# **Andrew Cropper**

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### **Education**

| PhD Computer Science, Imperial College London Supervisor: Professor Stephen Muggleton Thesis: Inductive learning of efficient logic programs   | 10/2013 -         |
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| MSc Computer Science, University of Oxford<br>Supervisor: Dr Brian Harrington<br>Thesis: Modelling stock volume using Twitter  | 10/2010 - 10/2011 |
| BSc Computer Science, Nottingham Trent University Graduated with first-class honours Supervisor: Dr Caroline Langensiepen Dissertation: Identifying and inferring objects from natural language text | 10/2005 - 07/2009 |
| Experience   |                   |

| Experience  |                   |
|---|-------------------|
| Visiting researcher, National Institute of Informatics, Tokyo, Japan<br>Supervisor: Professor Katsumi Inoue   | 08/2015 - 09/2015 |
| Research intern, National Institute of Informatics, Tokyo, Japan<br>Supervisor: Professor Katsumi Inoue<br>Topic: Comparing meta-interpretive learning and meta-level abduction | 10/2014 - 12/2014 |
| Research Assistant, University of Cambridge<br>Supervisor: Dr Eiko Yonkei<br>Topic: Distributed asynchronous graph algorithms   | 07/2013 - 10/2013 |
| Research Engineer, MFG Labs, Paris, France<br>Topic: Machine learning large (billions of edges) networks  | 01/2012 - 07/2013 |
| Software Engineer, Esendex, Nottingham Topic: Developed analytical tools to monitor business SMS traffic  | 01/2010 - 10/2010 |
| Software Engineer, Counter Solutions, Derbyshire<br>Topic: Developed analytical tools to monitor database and web servers   | 06/2007 - 10/2008 |

#### **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**

- Can predicate invention compensate for incomplete background knowledge? Scandinavian Conference on Artificial Intelligence, Halmstad, Sweden, 11/2015.
- Meta-interpretive learning of data transformation programs, International Conference on Inductive Logic Programming, Kyoto, Japan, 08/2015.
- Learning efficient logical robot strategies involving composable objects. International Conference on Inductive Logic Programming, Kyoto, Japan, 08/2015.
- Learning efficient logical robot strategies involving composable objects. International Joint Conference on Artificial Intelligence, Buenos Aires, Argentina, 07/2015.
- Learning efficient logic programs, Doctoral Consortium of the International Joint Conference on Artificial Intelligence 2015, Buenos Aires, Argentina, 07/2015.
- Predicate invention in meta-interpretive learning, Meeting on abductive and inductive reasoning, Wakayama University, Japan, 12/2014.
- Logical minimisation of meta-rules within meta-interpretive learning, International Conference on Inductive Logic Programming, Nancy, France, 08/2014.
- · Can predicate invention in meta-interpretive learning compensate for incomplete background knowledge?,

International Conference on Inductive Logic Programming, Nancy, France, 08/2014.

• Identifying and inferring objects from textual descriptions of scenes from books, Imperial College Computing Student Workshop, London, United Kingdom, 08/2014.

# **Professional services**

Reviewing

2014 Imperial College Computing Student Workshop
 Other

· IJCAI 2015 Student volunteer