

Complete List of Anuradha Roy's Published Work:

h-index (Scopus): 11

h-index (Google Scholar): 16

i10-index (Google Scholar): 24

Refereed Statistical Journal Articles:

1. Koziol A. (Ph.D. student), Roy Anuradha, Zmyslony, R., Leiva, R. and Fonseca, M. (2018) "Free-coordinate Estimation for Doubly Multivariate Data", *Linear Algebra and its Applications*, 547, 217-239.
2. Roy Anuradha, Filipiak K., and Klein D. (2018) "Testing a Block Exchangeable Covariance Matrix", *Statistics: A Journal of Theoretical and Applied Statistics*, 52 (2), 393-408.
3. Žežula I., Klein D. and Roy Anuradha, (2018) "Testing of Multivariate Repeated Measures Data with Block Exchangeable Covariance Structure", *TEST*, Published Online, DOI: 10.1007/s11749-017-0549-z, (cited 2 times).
4. Koziol A. (Ph.D. student), Roy Anuradha, Zmyslony, R., Leiva, R. and Fonseca, M. (2017) "Best Unbiased Estimates for Parameters of Three-level Multivariate Data with Doubly Exchangeable Covariance Structure", *Linear Algebra and its Applications*, 535, 87-104, (cited 2 times).
5. Pavlenko T. and Roy Anuradha, (2017) "Supervised Classifiers of High-dimensional Higher-order Data with Locally Doubly Exchangeable Covariance Structure", *Communications in Statistics – Theory and Methods*, 46(23), 11612-11634.
6. Coelho C. A. and Roy Anuradha, (2017) "Testing the Hypothesis of a Block Compound Symmetric Covariance Matrix for Elliptically Contoured Distributions", *TEST*, 26 (2), 308-330 (cited 3 times).
7. Filipiak K., Klein D. and Roy Anuradha, (2017) "A Comparison of Likelihood Ratio Tests and Rao's Score Test for Three Separable Covariance Matrix Structures", *Biometrical Journal*, 59(1), 192–215, (cited 2 times).
8. Filipiak K., Klein D. and Roy Anuradha, (2016) "Score Test for a Separable Covariance Structure with the First Component as Compound Symmetric Correlation Matrix", *Journal of Multivariate Analysis*, 150, 105-124 (cited 3 times).
9. Roy Anuradha, Zmyslony R., Fonseca M. and Leiva R. (2016) "Optimal Estimation for Doubly Multivariate Data in Blocked Compound Symmetric Covariance Structure" *Journal of Multivariate Analysis*, 144, 81-90 (cited 8 times).
10. Hao C., Liang Y. (Ph.D. students) and Roy Anuradha, (2015) "Equivalency between Vertices and Centers-coupled-with-radii Principal Component Analyses for Interval Data", *Statistics & Probability Letters*, 106, 113-120 (cited 4 times).
11. Roy Anuradha, Leiva R., Žežula I. and Klein D. (2015) "Testing of Equality of Mean Vectors for Paired Doubly Multivariate Observations in Blocked Compound Symmetric Covariance Matrix Setup", *Journal of Multivariate Analysis*, 137, 50-60 (cited 10 times).

