*
Panel on failures and biases in AI

13. Dark Data: Bias, Trust, and Inclusion, Beyond Conference, Edinburgh *Nov 2019*
Panel on ethical issues around data at creative industries conference

12. Fairness, Data, and Ethics, Royal Bank of Scotland Data Fest *Nov 2019*
Panel on ethical issues at industry event

11. Competition and Markets Authority Consumer Detriment Symposium, Edinburgh *Sep 2019*
Panel of Digital Markets and Consumer Welfare

10. Canada-UK-France Trilateral AI Ethics Workshop, London *Jun 2019*
Panel on Fairness in AI

9. CyberUK 2019 Conference, Glasgow *Apr 2019*
Panel on Ethical Implications of AI

8. Digital Cities 2018 Edinburgh and Southeast Scotland Conference, Edinburgh *Mar 2019*
Panel on the Data-Driven Innovation Programme

7. UNICA Seminar on Research Policies and Urban Challenges, Brussels, Belgium *Feb 2019*
Panel on University & Urban Challenges

6. ICAEW Futures Salon on Professionalism and AI, Edinburgh, United Kingdom *Sep 2017*
Panel on the impact of AI on accountancy

5. Anthrobotics Workshop, Edinburgh, United Kingdom *Mar 2016*
Panel on "Are we becoming Anthrobots?"

4. Agent Verification Workshop, Liverpool, United Kingdom *Sep 2015*
Panel on Challenges in Agent Verification

3. IFIP Summer School on Privacy and Identity Management, Edinburgh *Aug 2015*
Panel on Privacy and Ethics: The SmartSociety Initiative and its Challenges

2. ICT Days Trento, Italy *Mar 2015*
Panel on Promises and Risks of Social Computation

1. HAIDM 2014 Workshop at AAMAS 2014, Paris, France *May 2014*
Panel on Research Challenges in Human-Agent Decision Making

Media Appearances and Coverage

Should AI have a 'kill switch'? *Jan 2025*
Interviewed for episode of BBC Radio 4 series 'The Artificial Human'

The Future of AI, iSciFlyBy Podcast *Jan 2023*
Extended podcast interview on future of AI

It all adds up at the Bayes Centre, FutureScot *Apr 2022*
Interview feature in Scottish tech publication

Towards a Vision for Next-Generation AI, Scotland AI Strategy *Mar 2022*
Podcast on new directions for AI

Edinburgh's flourishing thanks to AI (in French), RTS Swiss Radio *Feb 2022*
Interview to major Swiss broadcaster

With an AI to the Future, Edinburgh Impact *Jan 2022*
Extended feature on AI Strategy on the University's Impact web site

Building Scotland's AI powerhouse – brick by brick, The Scotsman *May 2021*
Article on Scotland's AI Strategy and the role of innovation hubs in its delivery

An AI masters the video game StarCraft II, Nature Podcast *Oct 2019*
Appearance on podcast as expert commenting on new advances in game-playing AI

Brainwaves: Love, Life, and Algorithms, BBC Scotland *Feb 2019*
Appeared on radio programme as expert on algorithm ethics

What are the future trends for AI in business?, IDG Connect *Nov 2017*
Interview on the importance of AI for business

We need to talk about Wall-E, The Times (Scottish Edition) *Mar 2017*
Coverage of our work in the Anthrobotics Initiative

Fundamentals of Collective Adaptive Systems Online Reading Room *Apr 2015*
Learning to Speak the Language of Collectives (article)

Khaleej Times, Dubai (reprinted at ACM TechNews) *Oct 2005*
A Matter of Artificial Intelligence (interview on the future of AI)

Publications

Theses

[1] M. Rovatsos. *Computational Interaction Frames*. PhD thesis, Department of Informatics, Technical University of Munich, 2004

[2] M. Rovatsos. LAYLA – An InteRRaP Extension for Layered Learning in Repeated Games. Diploma Thesis, Department of Informatics, Universität des Saarlandes, Saarbruecken, Germany, 1999

Edited Volumes and Proceedings

[1] M. Rovatsos, G. Vouros, and V. Julian, editors. *Multi-Agent Systems and Agreement Technologies. 13th European Conference, EUMAS 2015, and Third International Conference, AT 2015, Athens, Greece, December 17-18, 2015, Revised Selected Papers*, volume 9571 of *LNAI*. Springer International Publishing, 2016

