

ŞTEFAN SARKADI

PhD Candidate in Artificial Intelligence

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📍 London, UK

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RESEARCH EXPERIENCE

PhD Research

King's College London, Dept. of Informatics

📅 Oct 2016 – Present

📍 London, UK

- Research, design, implementation and evaluation of Multi-Agent Systems using Agent-Based Modelling techniques.
- Engineering of agent architectures and communication protocols using Knowledge Engineering techniques.
- Extensive interdisciplinary research on the topic of machine deception using a holistic approach covering literature from Psychology, Philosophy, Sociology, Economics, Neuroscience and Communication Theory.

Visiting PhD Research

MIT, Media Lab

📅 Jul 2018 – Oct 2018

📍 Cambridge, MA

- Research, design, implementation and evaluation of evolutionary game-theoretical models of agents.
- Development of evolutionary models using high-level cognitive architectures to promote cooperation and ethical behaviour in agent societies.

Research Assistant

King's College London, Dept. of Informatics

📅 Sep 2015 – Sep 2016

📍 London, UK

- Research on the feasibility of applying Blockchain technology for Nuclear Non-Proliferation.
- Big Data analysis of wheat market data for the development of market behaviour models.

TEACHING EXPERIENCE

Associate Fellow

The Higher Education Academy UK

📅 2019 - present

📍 UK

Graduate Teaching Assistant

King's College London, Dept. of Informatics

📅 Sep 2016 – Present

📍 London, UK

- Taught small group tutorials of 10-15 undergraduate students for: Introduction to Artificial Intelligence; Elementary Logic and Applications.
- Taught large group tutorials of 100 - 400 undergraduate and postgraduate students for: Artificial Intelligence.
- Taught and supervised lab practicals of 30-50 undergraduate and postgraduate students for: Artificial Intelligence; Machine Learning; Computer Programming for Data Science.

RESEARCH INTERESTS

- Modelling ethical and unethical AI.
- Modelling of complex cognitive agents.
- Cyber-threats of malicious AI.
- Ethical implications of malicious AI in society.

MAIN PROJECTS

Deceptive Machines

- This is my main project; it looks into the ways in which we can model, design and engineer machines that can deceive and that can detect deception. The short-term aim of this project is to model deceptive interactions between artificial agents. The long-term aim of this project is to understand how to prevent and mitigate the malicious behaviour of machines that, in the future, might develop their own reasons to deceive.

Artificial Theory of Mind

- This project, which is closely tied to the one mentioned above, looks into the ability of artificial agents to model the minds of other agents (human or artificial). This ability enables machines to deceive by manipulating the beliefs of their targets. The aim of this project is to understand how machines might form Theories-of-Mind of their targets through communication.

Machine Behaviour & Society

- This project looks into how machines that exhibit unethical behaviour, such as deception, impact society. Some questions this project aims to answer are: What are the ethical implications of deceptive machines? Is there ethical machine deception? What forms can machine deception take in society? Are Computer Science techniques appropriate for the study of machine deception, or any other type of machine behaviour?

AWARDS & GRANTS

- Nominated for KCL Dept. of Informatics *Outstanding Teaching Assistant Award* 2018/2019.
- Two *Best Early Researcher Paper* nominations at the AT&EUMAS 2018 conferences.
- *Graduate Visiting Researcher Funding*, MIT Media Lab (2018).
- *Conference Travel Grant for IJCAI '18*, Artificial Intelligence Journal (2018).
- *NMS Faculty Studentship Scheme*, King's College London (2018-2020).
- *Graduate Teaching Studentship*, King's College London (2016-2018).
- *Academic Performance Scholarship*, West University of Timişoara (2012-2014).

TALKS & LECTURES

Deceptive Storytelling in Argumentation Games
Reasoning and Planning Group Seminar, King's College London

📅 May 2019

📍 London, UK

Deceptive Storytelling in Artificial Dialogue Games
AAAI Spring Symposium

📅 March 2019

📍 Stanford, California

Towards an Approach for Modelling Uncertain
Theory of Mind in Multi-Agent Systems

AT & EUMAS 2018 Joint Session

📅 Dec 2018

📍 Bergen, Norway

On the Formal Semantics of Theory of Mind in
Agent Communication

AT & EUMAS 2018 Joint Session

📅 Dec 2018

📍 Bergen, Norway

Lies, Bullshit and Deception in Agent-Oriented
Programming Languages

20th International TRUST Workshop @ IJCAI/AAMAS

📅 July 2018

📍 Stockholm, Sweden

Is Your AI Cheating on You?

