

**Mandoye Ndoye, Ph.D., Assistant Professor, Electrical Engineering Department**  
**Publications and Presentations (2008-2017)**

**REFEREED JOURNAL PUBLICATIONS:**

1. **M. Ndoye** and J. M. M. Anderson. "An MM-Based Algorithm for  $\ell_1$ -Regularized Least-Squares Estimation with an Application to GPR Image Reconstruction". IEEE Transactions on Image Processing, Volume 25, Issue 5, Pages 2206-2221, May 2016
2. M. J. Castro-Sitiriche and M. Ndoye. "On the Links Between Sustainable Wellbeing and Electrical Energy Consumption". African Journal on Science, Technology, Innovation and Development, Volume 5, Issue 4, Page 327-335, September 2013.
3. **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.
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.

**PUBLICATIONS IN INTERNATIONAL CONFERENCE PROCEEDINGS:**

1. H. Ogworonjo, J.M.M. Anderson, **M. Ndoye** and L. Nguyen. "An  $\ell_1$ -Regularized Least Squares Method for Reconstructing Step-Frequency Ground Penetrating Radar Images". IEEE 2016 International Radar Conference, Philadelphia, PA, May 2nd - May 6th, 2016.
2. **M. Ndoye**, D. Newman, K. Gullie, K. Connor, M. Chouikha, J. Attia, Si. Foo and P. Andrei. "The Implementation of Experimental Centric Pedagogy in 13 ECE Programs - The View from Students and Instructors". ASEE 123-rd Annual Conference and Exposition, New Orleans, LA, June 26th - 29th, 2016.
3. 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.
4. **M. Ndoye** and J. M. M. Anderson. "An Iterative  $\ell_1$ -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.
5. **M. Ndoye** and J. M. M. Anderson. "A Majorize-Minimize Algorithm for  $\ell_1$ -Regularized Least Squares Estimation in GPR Image Reconstruction". Proceedings of the 2013 IEEE Radar Conference, Pages 1-6, Ottawa, Ontario, Canada, April 29th - May 3rd, 2013.
6. **M. Ndoye** and C. Kamath. "Extending the MC-SURE to denoise sensor data streams". Proceedings of 46<sup>th</sup> IEEE Annual ASILOMAR Conference on Signals, Systems and Computers, Pages 782-786, Pacific Grove, California, November 4-7, 2012

7. M. Castro and **M. Ndoye**. "Subjective Wellbeing and Sustainability: A Data Driven Look at Global Electrical Energy Consumption". Proceedings of the 5th International Conference on Appropriate Technology, Pages 141-148, Pretoria, South Africa, November 20-24, 2012.
8. **M. Ndoye** and C. Kamath. "Pattern Analysis in Wind Power Time Series". NASA Conference on Intelligent Data Understanding, Mountain View, CA, October 19-21, 2011.
9. **M. Ndoye**, V. Totten, D. M. Bullock and J. V. Krogmeier. "A Signal Processing Framework for Vehicle Re-identification and Travel Time Estimation". Proceedings of the 12st International IEEE Conference on Intelligent Transportation Systems, pages 830-835, Saint Louis, MO, USA, October 3-7, 2009.
10. **M. Ndoye**, A. Barker, D. M. Bullock and J. V. Krogmeier. "A Multi-Scale Recursive Correlation-Averaging Algorithm for Synchronization and Fusion of Independent Pavement Roughness Measurements". Proceedings of the 12st International IEEE Conference on Intelligent Transportation Systems, pages 644-649, Saint Louis, MO, October 3-7, 2009.
11. J. Ernst, **M. Ndoye**, D. M. Bullock and J. V. Krogmeier. "Maximum-Likelihood Speed Estimation using Vehicle-Induced Magnetic Signature". Proceedings of the 12st International IEEE Conference on Intelligent Transportation Systems, pages 628-643, Saint Louis, MO, October 3-7, 2009.
12. **M. Ndoye**, V. Totten, B. Carter, D. M. Bullock and J.V. Krogmeier. "Vehicle Detector Signature Processing and Vehicle Re-identification for Travel Time Estimation". Transportation Research Board 87th Annual Meeting, Washington, DC, January 2008, TRB paper 08-0497.
13. A. Barker, **M. Ndoye**, D. M. Bullock and J.V. Krogmeier. "Leveraging Vehicle Infrastructure Integration (VII) Data for Pavement Condition Monitoring". Transportation Research Board 87th Annual Meeting, Washington, DC, January 2008, TRB paper 08-0532.

#### **CONFERENCE PRESENTATIONS AND TALKS:**

1. An Iterative  $\ell_1$ -Regularized Least Squares Algorithm for GPR Imaging. Howard University ResearchDay, Washington, DC, April 4, 2014.
2. An Iterative  $\ell_1$ -Regularized Least Absolute Deviation Algorithm for Robust GPR Imaging. IEEE 48<sup>th</sup> Annual Conference on Information Sciences and Systems, Princeton, NJ, March 19 - March 21, 2014
3. Denoising sensor streaming data using the MC-SURE algorithm. Fifth Annual Postdoctoral Symposium, Lawrence Livermore National Laboratory, 17 July 2012, Livermore, CA.
4. Denoising sensor streaming data using the MC-SURE algorithm. 2012 CMT-IT National Laboratory Professional Development DOE Workshop for Underrepresented Participants, Lawrence Livermore National Laboratory, 14-15 June 2012, Livermore, CA.
5. Pattern Analysis in Wind Power Time Series. NASA Conference on Intelligent Data Understanding, Mountain View, CA, October 19-21, 2011.
6. Pattern Identification in Wind Power Generation Time-Series. Fourth Annual Postdoctoral Symposium, Lawrence Livermore National Laboratory, 1st June 2011, Livermore, CA.

7. "Vertically Integrated Projects". 2010 IL/IN American Society of Engineering Education Sectional Conference: Innovations in Engineering Education, 9-10 April 2010, West Lafayette, IN.
8. "Sensing, Applied Signal Processing and Data Analytics for Intelligent Transportation Systems. Lawrence Livermore National Lab, 4th October 2010, Lawrence, CA.
9. A Signal Processing Framework for Vehicle Re-identification and Travel Time Estimation. 12st International IEEE Conference on Intelligent Transportation Systems, Saint Louis, MO, USA, October 3-7, 2009.
10. A Multi-Scale Recursive Correlation-Averaging Algorithm for Synchronization and Fusion of Independent Pavement Roughness Measurements. 12st International IEEE Conference on Intelligent Transportation Systems, Saint Louis, MO, October 3-7, 2009.
11. Vehicle Detector Signature Processing and Vehicle Re-Identification for Travel Time Estimation. Transportation Research Board 87-th Annual Meeting, Washington, DC, January 2008