# Andrew Cropper

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| **Email** | andrew.cropper@gmail.com | |
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| **Education** | **PhD Computer Science**, Imperial College London | 2017 |
| | Supervisor: Professor Stephen Muggleton | |
| | Thesis: Efficiently learning efficient programs | |
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| | **MSc Computer Science**, University of Oxford | 2011 |
| | Supervisor: Dr Brian Harrington | |
| | Thesis: Predicting stock volume using Twitter | |
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| | **BSc Computer Science**, Nottingham Trent University | 2009 |
| | Graduated with first-class honours | |
| | Supervisor: Dr Caroline Langensiepen | |
| | Dissertation: Identifying and inferring objects from natural language | |
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| **Employment** | **Junior Research Fellow**, Hertford College, University of Oxford | 2018 - |
| | Working on inductive logic programming | |
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| | **Research Assistant**, University of Cambridge | 2013 |
| | Worked with Dr Eiko Yonkei on distributed graph algorithms | |
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| | **Research Engineer**, MFG Labs, Paris, France | 2012 - 2013 |
| | Designed large-scale distributed machine learning algorithms | |
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| | **Software Engineer**, Esendex, Nottingham | 2010 |
| | Developed analytical tools to monitor SMS traffic | |
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| | **Software Engineer**, Counter Solutions, Derbyshire | 2007 - 2008 |
| | Developed analytical tools to monitor servers | |
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| **Research visits** | Massachusetts Institute of Technology | 2016 |
| | Worked with Professor Josh Tenenbaum on program induction | |
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| | 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**     **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.

**Invited 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.