[2] D. Miorandi, V. Maltese, M. Rovatsos, A. Nijholt, and J. Stewart, editors. *Social Collective Intelligence. Combining the Powers of Humans and Machines to Build a Smarter Society*. Computational Social Sciences Series. Springer-Verlag, 2014

[3] M. Klusch, M. Rovatsos, and T. Payne, editors. *Cooperative Information Agents X (CIA 2006), Tenth International Workshop, Edinburgh, UK, 11th-13th September*, volume 4149 of *Lecture Notes in Computer Science*. Springer-Verlag, Berlin, Germany, 2006

[4] M. Nickles, M. Rovatsos, and G. Weiss, editors. *Agents and Computational Autonomy - Potentials, Risks and Solutions. Postproceedings of the First International Workshop (AUTONOMY 2003), July 14, 2003, Melbourne, Australia*, volume 2969 of *Lecture Notes in Computer Science*. Springer-Verlag, 2004

Invited Book Chapters

[1] M. Rovatsos. Anticipatory Artificial Intelligence. In R. Poli, editor, *Handbook of Anticipation*. Springer International, 2017

[2] M. Rovatsos, D. Diochnos, and M. Craciun. Agent Protocols for Social Computation. In *Advances in Social Computing and Multiagent Systems*, volume 541 of *CCIS*, pages 94–111. Springer International, 2015

[3] M. Rovatsos, I. Rahwan, F. Fischer, and G. Weiss. Practical Strategic Reasoning and Adaptation in Rational Argument-Based Negotiation. In S. Parsons, N. Maudet, P. Moraitis, and I. Rahwan, editors, *Argumentation in Multi-Agent Systems II*, volume 4049 of *Lecture Notes in Computer Science*, pages 122–137. Springer-Verlag, Berlin, Germany, 2006

[4] F. Fischer, M. Rovatsos, and G. Weiss. Adaptiveness in agent communication: Application and adaptation of conversation patterns. In R. van Eijk, R. Flores, and M.-P. Huget, editors, *Agent Communication*, volume 3859 of *Lecture Notes in Computer Science*, pages 211–226. Springer-Verlag, Berlin, Germany, 2006

[5] M. Nickles, M. Rovatsos, W. Brauer, and G. Weiß. Communication Systems: A Unified Model of Socially Intelligent Systems. In K. Fischer, M. Florian, and T. Malsch, editors, *Socionics: Scalability of Complex Social Systems*, volume 3413 of *Lecture Notes in Artificial Intelligence*, pages 289–313. Springer-Verlag, Berlin, Germany, 2005

[6] M. Rovatsos and K. Paetow. On the Organisation of Social Experience: Scaling up Social Cognition. In K. Fischer, M. Florian, and T. Malsch, editors, *Socionics: Scalability of Complex Social Systems*, volume 3413 of *Lecture Notes in Artificial Intelligence*, pages 155–175. Springer-Verlag, Berlin, Germany, 2005

[7] M. Rovatsos and G. Weiß. Autonomous Software. In S. K. Chang, editor, *Handbook of Software Engineering and Knowledge Engineering. Volume 3: Recent Advances*, pages 63–84. World Scientific Publishing, River Edge, NJ, 2005

[8] M. Rovatsos, M. Nickles, and G. Weiss. An Empirical Model of Communication in Multiagent Systems. In F. Dignum, editor, *Advances in Agent Communication*, volume 2922 of *Lecture Notes in Artificial Intelligence*, pages 18–36. Springer-Verlag, Berlin, Germany, 2004

[9] M. Rovatsos, G. Weiß, and M. Wolf. Multiagent Learning for Open Systems: A Study in Opponent Classification. In E. Alonso, D. Kazakov, and D. Kudenko, editors, *Adaptive Agents and Multi-Agent Systems*, volume 2636 of *Lecture Notes in Artificial Intelligence*, pages 66–87. Springer-Verlag, Berlin, Germany, 2003

