Andrew Cropper

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Department of Computing,
Imperial College London,
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London, SW7 2AZ

Education

PhD Computer Science, Imperial College London — 10/2013 -
Supervisor: Professor Stephen Muggleton
Thesis: Inductive learning of efficient logic programs

MSc Computer Science, University of Oxford — 10/2010 - 10/2011
Supervisor: Dr Brian Harrington
Thesis: Modelling stock volume using Twitter

BSc Computer Science, Nottingham Trent University — 10/2005 - 07/2009
Graduated with first-class honours
Supervisor: Dr Caroline Langensiepen
Dissertation: Identifying and inferring objects from natural language text

Experience

Visiting researcher, National Institute of Informatics, Tokyo, Japan — 08/2015 - 09/2015
Supervisor: Professor Katsumi Inoue

Research intern, National Institute of Informatics, Tokyo, Japan — 10/2014 - 12/2014
Supervisor: Professor Katsumi Inoue
Topic: Comparing meta-interpretive learning and meta-level abduction

Research Assistant, University of Cambridge — 07/2013 - 10/2013
Supervisor: Dr Eiko Yonkei
Topic: Distributed asynchronous graph algorithms

Research Engineer, MFG Labs, Paris, France — 01/2012 - 07/2013
Topic: Machine learning large (billions of edges) networks

Software Engineer, Esendex, Nottingham — 01/2010 - 10/2010
Topic: Developed analytical tools to monitor business SMS traffic

Software Engineer, Counter Solutions, Derbyshire — 06/2007 - 10/2008
Topic: Developed analytical tools to monitor database and web servers

Publications

Conferences

1. **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*, **ILP 2015**. To appear.
2. **A. Cropper** and S.H. Muggleton. Learning efficient logical robot strategies involving composable objects. In *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence*, **IJCAI 2015**, Buenos Aires, Argentina, July

25-31, 2015 (2015), pp. 3423-3429.

3. **A. Cropper**. Learning efficient logic programs. In *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence*, **IJCAI 2015**, Buenos Aires, Argentina, July 25-31, 2015 (2015), pp. 4359-4360.
4. **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 (2015), pp. 27-36.
5. **A. Cropper** and S.H. Muggleton. Logical minimisation of meta-rules within meta-interpretive learning. In *Inductive Logic Programming - 24th International Conference*, **ILP 2014**, Nancy, France, September 14-16, 2014, Revised Selected Papers (2014), pp. 62-75.

Workshops

1. C. Farquhar, G. Grov, **A. Cropper**, S.H. Muggleton, and A. Bundy. Typed meta-interpretive learning for proof strategies. *The 6th International Workshop on the use of AI in Formal Methods*, AI4FM 2015.
2. **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 (2014), pp. 19-26.

Awards and grants

- *Machine Learning Journal* best student paper — ILP 2014
- National Institute of Informatics international internship program — 10/2014 - 12/2014
- Syngenta fellowship — 10/2013 - 10/2017
- Full BBSRC PhD case studentship — 10/2013 - 10/2016

Talks

- Meta-interpretive learning of data transformation programs, The 25th International Conference on Inductive Logic Programming, Kyoto, Japan, 2015.
- Learning efficient logic programs, Doctoral Consortium of the International Joint Conference on Artificial Intelligence 2015, Buenos Aires, Argentina, 2015.
- Meta-interpretive learning normal logic programs, Meeting on meta-interpretive learning, Imperial College London, UK, 2015.
- Predicate invention in meta-interpretive learning, Meeting on abductive and inductive reasoning, Wakayama University, Japan, 2014.
- Can predicate invention in meta-interpretive learning compensate for incomplete background knowledge?, The 24th International Conference on Inductive Logic Programming, Nancy, France, 2014.

Professional services

Reviewing

- 2014 Imperial College Computing Student Workshop

Other

- IJCAI 2015 Student volunteer