12. Leiva R., Roy Anuradha, Bageta R. and Pina J. C. (2015) “An Extension of the Birnbaum-Saunders Distribution as a Model for Fatigue Failure due to Multiple Cracks”, *Journal of Statistical Theory and Practice*, 9(1), 88-121 (cited 1 time)
13. Leiva R. and Roy Anuradha, (2014) “Classification of Higher-Order Data with Separable Covariance and Structured Multiplicative or Additive Mean models”, *Communications in Statistics – Theory and Methods*, 43(5), 989–1012 (cited 4 times).
14. Roy Anuradha and Fonseca M. (2012), “Linear Models with Doubly Exchangeable Distributed Errors”, *Communications in Statistics – Theory and Methods*, 41(13), 2545–2569 (cited 14 times).
15. Roy Anuradha and Leiva R. (2012), “Classification Rules for Multivariate Repeated Measures Data with Equicorrelated Correlation Structure on both Time and Spatial Repeated Measurements”, *Communications in Statistics – Theory and Methods*, 41(8), 1411-1420 (cited 4 times).
16. Leiva R. and Roy Anuradha, (2012), “Linear Discrimination for Three-level Multivariate Data with Separable Additive Mean Vector and Doubly Exchangeable Covariance Structure”, *Computational Statistics and Data Analysis*, 56(6), 1644-1661 (cited 10 times).
17. Roy Anuradha and Leiva R. (2011), “Estimating and Testing a Structured Covariance Matrix for Three-level Multivariate Data”, *Communications in Statistics – Theory and Methods*, 40(11), 1945-1963 (cited 21 times).
18. Leiva R. and Roy Anuradha, (2011), “Linear Discrimination for Multi-level Multivariate Data with Separable Means and Jointly Equicorrelated Covariance Structure”, *Journal of Statistical Planning and Inference*, 141(5), 1910-1924 (cited 18 times).
19. Leiva R. and Roy Anuradha, (2011), “A Quadratic Classification Rule with Equicorrelated Training Vectors for Non-random Samples”, *Communications in Statistics – Theory and Methods*, 40(2), 213-231 (cited 4 times).
20. Louden C. (M.S. student) and Roy Anuradha, (2010), “Classification Rules under Autoregressive and General Circulant Covariance”, *Communications in Statistics – Theory and Methods*, 39(18), 3294-3315 (cited 2 times).
21. Leiva R. and Roy Anuradha, (2009), “Classification Rules for Triply Multivariate Data with an AR(1) Correlation Structure on the Repeated Measures over Time”, *Journal of Statistical Planning and Inference*, 139(8), 2598-2613 (cited 10 times).
22. Roy Anuradha (2009), “An Application of Linear Mixed Effects Model to Assess the Agreement between Two Methods with Replicated Observations”, *Journal of Biopharmaceutical Statistics*, 19(1), 150-173 (cited 20 times).
23. Roy Anuradha and Leiva R. (2008), “Likelihood Ratio Tests for Triply Multivariate Data with Structured Correlation on Spatial Repeated Measurements”, *Statistics & Probability Letters*, 78(13), 1971-1980 (cited 33 times).
24. Roy Anuradha (2008), “Computation Aspects of the Parameter Estimates of Linear Mixed Effects Model in Multivariate Repeated Measures Set-up”, *Journal of Applied Statistics*, 35(3), 307-320 (cited 4 times).

25. Roy Anuradha and Leiva R. (2007), “Discrimination with Jointly Equicorrelated Multi-level Multivariate Data”, *Advances in Data Analysis and Classification*, 1(3), 175-199 (cited 21 times).
26. Roy Anuradha and Khattree R. (2007), “Classification of Multivariate Repeated Measures Data with Temporal Autocorrelation”, *Journal of Applied Statistical Science*, 15(3), 283-294 (cited 17 times).
27. Roy Anuradha (2006), “A New Classification Rule for Incomplete Doubly Multivariate Data using Mixed Effects Model with Performance Comparisons on the Imputed Data”, *Statistics in Medicine*, 25(10), 1715-1728 (cited 16 times).
28. Roy Anuradha (2006), “Estimating Correlation Coefficient between Two Variables with Repeated Observations using Mixed Effects Model”, *Biometrical Journal*, 48(2), 286-301 (cited 84 times).

(This paper is the Most Accessed Paper in Three Consecutive Years 2014- 2016 in Biometrical Journal.)

29. Roy Anuradha (2006), “Testing of Kronecker Product Structured Mean Vectors and Covariance Matrices”, *Journal of Statistical Theory and Applications*, 5(1), 53-69 (cited 6 times).
30. Roy Anuradha and Khattree R. (2005), “A Study of Covariance Structures for Repeated Measures in the Context of Classification Analysis”, *Journal of the Indian Statistical Association*, 43(2), 127-145.
31. Roy Anuradha and Khattree R. (2005), “Classification Based on Multivariate Repeated Measures with Time Effect on Mean Vector and an AR(1) Correlation Structure on the Repeated Measures”, *Calcutta Statistical Assoc. Bulletin*, 57, 49-65 (cited 2 time).
32. Roy Anuradha and Khattree R. (2005), “On Implementation of a Test for Kronecker Product Covariance Structure for Multivariate Repeated Measures Data”, *Statistical Methodology*, 2(4), 297-306 (cited 44 times).
33. Roy Anuradha and Khattree R. (2005), “On Discrimination and Classification with Multivariate Repeated Measures Data”, *Journal of Statistical Planning and Inference*, 134(2), 462-485 (cited 26 times).
34. Roy Anuradha and Khattree R. (2005), “Discrimination and Classification with Repeated Measures Data under Different Covariance Structures”, *Communications in Statistics-- Simulation and Computation*, 34(1), 167-178 (cited 16 times).
35. Roy Anuradha and Khattree R. (2003), “Tests for Mean and Covariance Structures Relevant in Repeated Measures Based Discriminant Analysis”, *Journal of Applied Statistical Science*, 12(2), 91-104, (cited 28 times).