Refereed Journals

[1] J. Zhao, M. Patel, P. Inglesant, V. Portillo, H. Webb, L. Dowthwaite, P. Fiddi, B. Legastelois, E. Perez Vallejos, M. Rovatsos, and M. Jirotka. Navigating the labyrinth of RI through a practical application – A case study in a cross-disciplinary research project. *Journal of Responsible Technology*, 15, 2023

[2] G. Ogunniye, B. Legastelois, M. Rovatsos, L. Dowthwaite, V. Portillo, E. Perez Vallejos, J. Zhao, and M. Jirotka. Understanding User Perceptions of Trustworthiness in E-recruitment Systems. *IEEE Internet Computing*, 2021. in press

[3] H. Webb, M. Patel, M. Rovatsos, A. Davoust, S. Ceppi, A. Koene, L. Dowthwaite, V. Portillo, M. Jirotka, and M. Cano. It would be pretty immoral to choose a random algorithm: Opening up algorithmic interpretability and transparency. *Journal of Information, Communication and Ethics in Society*, 17(2):210–228, 2019

[4] M. Rovatsos, D. Gromann, and G. Bella. The Taboo Challenge Competition. *AI Magazine*, 39(1):84–87, 2018

[5] O. Scekic, T. Schiavinotto, S. Videnov, M. Rovatsos, H. Truong, D. Miorandi, and S. Dustdar. A Programming Model for Hybrid Collaborative Adaptive Systems. *IEEE Transactions on Emerging Topics in Computing*, 8(1):6–19, 2020

[6] Z. Wen, R. Yang, P. Garraghan, T. Lin, J. Xu, and M. Rovatsos. Fog Orchestration for IoT Services: Issues, Challenges and Directions. *IEEE Internet Computing*, 21(2):16–24, March/April 2017

[7] A. White, A. Tate, and M. Rovatsos. Improving Plan Execution Robustness through Capability Aware Maintenance of Plans by BDI Agents. *International Journal of Agent-Oriented Software Engineering*, 5(4):306–335, 2017

[8] J. Such and M. Rovatsos. Privacy Policy Negotiation in Social Media. *ACM Transactions on Autonomous and Adaptive Systems*, 11(1):4:1–4:29, 2016

[9] J. Hrncir, M. Rovatsos, and M. Jakob. Ridesharing on timetabled transport services: A multiagent planning approach. *Journal of Intelligent Transportation Systems*, 19:89–105, 2015

[10] I. Wallace and M. Rovatsos. A Computational Framework for Practical Social Reasoning. *Computational Intelligence*, 31:69–105, 2015

[11] E. Serrano, M. Rovatsos, and J. Botia. Data Mining Agent Conversations: A Qualitative Approach to Multiagent Systems Analysis. *Information Sciences*, 230:132–146, 2013

[12] A. Manataki, Y. Chen-Burger, and M. Rovatsos. SCOlog: A logic-based approach to analysing supply chain operation dynamics. *Expert Systems with Applications*, 41:23–38, 2014

[13] J. Tožička, M. Rovatsos, M. Pěchouček, and Štěpán Urban. MALEF: Framework for distributed machine learning and data mining. *International Journal on Intelligent Information and Database Systems*, 2(1):6–24, 2008

[14] M. Nickles, M. Rovatsos, M. Schmitt, W. Brauer, F. Fischer, T. Malsch, K. Paetow, and G. Weiss. The Empirical Semantics Approach to Communication Structure Learning and Usage: Individualistic vs. Systemic Views. *Journal of Artificial Societies and Social Simulation*, 10(1), 2007. (online journal)

[15] G. Weiß, M. Nickles, M. Rovatsos, and F. Fischer. Specifying the Intertwining of Cooperation and Autonomy in Agent-based Systems. *Journal of Networks and Computer Applications*, 30:1196–1215, August 2007

[16] M. Nickles, M. Rovatsos, and G. Weiss. Expectation-oriented modeling. *Engineering Applications of Artificial Intelligence*, 18(8):891–918, 2005

[17] F. Fischer and M. Rovatsos. An Empirical Semantics Approach to Reasoning About Communication. *Engineering Applications of Artificial Intelligence*, 18(4):809–823, 2005. Special Issue on Best Papers of CIA 2004

[18] M. Nickles, M. Rovatsos, W. Brauer, and G. Weiss. Towards a Unified Model of Sociality in Multiagent Systems. *International Journal of Computer and Information Science*, 5(2):73–88, 2004

[19] G. Weiß, J. Duscher, M. Nickles, and M. Rovatsos. Spezifikation von Softwareautonomie. *Künstliche Intelligenz*, 18(4):44–50, 2004. (Article in the German AI Journal, English title "Specification of software autonomy".)

