

## Publications of Musa H. Asyali, Ph.D.

### Books and Chapters

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2. G. Celebi, I. S Uzun, M.H. Asyali, and M. Pehlivan, “Nonlinear Analysis of Heart Rate Variability.” Book Chapter in *Nonlinearity and Disorder: Theory and Applications*, pp. 387-396, Kluwer Publishers, July 2001.

### Journal Papers

3. L. Zheng, G. de Polavieja, V. Wolfram, M.H. Asyali, R. Hardie, and M. Juusola, “Feedback network controls the gain and signal quality at the first visual synapse of in vivo *Drosophila*,” submitted to the *Proc Natl Acad Sci USA*.
4. O. Demirkaya and M.H. Asyali, “Segmentation of Microarray cDNA Spots using Markov Random Field Modeling,” *Bioinformatics Advance Access* published online on April 19, 2005, doi:10.1093/bioinformatics/bti455.
5. M.H. Asyali and M. Alci, “Reliability analysis of microarray data using fuzzy C-means and normal mixture modeling based classification methods,” *Bioinformatics*. Vol. 21, No. 5, pp. 644-649, 2005.
6. M.H. Asyali and M. Juusola, “Use of the Meixner Functions in Estimation of Volterra Kernels of Nonlinear Systems with Delay,” *IEEE Transactions on Biomedical Engineering*, Vol. 52, No. 2, pp. 229-237, 2005.
7. M.H. Asyali, M.M. Shoukri, O. Demirkaya, and K.S.A. Khabar, “Estimation of Signal Thresholds for Microarray Data Using Mixture Modeling” *Nucleic Acids Research*, Vol. 32, No. 8, pp. 2323-2335, 2004.
8. M. Alci and M.H. Asyali, “Assessment of Reliability of Microarray Data Using Fuzzy C-Means Classification,” *Lecture Notes in Computer Science*, Vol. 3316, pp. 1322-1327, 2004.
9. O. Demirkaya and M.H. Asyali, “Determination of image bimodality thresholds for different intensity distributions,” *Signal Processing: Image Communication*, Vol. 19, No. 6, pp. 507-516, 2004.

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10. M.M. Shoukri and M.H. Asyali, “Statistical Inference on Mixture of Two Binomial Distributions with Applications in Genetic Linkage,” *Far East Journal of Theoretical Statistics*, Vol. 13, No. 1, pp. 81-100, 2004.
  11. M.M. Shoukri, M.H. Asyali, and A. Donner, “Sample Size Requirements for the Design of Reliability Study: Review and New Results,” *Statistical Methods in Medical Research*, Vol. 13, No. 4, pp. 251-271, 2004.
  12. M.M. Shoukri, M.H. Asyali, R. VanDorp, and D. Kelton, “The Poisson Inverse Gaussian Regression Model in the Analysis of Clustered Counts Data,” *Journal of Data Science*, Vol. 2, No.1, pp. 17-32, 2004.
  13. M.M. Shoukri, M. H. Asyali, and S.D. Walter, “Issues of Cost and Efficiency in the Design of Reliability Studies,” *Biometrics*, Vol. 59, No. 4, pp.1107-1112, 2003.
  14. M.M. Shoukri, M.A Chaudhary, and M. H. Asyali, “Confidence Intervals for the Limiting Availability Assuming Correlated Rayleigh Random Variables,” *Journal of Statistical Research*, Vol. 37, No. 2, pp. 183-191, 2003.
  15. M.H. Asyali, M.C.K Khoo and R.B. Berry, “Assessment of Closed-Loop Ventilatory Stability in Obstructive Sleep Apnea,” *IEEE Transactions on Biomedical Engineering*, Vol. 49, No. 3, pp. 1434-1441, Mar. 2002.
  16. M.C.K Khoo, J.J. Shin, M.H. Asyali, T.S. Kim and R.B. Berry, “Ventilatory Dynamics of Transient Arousal in Patients with Obstructive Sleep Apnea,” *Respiration Physiology*, Vol. 85, No. 4, pp. 1434-1441, 1998.
  17. R.B. Berry, M.H. Asyali and M.C.K Khoo, “Within Night Variation in Respiratory Effort Proceeding Apnea Termination and EEG Delta Power in Sleep Apnea,” *Journal of Applied Physiology*, Vol. 112, pp. 291-303, 1998.
- Conference Papers**
18. M.H. Asyali, “Discrimination Power of Long-Term Heart Rate Variability Measures,” Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Cancun, September 17-21, 2003.