Refereed Biomedical, Medical and Other Scientific Journal Articles:

36. Zhao F., Kirby M. (M.S. student), Roy Anuradha, Hu Y., Guo X. E. and Wang X., (2018) “Commonality in Microarchitecture of Human Trabecular Bones: A Preliminary Study”, *Bone*, 111, 59-70.
37. Roy Anuradha, Fuller C. D., Rosenthal D. I. and Thomas C. R. Jr., (2015) “Comparison of Measurement Methods with a Mixed Effects Procedure Accounting for Replicated Evaluations (COM₃PARE): Method Comparison Algorithm Implementation for Head and Neck IGRT Positional Verification”, *BMC Medical Imaging*, 15:35 (11 pages) (cited 1 time).

38. Starnes J. W., Neidre D. B., Nyman J. S., Roy Anuradha, Nelson M. J., Gutierrez G. and Wang X., (2013) "Synergistic Effect of Exercise and Statins on Femoral Strength in Rats", *Experimental Gerontology*, 48(8), 751-755 (cited 14 time).
39. Chen C. L. P., Chen M. C., Agaian S. S., Zhou Y., Roy Anuradha, Rodriguez B. M., (2012), "A pattern recognition system for JPEG steganography detection", *Optics Communications*, 285(21-22), 4252-4261(cited 6 times).
40. Nyman J. S., Roy Anuradha, Reyes M. J., and Wang X. (2009), "Mechanical Behavior of Human Cortical Bone in Cycles of Advancing Tensile Strain for Two Age Groups", *Journal of Biomedical Materials Research: Part A*, 89(2), 521-529 (cited 16 times).
41. Oubre C. M., Roy Anuradha, Toner C. and Kalns J. (2007), "Retrospective Study of Factors Affecting Non-Healing of Wounds During Hyperbaric Oxygen Therapy", *Journal of Wound Care*, 16(6), 245-250 (cited 21 times).
42. Nyman J. S., Roy Anuradha, Tyler J. H., Acuna R. L., Gayle J. H. and Wang X. (2007), "Age-Related Factors Affecting the Postyield Energy Dissipation of Human Cortical Bone", *journal of Orthopaedic Research*, 25(5), 646- 655 (cited 92 times).
43. Nyman J. S., Roy Anuradha, Acuna R. L., Gayle H. J., Reyes M. J., Tyler J. H., Dean D. D. and Wang X. (2006), "Age-Related Effect on the Concentration of Collagen Cross-Links in Human Osteonal and Interstitial Bone Tissue", *Bone*, 39(6), 1210-1217 (cited 59 times).
44. Nyman J. S., Roy Anuradha, Shen X. M., Acuna R. L., Tyler J. H. and Wang X. (2006), "The Influence of Water Removal on the Strength and Toughness of Cortical Bone", *Journal of Biomechanics*, 39(5), 931-938 (cited 215 times).
45. Banerjee M., George J., Song E. Y., Roy Anuradha and Hryniuk W. (2004), "Tree-Based Model for Breast Cancer Prognostication", *Journal of Clinical Oncology*, 22(13), 2567-2575 (cited 101 times).
46. Kalns J., Roy Anuradha, Loeffler C. and Wright J. K. (2004), "A Retrospective Evaluation of Digital Wound Imaging to Predict Response to Hyperbaric Oxygen Treatment", *Ostomy/Wound Management*, 50(4), 36-48.
47. Roy Anuradha and Datta A. K. (1994), "A Hierarchical Perception Linked Model for Machine Recognition of Vowels in Telugu", *Acustica*, 80(4), 406-412 (cited 2 times).
48. Datta A. K., Ganguly N. R., Roy Anuradha and Mukherjee B. (1991), "A Hierarchical Perception-Linked Model for Machine Recognition of Phonemes", *Information Sciences*, 55, 259-269.
49. Datta A. K., Roy Anuradha and Ganguli N. R. (1987), "An Expert System for Key Syllable Based Isolated Word Recognition", *Pattern Recognition Letters*, 6, 145-150 (cited 4 times).
50. Roy Anuradha (1986), "A Note on the Aerodynamic Force System on an Axis- Symmetric Body", *Journal of Armament Studies*, 23-26.