[20] M. Schillo, M. Rovatsos, and P. Funk. Using trust for detecting deceitful agents in artificial societies. *Applied Artificial Intelligence*, 14(8):825–849, 2000

Refereed Conferences

[1] D. Kekulluoglu, M. Rovatsos, and N. Kokciyan. Answerable Sociotechnical Systems (demonstration paper). In *Proceedings of the 27th European Conference on Artificial Intelligence (ECAI 2024)*, Santiago de Compostela, Spain, 19-24 October, 2024

[2] D. Kekulluoglu, L. Hatherall, N. Sethi, T. Vierkant, S. Vallor, N. Kokciyan, and M. Rovatsos. Answerability by design in sociotechnical systems. In *Proceedings of the 26th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW-23)*, Minneapolis, USA, October 14-18, 2023

[3] M. Rovatsos and R. Filgueira. Building Lightweight Semantic Search Engines. In *Proceedings of the IEEE International Conference on eScience (eScience 2023)*, Limassol, Cyprus, October 9-13, 2023

[4] C. Barale, M. Rovatsos, and N. Bhuta. Automated Refugee Case Analysis: An NLP Pipeline for Supporting Legal Practitioners. In *Findings of ACL 2023, Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL 2023)*, 2023

[5] L. Hatherall, D. Kekulluoglu, N. Kokciyan, M. Rovatsos, N. Sethi, T. Vierkant, and S. Vallor. Responsible Agency Through Answerability: Cultivating the Moral Ecology of Trustworthy Autonomous Systems. In *Proceedings of the International Symposium on Trustworthy Autonomous Systems (TAS 2023)*, 2023

[6] A. Davoust and M. Rovatsos. Social Contracts for Non-cooperative Games. In *Proceedings of the Third AAAI/ACM Conference on Artificial Intelligencs, Ethics, and Society (AIES 2020)*, New York, NY, February 7-8, 2020

[7] H. Webb, A. Davoust, M. Rovatsos, M. Patel, A. Koene, and M. Jirotka. A Responsive Engagement Approach to Promote the Development of 'Fairer' Algorithms. In *Proceedings of the European Conference on the Impact of Artificial Intelligence and Robotics (ECIAIR 2019)*, Oxford, UK, October 31-November 1, 2019

[8] M. Patel, H. Webb, M. Jirotka, A. Davoust, R. Gales, M. Rovatsos, and A. Koene. Harnessing Interdisciplinarity to Promote the Ethical Design of AI Systems. In *Proceedings of the European Conference on the Impact of Artificial Intelligence and Robotics (ECIAIR 2019)*, Oxford, UK, October 31-November 1, 2019

[9] M. Rovatsos, D. Diochnos, Z. Wen, S. Ceppi, and P. Andreadis. SmartOrch: An Adaptive Orchestration System for Human-Machine Collectives. In *Proceedings of the Special Track on Collective Adaptive Systems and Middleware of the 32nd ACM Symposium on Applied Computing (SAC2017)*, pages 37–44, Marrakech, Morocco, 2017

[10] Luis de Miranda, Subramanian Ramamoorthy, and Michael Rovatsos. We, Anthrobot: Learning From Human Forms of Interaction and Esprit de Corps to Develop More Plural Social Robotics. In J. Seibt, M. Norskov, and S. Schack Andersen, editors, *What Social Robots Can and Should Do? Proceedings of the Robophilosophy 2016 / TRANSOR 2016 Conference*, volume 290 of *Frontiers in Artificial Intelligence and Applications*, pages 48–59, Aarhus, Denmark, October 17-21, 2016

[11] A. White, A. Tate, and M. Rovatsos. CAMP-BDI: A Pre-emptive Approach for Plan Execution Robustness in Multiagent Systems. In *Proceedings of the 18th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2015)*, pages 65–84, Bertinoro, Italy, 26-30 October, 2015

