Wenwen Li

CCBS, 49 Little France Crescent, Edinburgh EH16 4SB
wenwen.li@ed.ac.uk
https://minawenli.gitlab.io/

Education

2014 – 2018 **Doctor of Philosophy**, *Computer Science, University of Nottingham*, UK.
Supervisors Dr Ender Özcan and Prof Robert John
2012 – 2013 **Master of Science (Distinction)**, *Operational Research, University of Edinburgh*, UK.
2004 – 2008 **Bachelor of Engineering**, *Software Engineering, Anhui University*, China.

Research Interests

Machine learning, reinforcement learning and numerical optimisation methods, with applications to neuroimaging, clinical imaging and medical records.

Awards

2014 – 2017 **Vice-Chancellor's Scholarship for Research Excellence (International)**.
01.2019 **China Scholarship Council Excellent Oversea PhD Students Award**.

Publications

Journals
- **W. Li**, E. Özcan and R. John. "A Learning Automata based Multiobjective Hyper-heuristic". *IEEE Transactions on Evolutionary Computation* (Impact factor: 8.124), to appear in 2019.
- S. Khajavi, M. Baumers, J. Holmström, E. Özcan, J. Atkin, W. Jackson and **W. Li**. "To Kit or Not to Kit: Analysing the Value of Model-based Kitting for Additive Manufacturing". *Computers in Industry* (Impact factor: 2.85), vol. 98, pp. 100–117, 2018.
- **W. Li**, E. Özcan and R. John. "Multi-objective Evolutionary Algorithms and Hyper-heuristics for Wind Farm Layout Optimisation". *Renewable Energy* (Impact factor: 4.90), vol. 105, pp. 473-482, 2017.

Conferences
- **W. Li**, E. Özcan, R. John, J. H. Drake, A. Neumann, and M. Wagner. "A Modified Indicator-based Evolutionary Algorithm (mIBEA)". *IEEE Congress on Evolutionary Computation (CEC)*, pp. 1047-1054, 2017.
- **W. Li**, J. Lou, S. Zhou and H. Lu. "Sturm: Sparse Tubal-Regularized Multilinear Regression for fMRI". *International Workshop on Machine Learning in Medical Imaging. Springer, Cham*, 2019.

Submissions
- **W. Li**, A. Fontanella, A. Antoniou, E. Platt, C. Martin, G. Mair, E. Trucco, A. Storkey, J. Wardlaw. "Acute Ischaemic Stroke (AIS) Lesion Detection with a Convolutional Deep Learning Model". *7th European Stroke Organisation Conference (ESOC 2021)*, Under Review.

Research Experience

09.2019 – now **Research Fellow in Medical Imaging**, *University of Edinburgh*.
Designing deep learning models for diagnosis and prognosis of neurovascular diseases such as acute ischaemic stroke.

06.2019 – 08.2019 **Research Associate in Nature Language Processing**, *University of Sheffield*.
Collecting misinformation on social media platform e.g., Tweeter, Facebook.

06.2018 – 05.2019 **Research Associate in Machine Learning**, *University of Sheffield*, UK.
To develop new tensor-based sparse learning methods for severe cases of "large p, small n" for multi-dimensional data such as whole-brain fMRI in neuroimaging.
Output: Developed a new sparse multilinear regression method and lead-authored its submission to CVPR 2019.

10.2014 – 05.2018 **PhD Student**, *ASAP research group, University of Nottingham*, UK.
To develop multiobjective selection hyper-heuristics using reinforcement learning for solving challenging optimisation problems in planning and scheduling.
Output:
- Implemented and compared nine multiobjective hyper-heuristics on wind farm layout optimisation problems and published a journal paper in *Renewable Energy*, 2017.
- Proposed a reinforcement learning-based multiobjective hyper-heuristic and published a journal paper in *IEEE Trans. on Evolutionary Computation* (to appear in 2019) and another journal paper submission to *IEEE Trans. on Cybernetics* in Dec. 2018.
- Improved an indicator-based multiobjective evolutionary algorithm and published a conference paper in *IEEE CEC* 2017.

04.2016 – 10.2016 **Research Assistant**, *University of Nottingham*, UK.
To advance additive manufacturing with optimisation.
Output: Delivered an intelligent automatic planning and scheduling prototype software for 3D printing and co-authored a journal paper published in *Computers in Industry*, 2018.

Teaching Experience

09.2015 – 02.2018 **Teaching Assistant**, *University of Nottingham*, UK.
Organised and delivered tutorials, provided lab support, and marked on four modules: Automated Decision Support, Database Systems and Interfaces, C programming and Software Quality Assurance.

02.2017 **Tutorial on Multiobjecitve Optimisation**, *University of Nottingham*, UK.
Delivered a tutorial on fundamentals of multiobjective optimisation, evolutionary algorithms and benchmark problems.

07.2018 **Tutorials on Regularised Regression**, *University of Sheffield*, UK.
Delivered tutorials on regularised regression, i.e., Lasso, Group Lasso, Fused Lasso, as well as the optimisation method, Alternating Direction Method of Multipliers (ADMM).

Industrial Work Experience

05.2014 – 09.2014 **Operation Research Analyst**, *China Eastern Airlines*, Shanghai, China.
Worked with scholars from Georgia Tech, US on the aircrew scheduling problem.

02.2014 – 04.2014 **Consultant**, *New Oriental Vision Overseas Consulting*, Shanghai, China.
Provided consultancy service on oversea-study applications.

06.2013 – 12.2013 **Research Intern**, *Orange Labs, France Telecom*, Paris, France.
Worked on the cache placement problem of content delivery network in telecommunication.

12.2009 – 08.2012 **Software Quality & Data Analyst**, *Morningstar, Inc.*, Shenzhen, China.
Daily testing of software products and tracking data accuracy and completeness cases.

07.2008 – 06.2009 **Supply Chain Analyst**, *Ramaxel Technology Co, Ltd.*, Shenzhen, China.
Provided data analysis support for the supply chain operation cost monitoring.