THOMAS ARCHBOLD

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BACKGROUND

I am a Ph.D. candidate at King's College London where I am part of the Distributed Artificial Intelligence group. My research interests are in algorithmic game theory and mechanism design, which lie at the intersection of theoretical computer science and economics, as well as optimisation, algorithms, and complexity theory.

EDUCATION

Ph.D. Computer Science, King's College London *2020-2024 (expected)*
Research interests: algorithmic game theory and mechanism design, bounded rationality, theoretical computer science.
Supervisor: Professor Carmine Ventre

MSc. Computer Science, University of Warwick *2019-2020*
Classification: Distinction
Dissertation title: *A Decentralised Peer-Prediction Market* (awarded distinction)

BSc. (Hons) Computer Science, University of Warwick *2016-2019*
Classification: 2-1
Dissertation title: *An Educational Kernel for the Raspberry Pi* (awarded first class)

PUBLICATIONS

Non-Obvious Manipulability in Extensive-Form Mechanisms: the Revelation Principle for Single-Parameter Agents
In *Proceedings of the 32nd International Joint Conference on Artificial Intelligence (IJCAI 2023).* *August 2023*
With Bart de Keijzer and Carmine Ventre.

Non-Obvious Manipulability for Single-Parameter Agents and Bilateral Trade *May 2023*
In *Proceedings of the 22nd International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2023).*
With Bart de Keijzer and Carmine Ventre.

EXPERIENCE

Graduate Teaching Assistant, King's College London *2021-present*
- 4CCS1DST Data Structures (2022/23, 2021/22)
- 4CCS1FC1 Foundations of Computing I (2022/23)
- 6CCS3AIN AI Reasoning and Decision Making (2022/23)
- 6CCS3OME Optimization Methods (2021/22, 2020/21)

Private Tutor *2020-present*
Deliver lessons for maths and computer science for GCSE up to undergraduate level.

Software Graphics Engineer Intern, Imagination Technologies, Kings Langley *Jul 2019-Sep 2019*
Worked with the PowerVR Vulkan driver team researching Google's ANGLE API to analyse its performance on the driver, and wrote OpenGLES and Vulkan programs to test specific areas of its functionality. Contributed driver code and discussed progress and plans in weekly team meetings.

ACADEMIC INVOLVEMENT

Seminar Organiser, King's College London *Jan 2021-present*
Organise the fortnightly seminar within the Distributed Artificial Intelligence research group, which involves contacting internal and external speakers to present talks and chairing the meetings.

Academic Service *May 2021-present*
Subreviewer for AAMAS 2023, SAGT 2022, ADT 2021.
Conference volunteer at the (virtual) ICALP 2021.

Presenter, International Conference for Undergraduate Research 2018 *Sep 2018*
Presented individual research project on "Cellular Automata and Computational Universality" at the ICUR. Produced an introductory primer on cellular automata and their applications plus visualisation software.

LANGUAGES AND SKILLS

Programming Languages Bash, C, Common Lisp, Python
Languages French (B2/upper intermediate), Russian (B1/intermediate)

WIDER ACTIVITIES AND ACHIEVEMENTS

King's Education Awards Nominee 2021

First XV Player of the Season, University of Warwick RFC 2019/20, 2018/19

UWRFC First XV, QE Boys Rugby First XV, QE Boys Cricket First XI 2016/17-20, 2013/14-17, 2015/16-17