[12] O. Scekic, T. Schiavinotto, D. I. Diochnos, M. Rovatsos, H. Truong, I. Carreras, and S. Dustdar. Programming Model Elements for Hybrid Collaborative Adaptive Systems. In *Proceedings of the 1st IEEE International Conference on Collaboration and Internet Computing (CIC 2015)*, pages 278–287, Hangzhou, China, 2015

[13] O. Scekic, D. Miorandi, T. Schiavinotto, D. I. Diochnos, A. Hume, R. Chenu-Abente, H. Truong, M. Rovatsos, I. Carreras, S. Dustdar, and F. Giunchiglia. Smartsociety – A Platform for Collaborative People-Machine Computation. In *Proceedings of the 8th IEEE International Conference on Service Oriented Computing & Applications (SOCA 2015)*, pages 147–154, Rome, Italy, 2015

[14] M. Crosby, A. Jonsson, and M. Rovatsos. A single-agent approach to multiagent planning. In *Proceedings of the 21st European Conference on Artificial Intelligence (ECAI 2014)*, pages 237–242, Prague, Czech Republic, August 14-18, 2014

[15] M. Rovatsos. Multiagent Systems for Social Computation. In A. Lomuscio, P. Scerri, A. Bazzan, and M. Huhns, editors, *Proceedings of the 13th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2014)*, pages 1165–1168, Paris, France, 5th-9th May, 2014

[16] M. Crosby, M. Rovatsos, and R. Petrick. Automated Agent Decomposition for Classical Planning. In *Proceedings of the 23rd International Conference on Automated Planning and Scheduling (ICAPS 2013)*, pages 46–54, Rome, Italy, June 10-14, 2013

[17] E. Serrano, M. Rovatsos, and J. Botia. A Qualitative Reputation System for Multiagent Systems with Protocol-Based Communication. In V. Conitzer, M. Winikoff, L. Padgham, and V. van der Hoek, editors, *Proceedings of the Eleventh International Conference on Autonomous Agents Multiagent Systems (AAMAS 2012)*, pages 307–314, Valencia, Spain, June 4-8, 2012

[18] A. Jonsson and M. Rovatsos. Scaling Up Multiagent Planning: A Best-Response Approach. In *Proceedings of the 21st International Conference on Automated Planning and Scheduling (ICAPS 2011)*, pages 114–121, Freiburg, Germany, June 11-16, 2011

[19] A. Manataki, Y.-H. Chen-Burger, and M. Rovatsos. Improving the understanding of supply chain dynamics: Towards an intelligent simulation tool. In *Proceedings of the 17th Conference of the European Operations Management Association (EurOMA 2010)*, Porto, Portugal, 6-9 June, 2010

[20] A. Manataki, Y.-H. Chen-Burger, and M. Rovatsos. Towards Improving Supply Chain Coordination through Agent-Based Simulation. In Yves Demazeau, Frank Dignum, Juan M. Corchado, Javier Bajo, Rafael Corchuelo, Emilio Corchado, Florentino Fernández-Riverola, Vicente J. Julián, Pawel Pawlewski, and Andrew Campbell, editors, *Proceedings of the Eighth International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS 2010)*, volume 71 of *Advances in Intelligent and Soft Computing*, pages 217–224, Salamanca, Spain, 26th-28th April, 2010. Springer-Verlag, Berlin

[21] G. Christelis, M. Rovatsos, and R. Petrick. Exploiting Domain Knowledge to Improve Norm Synthesis. In Wiebe van der Hoek, Gal A. Kaminka, Yves Lespérance, Michael Luck, and Sandip Sen, editors, *Proceedings of the Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2010)*, pages 831–838, Toronto, Canada, May 10-14, 2010

[22] P. Martin, D. Robertson, and M. Rovatsos. Opportunistic Belief Reconciliation During Distributed Interactions. In Wiebe van der Hoek, Gal A. Kaminka, Yves Lespérance, Michael Luck, and Sandip Sen, editors, *Proceedings of the Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2010)*, pages 433–440, Toronto, Canada, May 10-14, 2010

[23] A. Belesiotis, M. Rovatsos, and I. Rahwan. Agreeing on Plans Through Iterated Disputes. In Wiebe van der Hoek, Gal A. Kaminka, Yves Lespérance, Michael Luck, and Sandip Sen, editors, *Proceedings of the Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2010)*, pages 765–772, Toronto, Canada, May 10-14, 2010