Conference Proceedings (Refereed):

51. Leiva R., Roy Anuradha, Bageta R. and Pina J. C. (2016), “Model of fatigue failure due to equicorrelated multiple cracks using extended Birnbaum-Saunders distribution”, *60th ISI World Statistics Congress (WSC)*, Rio de Janeiro, Brazil, 941-946.
52. Coelho A. C. and Roy Anuradha (2016), “Developing near-exact distributions for likelihood ratio statistics to test for Kronecker product structures in covariance matrices”, *60th ISI World Statistics Congress (WSC)*, Rio de Janeiro, Brazil, **0-5**.
53. Fonseca M. and Roy Anuradha (2012), “Discriminant Analysis in Models with Structured Mean and Covariance”, 1686-1689, *Proceedings of the International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2012)*, Kos, Greece.
54. Chen M. C. (Ph.D. student), Roy Anuradha and Rodriguez B. M., Agaian S. S. and Chen C. L. P. (2009), “An Application of Linear Mixed Effects Model to Staganography Detection”, 1782-1786, *Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics*, San Antonio, Texas (cited 7 times).

(This paper was Nominated as one of the five finalists for the Franklin V. Taylor Memorial Award for the Best Paper and Oral Presentation in IEEE SMC 09, and Awarded the certificate of merit.)

55. Roy Anuradha and Leiva R. (2007), “Classification Rules for Multi-level Multivariate Data”, *Proceedings of the 2nd International Conference on Innovative Computing, Information and Control*, Kumamoto City, Japan. (Indexed by EI Compendex) (cited 1 time).
56. Roy Anuradha and Khattree R. (2005), “Testing the Hypothesis of a Kronecker Product Covariance Matrix in Multivariate Repeated Measures Data”, *Proceedings of the 30th Annual SAS Users Group International Conference (SUGI 30)*, Philadelphia (cited 21 times).
57. Roy Anuradha, Bhowmick B. K. and Datta A. K. (1984), “A Statistical Approach for Recognition of Vowels in Connected Speech”, *Proceedings of the IEEE International Conf. on System Man and Cybernetics*, Bombay, India, 340-344.

Conference Proceedings (Non-refereed):

58. Henry Chacón (Ph.D. student) and Roy Anuradha (2017), “Piecewise Solutions to Big Data”, *Proceedings of the American Statistical Association, Statistical Programmers and Analysts Section*, 583- 591.
59. Roy Anuradha and Leiva R. (2008), “Testing of Hypothesis of a Structured Mean Vector for Three-level Multivariate Data with Structured Correlations on Repeated Measurements”, *Proceedings of the American Statistical Association, Statistical Computing Section*, 1940- 1947 (cited 2 times).
60. Roy Anuradha (2007), “A Note on Testing of Kronecker Product Covariance Structures for Doubly Multivariate Data”, *Proceedings of the American Statistical Association, Statistical Computing Section* in Seattle, Washington, 2157- 2162 (cited 6 times).
61. Roy Anuradha (1993), “A Method to Discriminate Between Speech/ Non-Speech Region in a Noisy Speech Signal and Some Related Observations”, *Proceedings of the 3rd International Conference on*

Advances in Pattern Recognition and Digital Techniques at Indian Statistical Institute, Calcutta, India, 124-129.

