

Andrew Cropper

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Education

- PhD Computer Science**, Imperial College London 2017
Supervisor: Professor Stephen Muggleton
Thesis: Efficiently learning efficient programs
- MSc Computer Science**, University of Oxford 2011
Supervisor: Dr Brian Harrington
Thesis: Predicting stock volume using Twitter
- BSc Computer Science**, Nottingham Trent University 2009
Graduated with first-class honours
Supervisor: Dr Caroline Langensiepen
Dissertation: Identifying and inferring objects from natural language

Employment

- Junior Research Fellow**, Hertford College, University of Oxford 2018 -
Working on inductive logic programming
- Research Assistant**, University of Cambridge 2013
Worked with Dr Eiko Yonkei on distributed graph algorithms
- Research Engineer**, MFG Labs, Paris, France 2012 - 2013
Designed large-scale distributed machine learning algorithms
- Software Engineer**, Esendex, Nottingham 2010
Developed analytical tools to monitor SMS traffic
- Software Engineer**, Counter Solutions, Derbyshire 2007 - 2008
Developed analytical tools to monitor servers

Research visits

- Massachusetts Institute of Technology 2016
Worked with Professor Josh Tenenbaum on program induction
- National Institute of Informatics, Tokyo, Japan 2014, 2015, 2017
Worked with Professor Katsumi Inoue on inductive logic programming

Awards

- Junior research fellowship, Hertford College, University of Oxford 2018
- *Machine Learning Journal* best student paper ILP 2014
- National Institute of Informatics international internship program 2014
- Syngenta fellowship 2013
- Full BBSRC PhD case studentship 2013

Publications

Journals

- A. Cropper and S.H. Muggleton. Learning efficient logic programs. *Machine learning journal*. To appear.

Conferences

- A. Cropper and S.H. Muggleton. Learning higher-order logic programs through abstraction and invention. In *Proceedings of the 25th International Joint Conference Artificial Intelligence (IJCAI 2016)*, pages 1418-1424. IJCAI, 2016.
- A. Cropper and S.H. Muggleton. Learning efficient logical robot strategies involving composable objects. In *Proceedings of the 24th International Joint Conference Artificial Intelligence (IJCAI 2015)*, pages 3423-3429. IJCAI, 2015.
- A. Cropper, A. Tamaddoni-Nezhad, and S.H. Muggleton. Meta-interpretive learning of data transformation programs. In *Proceedings of the 25th International Conference on Inductive Logic Programming (ILP2015)*, pages 46-59. Springer-Verlag, 2015. LNAI 9046.
- C. Farquhar, G. Grov, A. Cropper, S.H. Muggleton, and A. Bundy. Typed meta-interpretive learning for proof strategies. In *Late Breaking Papers of the 25th International Conference on Inductive Logic Programming*, pages 17-32, 2015.
- A. Cropper and S.H. Muggleton. Can predicate invention compensate for incomplete background knowledge? In *Thirteenth Scandinavian Conference on Artificial Intelligence - SCAI 2015*, Halmstad, Sweden, November 5-6, 2015, pp. 27-36.
- A. Cropper and S.H. Muggleton. Logical minimisation of meta-rules within meta-interpretive learning. In *Proceedings of the 24th International Conference on Inductive Logic Programming (ILP2014)*, pages 62-75. Springer-Verlag, 2015. LNAI 9046.

Workshops

- A. Cropper. Identifying and inferring objects from textual descriptions of scenes from books. In *2014 Imperial College Computing Student Workshop, ICCSW 2014*, September 25-26, 2014, London, United Kingdom, pp. 19-26.

Extended abstracts

- A. Cropper. Logic-based inductive synthesis of efficient programs. In *Proceedings of the 25th International Joint Conference Artificial Intelligence (IJCAI 2016)*, pages 3980-3981. IJCAI, 2016.
- A. Cropper. Learning efficient logic programs. In *Proceedings of the 24th International Joint Conference Artificial Intelligence (IJCAI 2015)*, pages 4359-4360. IJCAI, 2015.

Talks

- Learning efficient logic programs, *Workshop on approaches and Applications of inductive programming*, Dagstuhl, Germany, October 2017.
- Learning higher-order logic programs, *Workshop on approaches and Applications of inductive programming*, Dagstuhl, Germany, October 2017.
- Learning efficient logic programs, *Machine Intelligence 20 workshop on human-like computing*, London, UK, October 2016.
- Logic-based learning of programs from input/output examples, UC Berkeley, USA, July 2016.
- Metagol, *Workshop on approaches and Applications of inductive programming*, Dagstuhl, Germany, October 2015.
- Predicate invention in meta-interpretive learning, *Meeting on abductive and inductive reasoning*, Wakayama University, Japan, November 2014.