[24] X. R. Palou, M. Rovatsos, M. Mier Perez, and M. Lluch-Ariet. Collaborative Agent-Based Learning for Brain Tumor Diagnosis. In *Proceedings of the Twelfth International Congress of the Catalan Association of Artificial Intelligence (CCIA 2009)*, Cardona, Spain, 2009

[25] I. Wallace and M. Rovatsos. Bounded Social Reasoning in the ESB Framework. In S. Decker, J. Sichman, C. Sierra, and C. Castelfranchi, editors, *Proceedings of the Eighth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009)*, pages 1097–1104, May 10-15, Budapest, Hungary, 2009

[26] G. Christelis and M. Rovatsos. Automated Norm Synthesis in an Agent-Based Planning Environment. In S. Decker, J. Sichman, C. Sierra, and C. Castelfranchi, editors, *Proceedings of the Eighth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009)*, pages 161–168, May 10-15, Budapest, Hungary, 2009

[27] Jan Tožička, M. Rovatsos, and M. Pěchouček. A Framework for Agent-Based Distributed Machine Learning and Data Mining. In Edmund H. Durfee, Makoto Yokoo, Michael N. Huhns, and Onn Shehory, editors, *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2007)*, pages 96–103, Honolulu, Hawaii, May 14–18, 2007

[28] M. Rovatsos. Dynamic Semantics for Agent Communication Languages. In Edmund H. Durfee, Makoto Yokoo, Michael N. Huhns, and Onn Shehory, editors, *Proceedings of the 6th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2007)*, pages 100–107, Honolulu, Hawaii, May 14–18, 2007

[29] F. Fischer, M. Rovatsos, and G. Weiß. Acquiring and Adapting Probabilistic Models of Agent Conversations. In Frank Dignum, Virginia Dignum, Sven Koenig, Sarit Kraus, Munindar P. Singh, and Michael Wooldridge, editors, *Proceedings of the Fourth International Joint Conference on Agents and Multiagent Systems (AAMAS 2005)*, pages 106–113, Utrecht, The Netherlands, 2005

[30] M. Nickles, M. Rovatsos, and G. Weiss. Empirical-Rational Semantics of Agent Communication. In N. Jennings, C. Sierra, L. Sonenberg, and M. Tambe, editors, *Proceedings of the Third International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2004)*, pages 94–101, New York, NY, 2004

[31] M. Nickles, M. Rovatsos, W. Brauer, and G. Weiss. Towards a Unified Model of Sociality in Multiagent Systems. In W. Dosch and R. Y. Lee, editors, *Proceedings of the ACIS Fourth International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2003), October 16-18, 2003, Lübeck, Germany*, pages 177–187, 2003

[32] M. Rovatsos, M. Schillo, K. Fischer, and G. Weiss. Indicators for Self-Diagnosis: Communication-based Performance Measures. In M. Schillo, M. Klusch, J. Müller, and H. Tianfield, editors, *Proceedings of the First German Conference on Multiagent System Technologies (MATES 2003), Sep 22-25, 2003, Erfurt, Germany*, volume 2831 of *Lecture Notes in Artificial Intelligence*, pages 25–37, Berlin, Germany, 2003. Springer-Verlag

[33] G. Weiß, M. Rovatsos, M. Nickles, and C. Meindl. Capturing Agent Autonomy in Roles and XML. In J. S. Rosenschein, T. Sandholm, M. Wooldridge, and M. Yokoo, editors, *Proceedings of the Second International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2003)*, pages 105–112, Melbourne, Australia, 2003

[34] M. Rovatsos, M. Nickles, and G. Weiß. Interaction is Meaning: A New Model for Communication in Open Systems. In J. S. Rosenschein, T. Sandholm, M. Wooldridge, and M. Yokoo, editors, *Proceedings of the Second International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2003)*, pages 536–543, Melbourne, Australia, 2003

[35] M. Rovatsos, G. Weiß, and M. Wolf. An Approach to the Analysis and Design of Multiagent Systems based on Interaction Frames. In Maria Gini, Toru Ishida, Cristiano Castelfranchi, and W. Lewis Johnson, editors, *Proceedings of the First International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2002)*, pages 682–689, Bologna, Italy, 2002. ACM Press