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19. O. Demirkaya, M.H. Asyali, M.M. Shoukri, and K.S. Abu-Khabar, “Segmentation of Microarray cDNA Spots Using MRF-Based Method,” Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Cancun, September 17-21, 2003.
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  21. M.H. Asyali, “Introduction of a New Technique to Estimate Volterra Kernels of Physiological Systems and its Associated Application Mathematical Tool,” Proceedings of the National Meeting of Biomedical Engineering, pp. 66-71, Kayseri, 1999.
  22. M.H. Asyali, O. Mermer and I.S. Uzun, “Simulation of Nonlinear Dynamics of the Nerve Membrane through the Hodgkin-Huxley Model (Part I),” Proceedings of the National Meeting of Biomedical Engineering, pp. 121-130, Kayseri, 1999.
  23. M.H. Asyali, “State and Respiratory Variability in Obstructive Sleep Apnea: A Modeling Perspective,” Proceedings of the Biomedical Engineering National Meeting, pp. 31-45, Istanbul, 1998.
  24. S.H. Oguz and M.H. Asyali, “A Morphology Based Algorithm for Baseline Wander Elimination in ECG Records,” Proceedings of the IEEE International Biomedical Engineering Days, pp. 160-164, Istanbul, 1992.
  25. M. Karaman, M.H. Asyali, et al., “VLSI Design of a Digital Beam Former for Phased Array Medical Ultrasound Imaging,” Proceedings of the Bilkent University Electrical Electronics and Computer Engineering Conference, pp. 297-300, Ankara, 1991.
- Abstracts**
26. M.M. Shoukri and M.H. Asyali, “Analysis of Clustered Count Data Using Poisson Inverse Gaussian Regression,” EMR Conference of International Biometric Society, Antalya, 2003.

**Abstracts  
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27. M.H. Asyali and N. Elkum, “Optimization of Sampling Time Designs in Bioequivalence Tests: A Comparison of Techniques,” EMR Conference of International Biometric Society, Antalya, 2003.
28. N. Elkum and M.H. Asyali, “Design of Optimal Sampling Times in Bioequivalence Studies: A Simulation Approach,” EMR Conference of International Biometric Society, Antalya, 2003.
29. M.H. Asyali and O. Demirkaya, “Noise Reduction in 3-D PET Images Using Anisotropic Diffusion Filtering,” 5th International Congress of Nuclear Oncology and 15th National Congress of Turkish Society of Nuclear Medicine, Kusadasi, 2002.
30. M.H. Asyali and M.C.K. Khoo, “Closed-Loop Modeling of the Ventilatory Response to Transient Arousal from Sleep,” Annals of Biomedical Engineering, Vol. 25, Supplement 1, pp. S18, 1997 IEEE BMES Annual Fall Meeting, San Diego, 1997.
31. R.B. Berry, M.H. Asyali, M.C.K. Khoo, “Cyclic Variability in the Arousal Threshold to Airway Occlusion in Obstructive Sleep Apnea, Proceedings of the American Lung Association and American Thoracic Society International Conference, San Francisco, 1997.
32. M.C.K. Khoo, R.B. Berry, J.W. Shin, M.H. Asyali, R. Woo and P. Sadowsky, “Ventilatory Dynamics of Arousal in Obstructive Sleep Apnea Syndrome During CPAP Application,” Proceedings of American Lung Association International Conference, New Orleans, 1996.
33. J.W. Shin, R.B. Berry, M.H. Asyali and M.C.K. Khoo, “Quantitative Assessment of Sleep Disordered Breathing Using a Fuzzy Logic Based Algorithm,” Proceedings of American Lung Association International Conference, New Orleans, 1996.