62. Roy Anuradha (1993), “Discrimination Between Speech/Non-Speech Region in a Noisy Speech Signal Using the Direction Cosines along each Band of the Spectrum”, *Proceedings of the Ninth International Congress of Cybernetics and Systems*, New Delhi, India, 93-98.
63. Roy Anuradha and Datta A. K. (1984), “A Perceptual Model for A.S.R.”, *Proceedings of the International Conference on Computer Systems and Signal Processing*, Bangalore, India.

Book Chapters:

1. Roy Anuradha and Khattree R. (2007), “Classification Rules for Repeated Measures Data from Biomedical Research”, In: Khattree R. and Naik D. N. (Eds) *Computational Methods in Biomedical Research*, 323-370 (cited 12 times).

Letters to the Editor:

1. Lee C. H. (Ph.D. student), Dutilleul P. and Roy Anuradha (2010), “Models with a Kronecker Product Covariance Structure: Estimation and Testing”, by Srivastava M. S., von Rosen T. and von Rosen D., *Mathematical Methods of Statistics*, 19(1), 88- 90 (cited 8 times).

Published Abstracts:

1. Shafiei N. (M.S. student), Gomez J., Roy Anuradha, Hu Y., Guo X. Ed., Wang X. (2018) “Is Underlying Trabecular Architecture Dependent on Anatomic Locations?”, *Going to be Published in the Proceedings of the Orthopaedic Research Society 2018 Annual Meeting*, #: 1576.
2. Kirby M. L. (M.S. student), Roy Anuradha, Zhao F. and Wang X. (2017) “Probabilistic Commonality of Trabecular Bone Structures: Is it a Result of Nature’s Design?”, *Proceedings of the 2017 Summer Biomechanics, Bioengineering and Biotransport Conference (SB³C2017)*.
3. Wood M. A., Aherne N. J., Herden J. P., Dean J. L. Hill J. D., Last A., Everitt C., Fuller C. D., Roy Anuradha, Shakespeare T. P. (2009) “Fiducial Marker (FM) Matching Versus Bone Matching in Image Guided Intensity Modulated Radiation Therapy (IG-IMRT) of the Prostate Bed following Radical Prostatectomy”, *Proceedings of the 51st annual meeting of American Society for Therapeutic Radiation and Oncology*.
4. Aherne N. J., Wood M. A., Herden J. P., Mincham S., Last A., Hill J. D., Fuller C. D. Roy Anuradha, Shakespeare T. P. (2009) “Fiducial Based Target definition in Patients Undergoing Salvage IMRT following Prostatectomy”, *Proceedings of the Asian Oncology Summit, Poster Discussion, Preferred Papers, Genito Urinary*, # 205.
5. Neidre D. B., Nyman J. S., Roy Anuradha, Nelson M. J., Gutierrez G., Wang X. and Starnes J. W. (2007), “Treadmill Exercise Plus Statin Administration Increases Femoral Strength in Rats”, *Proceedings of the 53rd Annual Meeting of the Orthopaedics Research Society*, # 1397.
6. Reyes M. J., Nyman J. S., Roy Anuradha and Wang X. (2006), “Post-yield Energy Dissipation as Function of Strain in Middle and Old Aged Cortical Bone”, *Proceedings of the Annual Fall Meeting of the Biomedical Engineering Society*, # 1371.

7. Nyman J. S., Tyler J. H., Acuna R. L., Roy Anuradha and Wang X. (2005), "Age and Gender Differences in the Post-Yield Energy Dissipation of Cortical Bone", *Proceedings of the Annual Fall Meeting of the Biomedical Engineering Society*, # 106. P1.40.
8. Nyman J. S., Tyler J. H., Roy Anuradha, DeLeon A. and Wang X. (2005), "The Effect of Age and Gender on the Post-Yield Energy Dissipation of Cortical Bone", *Proceedings of the 51st Annual Meeting of the Orthopaedics Research Society*, # 0669.
9. Nyman J. S., Roy Anuradha, Shen X. M. and Wang X. (2004), "The Role of Water Distribution on the Strength and Toughness of Cortical Bone", *Proceedings of the Annual Fall Meeting of the Biomedical Engineering Society*, # 1036.
10. Banerjee M., Song E. Y., Roy Anuradha, Du W. and Hryniuk W. (2001), "A Tree-Based Model for Breast Cancer Prognosis", *Proceedings of the American Association for Cancer Research*, # 3092, Vol. 42, 576.