Short Biographical Sketch for Robert J. Plemmons

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Education

· Ph.D. in Applied Mathematics, Auburn University, 1965. NDEA Fellowship (followed by research at NSA).
· B.S. in Mathematics (Physics Minor), Wake Forest University, 1961. Athletic Scholarship (followed by 4 years in Baltimore Orioles baseball minor league system).

Professional Experience

· 1965-67 Research Scientist, National Security Agency.
· 1967-81 Associate Professor, Professor, Mathematics and Computer Science, University of Tennessee.
· 1981-91 Professor, Computer Science and Mathematics, N.C. State University.
· 1991-Present, Z. Smith Reynolds Chair in Mathematics and Computer Science, Wake Forest University (now retired from teaching, but not research).

Directly Relevant Publications

· S. Berisha, J. Nagy and R. Plemmons, *Deblurring and Sparse Unmixing of Hyperspectral Images using Multiple Point Spread Functions*, Submitted, 2014.
· S. Berisha, J. Nagy and R. Plemmons, *Estimation of Atmospheric PSF Parameters for Hyperspectral Imaging*, Submitted, 2014.
· Q. Zhang, P. Pauca, R. Plemmons, R. Rand and T. Torgersen, *Information-Theoretic Feature Selection for Classification: Applications to Fusion of Hyperspectral and LiDAR Data*, Submitted, 2014.
· Q. Zhang, P. Pauca and R. Plemmons, *Detecting Objects under Shadows by Fusion of Hyperspectral and LiDAR Data: A Physical Model Approach*, Proc. IEEE WHISPERS Conference on Hyperspectral Imaging, Gainesville, FL, 2013.
· X. Zhao, F. Wang, T. Huang, M. Ng and R. Plemmons, *Deblurring and Sparse Unmixing For Hyperspectral Images*, IEEE Trans. on Geoscience and Remote Sensing, 51(7), pp. 4045-4058, 2013.
· J. Zhang, J. Erway, X. Hu, Q. Zhang, and R. Plemmons, *Randomized SVD Methods in Hyperspectral Imaging*, J. Electrical and Computer Engineering, Special Issue on Spectral Imaging, Volume 2012, Article ID 409357, 15 pages, 2012.
· N. Gillis and R. Plemmons, *Dimension Reduction, Classification, and Spectral Mixture Analysis using Nonnegative Underapproximation*, Optical Engineering, Vol. 50, 2011.

Selected Additional Publications

- F. Li, M. Ng and R. Plemmons, *Coupled Segmentation and Denoising/Deblurring Models for Hyperspectral Material Identification*, Numerical Linear Algebra with Applications, vol. 19, pp. 153–173, Jan., 2012.
- Q. Zhang, R. Plemmons, D. Kittle, D. Brady and S. Prasad, *Joint Segmentation and Reconstruction of Hyperspectral Data with Compressed Measurements*, Applied Optics, Vol. 50, pp. 4417–4435, 2011.
- D. Chen and R. Plemmons, *Nonnegativity Constraints in Numerical Analysis*, Invited paper at Symposium on the Birth of Numerical Analysis. In **The Birth of Numerical Analysis**, World Scientific Press, A. Bultheel and R. Cools, Eds., pp. 109-140, 2009.
- Q. Zhang, H. Wang, R. Plemmons and P. Pauca, *Tensor Methods for Hyperspectral Data Analysis: A Space Object Material Identification Study*, J. Optical Soc. Amer., Vol. 25, No. 12, pp. 3001-3012, 2008.
- A. Berman and R. Plemmons, *Nonnegative Matrices in the Mathematical Sciences*, **SIAM Classics in Applied Mathematics** (2nd Edition), 1994.

Synergistic Activities

- Author of over 250 articles and 3 books.
- Fellow, Society for Industrial and Applied Mathematics (SIAM).
- Member of APS, IEEE, OSA, SIAM and SPIE.
- Testimony representing AMS and SIAM given to the U.S. Senate Committee on Defense Appropriations, and the U.S. House of Representatives Committee on National Security.
- Continuous research support by DoD and/or NSF grants since 1968.

Collaborators and Other Affiliations

- *Publication Collaborators in past 5 Years*: D. Brady (Duke Univ.), D. Chen (Tufts U.), N. Gillis (Louvain U., Belgium), M. Ng (Hong Baptist U., China), F. Li, (East China Normal U., China), P. Pauca (Wake Forest), S. Prasad (U. New Mexico), R. Rand (NGA), T. Torgersen (Wake Forest), F. Wang (Hong Baptist U., China), Q. Zhang (Wake Forest U.), X. Zhao (Chengdu U., China).
- *Research Grant Co-PIs in past 5 Years*: D. Brady (Duke), V. Bhagavatula (Carnegie Mellon), P. Pauca (Wake Forest), S. Prasad (New Mexico), A. Ross (WVU), D. Nikic and Jason Wu (Boeing).
- *Graduate PhD Advisors*: R. Ball, E. Haynsworth, Auburn University, 1965 (deceased).
- *Thesis and Postdoc Advising in Past 2 Years*: J. Zhang (Tufts U.) MS Wake Forest U. (2013), X. Hu (Syracuse U.) Postdoc at Wake Forest Univ. (2010-2012). Overall, I have directed thirty-six M.S. students and twelve Ph.D. students at three Universities.