[36] M. Rovatsos and J. Lind. Hierarchical common-sense interaction learning. In E. H. Durfee, editor, *Proceedings of the Fifth International Conference on Multi-Agent Systems (ICMAS 2000)*, pages 239–246, Boston, MA, 2000. IEEE Computer Society Press

Refereed Workshops and Symposia

[1] P. Schneider, W. Poelman, M. Rovatsos, and F. Matthes. Engineering Conversational Search Systems: A Review of Applications, Architectures, and Functional Components. In *Proceedings of the NLP for Conversational AI (NLP4ConvAI) Workshop at ACL 2024*, Bangkok, Thailand, 16th August, 2024

[2] C. Barale, M. Klaisoongnoen, P. Minervini, M. Rovatsos, and N. Bhuta. AsyLex: A Dataset for Legal Language Processing of Refugee Claims. In *Proceedings of the Fourth Natural Legal Language Processing Workshop (NLLP 23)*, Singapore, 2023

[3] C. Barale, M. Rovatsos, and N. Bhuta. Do Language Models Learn about Legal Entity Types during Pretraining? In *Proceedings of the Fourth Natural Legal Language Processing Workshop (NLLP 23)*, Singapore, 2023

[4] P. Andreadis, S. Ceppi, M. Rovatsos, and S. Ramamoorthy. Diversity-Aware Recommendation for Human Collectives. In *Proceedings of the 1st International Workshop on Diversity-Aware Artificial Intelligence (DIVERSITY 2016)*, The Hague, The Netherlands, 2016

[5] M. Anslow and M. Rovatsos. Aligning Experientially Grounded Ontologies using Language Games. In *Graph Structures for Knowledge Representation and Reasoning, 4th International Workshop, GKR 2015, Buenos Aires, Argentina, July 25, 2015, Revised Selected Papers*, volume 9501 of *Lecture Notes in Artificial Intelligence*, pages 15–31, Switzerland, 2015. Springer International Publishing

[6] T. Marques and M. Rovatsos. Toward Domain-Independent Dialogue Planning. In *Fourth International Workshop on Human-Agent Interaction Design and Models (HAIDM 2015)*, Istanbul, Turkey, 4th May, 2015

[7] E. Serrano, M. Rovatsos, and J. Botia. An Approach for the Qualitative Analysis of Open Agent Conversations. In *Proceedings of the Third International Workshop on Infrastructures and Tools for Multiagent Systems (ITMAS 2012)*, Valencia, Spain, 2012

[8] A. Maghraby, D. Robertson, A. Grando, and M. Rovatsos. Bridging the specification protocol gap in argumentation. In *Proceedings of the Ninth International Workshop on Argumentation in Multi-Agent Systems (ArgMAS 2012)*, Valencia, Spain, June 2012

[9] J. Hrncir and M. Rovatsos. Applying strategic multiagent planning to real-world travel sharing problems. In *Proceedings of the 7th International Workshop on Agents in Traffic and Transportation (ATT 2012)*, Valencia, Spain, June 5, 2012

[10] E. Klein and M. Rovatsos. Temporal Vagueness, Coordination and Communication. In *Vagueness in Communication (ViC 2009), July 20-24, 2009, Bordeaux, France. Revised Selected Papers*, volume 6517 of *Lecture Notes in Artificial Intelligence*, pages 108–126, Berlin, 2011. Springer-Verlag

[11] I. Wallace and M. Rovatsos. Executing Specifications of Social Reasoning Agents. In *Proceedings of the Eighth International on Declarative Agent Languages and Technologies (DALT 2010), May 12th/13th, Toronto, Canada*, 2010

[12] A. Belesiotis, M. Rovatsos, and I. Rahwan. A Generative Dialogue System for Arguing about Plans in Situation Calculus. In P. MacBurney, S. Parsons, I. Rahwan, and N. Maudet, editors, *Proceedings of the Sixth International Workshop on Argumentation in Multi-Agent Systems (ArgMAS 2009)*, volume 6057 of *Lecture Notes in Computer Science*, Berlin, 2010. Springer-Verlag

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