

MANDOYE NDOYE

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a. Professional Preparation

Rensselaer Polytechnic Institute	Troy, NY	Electrical Engineering	BS, 2003
Howard University	Washington, DC	Electrical Engineering	MS, 2005
Purdue University	West Lafayette, IN	Mathematics	MS, 2009
Purdue University	West Lafayette, IN	ECE	PhD, 2010

b. Academic Appointments

2014 – Present	Assistant Professor, Dept. of Electrical Engineering, Tuskegee University
2012 – 2014	Research Associate, Dept. of Electrical & Computer Eng., Howard University

c. Industrial Experience

Research Staff Member	Lawrence Livermore National Laboratory	Livermore, CA	01/2011 – 12/2012
Senior Development Engineer	Intelligent Imaging Systems	Winchester, KY Edmonton, AB	05/2010 – 12/2010

d. Granted Patents

1. “Using an MM-principle to enforce a sparsity constraint on fast image data estimation from large image data sets”. US Patent no. US9864046B2, Issued January 9, 2018.
Co-Inventors: J. M. M. Anderson, O. Ode and H. Ogoworonjo.
2. “Using an MM-principle to achieve fast image data estimation from large image data sets”. US Patent no. US9870641B2, Issued January 16, 2018
Co-Inventor: J. M. M. Anderson

e. Selected Publications

1. M. Ndoye and J. M. M. Anderson. “An MM-Based Algorithm for ℓ_1 -Regularized Least-Squares Estimation with an Application to GPR Image Reconstruction”. IEEE Transactions on Image Processing, Volume 25, Issue 5, Pg. 2206-2221, May 2016
2. M. Ndoye, A. Barker, J. V. Krogmeier and D. M. Bullock. “A Multi-Scale Recursive Correlation-Averaging Algorithm for an Automated Distributed Road-Condition Monitoring System. IEEE Transactions on Intelligent Transportation Systems, Volume 12, Issue 3, Pages 795-808, 09/2011
3. C. Luciano, M. Ndoye, G. V. Murphy and K. A. Aganah, “Game Theoretic Approach for Automated PID Controller Parameter Tuning”. CURENT’s 2017 Industry Conference and NSF-DOE Site Visit Industry Conference, Knoxville, TN
4. M. Ndoye, V. Totten, J. V. Krogmeier and D. M. Bullock. “Sensing and Signal Processing for Vehicle Signature Matching and Travel Time Estimation”. IEEE Transactions on Intelligent Transportation Systems, Volume 12, Issue 1, Pages 119-131, March 2011.

5. M. Ndoye and J. M. M. Anderson. "An Iterative ℓ_1 -Regularized Least Absolute Deviation Algorithm for Robust GPR Imaging". IEEE 48th Annual Conference on Information Sciences and Systems, Princeton, NJ, March 19th - March 21st, 2014
6. M. Ndoye and C. Kamath. "Extending the MC-SURE to denoise sensor data streams". Proceedings of 46th IEEE Annual ASILOMAR Conference on Signals, Systems and Computers, Pages 782-786, Pacific Grove, California, November 4-7, 2012
7. M. Ndoye, A. Barker, J. V. Krogmeier and D. M. Bullock. "A Multi-Scale Recursive Correlation-Averaging Algorithm for an Automated Distributed Road-Condition Monitoring System. IEEE Transactions on Intelligent Transportation Systems, Volume 12, Issue 3, Pages 795-808, September 2011.
8. W.A. Misba, M. Ndoye, M. A. Arif and G. V. Murphy. "Multi-objective optimal reactive power dispatch using modified game theory", 2017 North American Power Symposium (NAPS), Morgantown, WV, September 17-19, 2017
9. D. Greene, A. Odejayi, M. Ndoye and J. M. M. Anderson. "A GPU Accelerated Architecture for Real-Time GPR Image Reconstruction". IEEE 2015 International Radar Conference, Arlington, VA, May 10th – May 15th, 2015.
10. F. Chowdhury, M. Ndoye, Z. Lu, G. V. Murphy. "Coalitional Integration of Wind Turbines via Cooperative Energy Trading in Distributed Power System". 2018 IEEE PES Innovative Smart Grid Technologies Conference, District of Columbia, Feb. 19-22, 2018.

f. Technical skills

- Programming languages: C/C++ · Python · Assembly · Bash · R
- Practical skills in electronic instrumentation and computer hardware design
- Computing/simulation tools: MATLAB/Simulink · Labview · Numpy/Scipy/Matplotlib
- Data analysis tools: R · Pandas · scikit-learn · MySQL
- OS & software tools: Unix · git · make · latex/beamer · xfig · vim
- Modeling, simulation and numerical computing
- Practical experience in algorithm development, implementation and optimization
- Strong knowledge of signal processing, statistics and data analysis techniques

g. Synergistic Activities

- Technical Program Committee Member, IEEE Radar Conference, 2014
- Manuscript reviewer for several international journals and conferences in Electrical Engineering
- Faculty coordinator and coach of Tuskegee Engineering Team at the IBM Design Thinking Team at 2018 BEYA Conference.
- Development of a data analysis and programming course using the Python programming language.