Doctoral Consortium of IJCAI'18

📅 July 2018

📍 Stockholm, Sweden

Guest Lecture - Adv. Topics in CompSci Module
King's College London, Dept. of Informatics

📅 Nov 2017

📍 London, UK

Modelling Deception

Agents and Intelligent Systems PhD Symposium, King's
College London

📅 Aug 2017

📍 London, UK

Religion in the Public Cybersphere of Social Ma-
chines

COMSYMBOL 2016

📅 Nov 2016

📍 Montpellier, France

Guest Lecture - Psychology Module

West University of Timisoara, Faculty of Political Science,
Philosophy and Communication Sciences

📅 Jan 2016

📍 Timisoara, Romania

EDUCATION

Master of Science in Mind, Language,
and Embodied Cognition (Cognitive
Science)

The University of Edinburgh

📅 2014 - 2015

📍 Edinburgh, Scotland

Bachelor of Arts (with Hons.) in Phi-
losophy

West University of Timisoara

📅 2011 - 2014

📍 Timisoara, Romania

RESEARCH ACTIVITIES

1st International Workshop on Ex-
plainable Transparent Autonomous
Agent and Multi-Agent Systems

PC Member

📅 2019

7th Annual International Conference
on Human-Agent Interaction (HAI)

Reviewer

📅 2019

Argumentation Reading Group
King's College London

Co-Founding Member

📅 2016 - present

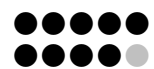
The Knowledge Engineering Review

Reviewer

📅 2016 - present

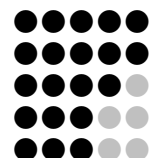
SKILLS

LateX
Python, R



LANGUAGE SKILLS

English
Romanian
German
French
Italian



PUBLICATIONS

Journal Articles

- Sarkadi, Stefan, Alison R. Panisson, Rafael H. Bordini, Peter McBurney, Simon Parsons, and Martin Chapman (2019). “Modelling Deception using Theory of Mind in Multi-Agent Systems”. In: *AI Communications*.

Conference Proceedings

- Sarkadi, Stefan, Peter McBurney, and Simon Parsons (2019). “Deceptive Storytelling in Artificial Dialogue Games”. In: *Proceedings of the AAAI 2019 Spring Symposium Series on Story-Enabled Intelligence*. In Press. Stanford, CA.
- Panisson, Alison R. et al. (2018a). “Lies, Bullshit, and Deception in Agent-Oriented Programming Languages”. In: *Proceedings of 20th International Trust Workshop (co-located with AAMAS/IJCAI/ECAI/ICML 2018)*. CEUR-WS. Stockholm, Sweden, pp. 50–61.
- – (2018b). “On the Formal Semantics of Theory of Mind in Agent Communication”. In: *6th International Conference on Agreement Technologies (co-located with EUMAS 2018)*. Bergen, Norway.
- Sarkadi, Stefan (2018). “Deception”. In: *Proceedings of the 27th International Joint Conference on Artificial Intelligence. IJCAI’18*. Stockholm, Sweden: AAAI Press, pp. 5781–5782.
- Sarkadi, Stefan, Alison R. Panisson, Rafael H. Bordini, Peter McBurney, and Simon Parsons (2018). “Towards an Approach for Modelling Uncertain Theory of Mind in Multi-Agent Systems”. In: *6th International Conference on Agreement Technologies (co-located with EUMAS 2018)*. Bergen, Norway.

Book Chapters

- Lobont, Florin and Ștefan Sarkadi (2016). “Religion in the public cybersphere of social machines”. In: *ComSymbol 2016: Religion(s), Laïcité(s) Et Société(s) Au Tournant Des Humanités Numériques*. Ed. by Mihaela-Alexandra Tudor and Stefan Bratosin.
- Sarkadi, Ștefan (2016). “Artificial Consciousness in an Artificial World”. In: *Communication Today: An Overview from Online Journalism to Applied Philosophy*. Ed. by M. Micle and C. Mesaroș, p. 777.