

Osonde A. Osoba

www.osonde-osoba.com

EDUCATION

PhD, Electrical Engineering, University of Southern California, CA 2013

- *Dissertation Title:* "Noise Benefits in Expectation-Maximization Algorithms"
- *Advisor:* Prof. Bart Kosko
- *Focus:* statistical signal processing, machine learning, stochastic resonance, Bayesian statistics
- *Awards:* Ming Hsieh Institute Scholar, Annenberg Graduate Fellow, National GEM Fellow
- *Leadership Positions:* President - Capoeira club, Secretary - Minority Engineering Graduate Student Assoc.

MS, Electrical Engineering, University of Southern California, CA 2007

- *Courses:* Digital Signal Processing, Machine Learning, Law & Intellectual Property, Statistics

BS, Electrical & Computer Engineering, University of Rochester, NY 2005

- *Honors:* With High Distinction. *Minor:* Mathematics.

EXPERIENCE

The RAND Corporation

Associate Engineer

Summer Research Associate

- Policy research on data analytics, decision-making under uncertainty, and emerging tech.
- Worked on proprietary portfolio management algorithm for optimally allocating funds in research and development project portfolios

Santa Monica, CA

July 2014 - Present

Summer 2012

University of Southern California

Lecturer (Graduate & Undergraduate)

Research & Teaching Assistant

- Developed and demonstrated a provably faster alternative to a popular statistical estimation algorithm: *Noise-enhanced expectation maximization algorithm* (patent pending)
- Worked on algorithm extensions to speed-up the k-means and backpropagation algorithms. Published in journals & conferences
- Lectured on probability, statistics, machine learning, & complex variables. Supervised class projects on statistics and machine learning. Developed seminar course on probabilistic simulation methods

Los Angeles, CA

2013 - Present

2007 - 2013

Intel Corporation (Strategic CAD Labs)

Graduate Technical Intern

- Analyzed power delivery networks in x86 microprocessors to improve chip power usage robustness. Developed a solution based on wavelet decomposition and PCA/SVD analysis

Hillsboro, OR

Summer 2009

SKILLS

- *Programming Languages:* MATLAB, Mathematica, C, C++, GAMS, Java, bash scripting, R
- *Numerical Analysis Skills:* machine learning algorithms, regression analyses, Monte Carlo/MCMC methods

PATENT & SELECTED PUBLICATIONS

- B. Kosko, O. Osoba, S. Mitaim, "Iterative Estimation Of System Parameters Using Noise-Like Perturbations," U.S. Patent Application 13/949,048 (July 2013)
- O. Osoba, S. Mitaim, B. Kosko, "The Noisy Expectation Maximization Algorithm," *Fluctuation and Noise Letters*, vol.12, no.03, Sept. 2013
- O. Osoba, S. Mitaim, B. Kosko, "Bayesian Inference with Adaptive Fuzzy Priors and Likelihoods," *IEEE Transactions on Systems, Man, and Cybernetics-B*, vol.41, no.5, pp.1183-1197, Oct. 2011