

Education

PhD Computer Science , Imperial College London	10/2013 - 10/2017
Supervisor: Professor Stephen Muggleton	
Thesis: Efficiently learning efficient programs	
MSc Computer Science , University of Oxford	10/2010 - 10/2011
Supervisor: Dr Brian Harrington	
Thesis: Predicting 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	

Employment

Research Assistant , University of Cambridge	07/2013 - 10/2013
Worked with Dr Eiko Yonkei on distributed graph algorithms	
Research Engineer , MFG Labs, Paris, France	01/2012 - 07/2013
Designed large-scale distributed machine learning algorithms	
Software Engineer , Esendex, Nottingham	01/2010 - 10/2010
Developed analytical tools to monitor SMS traffic	
Software Engineer , Counter Solutions, Derbyshire	06/2007 - 10/2008
Developed analytical tools to monitor servers	

Research visits

Visiting Researcher , Massachusetts Institute of Technology	07/2016
Worked with Professor Josh Tenenbaum on machine learning programs from data	
Visiting Researcher , National Institute of Informatics, Tokyo, Japan	04/2017 - 07/2017
Worked with Professor Katsumi Inoue on logic-based machine learning	08/2015 - 09/2015
	10/2014 - 12/2014

Awards and grants

• <i>Machine Learning Journal</i> 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 - 10/2017

Publications

Conference papers

1. 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.
2. 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.
3. 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.
4. 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.

5. 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.
6. 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.

Workshop papers

1. 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

1. 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.
2. A. Cropper. Learning efficient logic programs. In *Proceedings of the 24th International Joint Conference Artificial Intelligence (IJCAI 2015)*, pages 4359-4360. IJCAI, 2015.

Invited talks

2017 Learning efficient logic programs, Workshop on approaches and Applications of inductive programming, Dagstuhl, Germany

2017 Learning higher-order logic programs, Workshop on approaches and Applications of inductive programming, Dagstuhl, Germany

2016 Learning efficient logic programs, Machine Intelligence 20 workshop on human-like computing, London, UK.

2016 Logic-based learning of programs from input/output examples, UC Berkeley, USA.

2015 Metagol, Workshop on approaches and Applications of inductive programming, Dagstuhl, Germany

2014 Predicate invention in meta-interpretive learning, Meeting on abductive and inductive reasoning, Wakayama University, Japan.