Alan Malek

Curriculum Vitae

Postdoc

2017-current **Postdoctoral Associate**, *Massachusetts Institute of Technology*, IDSS and LIDS, Cambridge, MA.
Advised by Ali Jadbabaie and Alexander Rakhlin

Education

2009-2016 **Ph.D. Electrical Engineering and Computer Science**, *University of California*, Berkeley, CA.
Thesis Advisor: Peter Bartlett
Thesis Title: Sequential Decision Making

2009-2013 **M.A. Statistics**, *University of California*, Berkeley, CA.

2005-2009 **M.S. Electrical Engineering**, *Stanford University*, Palo Alto, CA.

2005-2009 **B.S. Mathematics**, *Stanford University*, Palo Alto, CA.
minor in Physics

Publications

- W, Kotłowski, W. Koolen, A. Malek. Random Permutation Online Isotonic Regression. *Advances in Neural Information Processing Systems (NIPS) 29*, December 2017.
- A. Malek, Y. Chow, M. Ghavamzadeh, S. Katariya. Sequential Multiple Hypothesis Testing with Type I Error Control. *Proceedings of Artificial Intelligence and Statistics (AISTATS)*, April 2017.
- Y. Abbasi-Yadkori, P. Bartlett, V. Gabillon, A. Malek. Hit-and-Run for Sampling and Planning in Non-Convex Spaces. *Proceedings of Artificial Intelligence and Statistics (AISTATS)*, April 2017.
- W, Kotłowski, W. Koolen, A. Malek. Online Isotonic Regression. *Proceedings of the Conference on Learning Theory (COLT)*, June 2016.
- W. Koolen, A. Malek, P. Bartlett, and Y. Abassi-Yadkori. Minimax Time Series Prediction. *Advances in Neural Information Processing Systems (NIPS) 28*, December 2015.
- P. Bartlett, W. Koolen, A. Malek, E. Takimoto, M. Warmuth. Minimax fixed-design linear regression. In *Proceedings of the Conference on Learning Theory (COLT)*, volume 40, June 2015.

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- Y. Abassi-Yadkori, P. Bartlett, X. Chen, A. Malek. Large-scale Markov decision problems with KL control cost. In *Proceedings of the 32nd International Conference on Machine Learning (ICML)*. June 2015.
- W. Koolen, A. Malek, P. Bartlett. Efficient minimax strategies for square loss games. In *Advances in Neural Information Processing Systems (NIPS) 27*, December 2014.
- Y. Abbasi-Yadkori, P. Bartlett, and A. Malek. Linear programming for large-scale Markov decision problems. In *Proceedings of the 31st International Conference on Machine Learning (ICML)*, 2014.

Preprints

- Y. Abbasi-Yadkori, P. Bartlett, and A. Malek. Linear programming for large-scale Markov decision problems. *arXiv:1402.6763 [math.OC]*, 2014.

Talks

July 2016 **Minimax Strategies for Square Loss Games**, *Artificial Intelligence and Reinforcement Learning Seminar*, University of Alberta.

August 2016 **Minimax Strategies for Square Loss, Linear Regression, and Time-series Prediction**, *Machine Learning Seminar*, MIT.

April 2016 **Keynote**, *Harker Research Symposium*.

Teaching

Spring 2016 **CS281b/Stat241b TA**, *UC Berkeley*, Statistical Learning Theory II.
- Statistical risk bounds, minimax game theoretic algorithms, neural networks, kernel methods, ensemble methods
- Responsible for: homework and solutions, grading

Fall 2015 **CS281a/Stat241a TA**, *UC Berkeley*, Statistical Learning Theory.
- Graphical models, general inference, statistical estimation
- Responsible for: discussion section, homework and solutions, grading

Spring 2014 **CS281b/Stat241b TA**, *UC Berkeley*, Statistical Learning Theory II.
- Machine learning, Online prediction, kernel methods, boosting, etc.
- Responsible for: grading, office hours, homework solutions

Spring 2011 **EE20N TA**, *UC Berkeley*, Signals and Systems.
- Responsible for: weekly lab (using Labview), discussion sections, office hours

Spring 2011 **EE20N TA**, *UC Berkeley*, Signals and Systems.
- Responsible for: weekly lab (using Labview), discussion sections, office hours

Service

2014-2017 **Reviewer**, *NIPS. Best reviewer award 2017.*

2017 **Reviewer**, *UAI.*

2017 **Reviewer**, *AAAI.*

2017-18 **Subreviewer**, *Algorithmic Learning Theory.*

2016-17 **Subreviewer**, *Conference on Learning Theory.*

2015-2016 **AI/ML Admissions Committee**, *UC Berkeley EECS Department*.

2014-2015 **AI/ML Admissions Committee**, *UC Berkeley EECS Department*.

2015 **Student Laptop Committee**, *UC Berkeley EECS Department*.

2010-2011 **Social Chair**, *UC Berkeley EE Graduate Student Assembly*.

Fall 2008 - Spring 2009 **Stanford Ceramics Club**, *Founder, President, Studio Manager*.

Work Experience

May 2015 -January 2016 **Data Science Intern**, *Adobe Research*.

- Developed sequential hypothesis testing techniques with theoretical and empirical evaluations
- Extended work to multiple sequential hypothesis tests
- Three patents in submission

May 2014 - September 2014 **Data Science Intern**, *Upwork*.

- Modeled client potential value and intervention susceptibility
- Worked on algorithms to improve job/freelancer matching

June 2008 - September 2008 **Science Intern**, *Anchor Intelligence*.

- Developed tools to identify click fraud in online advertisement data

June 2007 - September 2007 **Engineering Intern**, *Intuitive Surgical*.

- Simulated and optimized kinematics of prototype manipulator

June 2006 - September 2006 **Engineering Intern**, *Intuitive Surgical*.

- Built and tested electrical system for prototype product

References

Peter Bartlett
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59650 Villeneuve d'Ascq, France
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