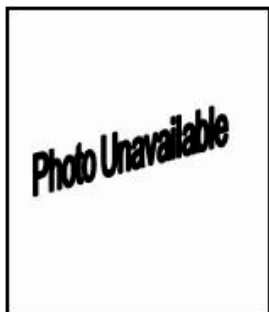


RESEARCH PROFILE



First Name: David (Dragoljub) **Middle Initial:** M. **Last Name:** Pokrajac
Title: Associate Professor (Tenured)
Department/School: Department of Computer and Information Sciences, College of Mathematics, Natural Sciences & Technology
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PROFESSIONAL EDUCATION:

- PhD Computer Science, Temple University, Philadelphia, PA, 2000-2002
- MS Telecommunications, University of Nis, Nis, Serbia, 1994-1997
- BS Electrical engineering, University of Nis, Nis, Serbia, 1989-1993

RESEARCH INTEREST AREA(S)

Dr. Pokrajac research interests include data mining, machine learning, visual analytics, computational geometry and discrete algorithms. He is active in multidisciplinary research ranging from classification of spectroscopy data, to detection of unusual objects in surveillance videos, to applications in environmental sciences and agriculture.

ACTIVE GRANTS & FUNDING

- **Adaptive Approach to Identify Unusual Behavior in Video Imagery, US DoD/DoA 54412-CI-ISP**, August 1, 2008 - July 31, 2011. Principal Investigator. \$700,000 (Funded).
- **Image-Based Biomarker of Breast Cancer Risk: Analysis of Risk Disparity among Minority Populations, US DoD/DoA**, March 19, 2009 - March 18, 2013. Co-Principal Investigator (DSU Principal Investigator: Fengshan Liu). \$1,322,501.00 (Funded).
- **Creation of the Center for Research and Education in Optical Sciences and Applications (CREOSA) at Delaware State University, National Science Foundation (NSF)**, September 1, 2006 - August 31, 2011. Principal Investigator for subproject (DSU Principal Investigator: Nouredine Melikechi). \$4,959,863 (Funded).

PROFESSIONAL AFFILIATIONS

- ACM
- IEEE

HONORS & AWARDS RECEIVED (LAST FIVE YEARS)

Delaware State Faculty Excellence Award 2010 for research and creativity

SELECTED PUBLICATIONS (LAST THREE YEARS)

Journal papers

Profile – D. Pokrajac

1. Z. Peric, J. Nikolic, **D. Pokrajac**, "Hybrid Scalar Quantizer for the Laplacian Source," *WSEAS Transactions on Communications*, Vol. 6, No 1, pp. 60-65, 2007.
2. Z. Peric, J. Nikolic, D. Pokrajac, "Estimation of the support region for Laplacian source scalar quantizers," *Journal of Electrical Engineering*, Vol. 58, No 1, pp. 47-51, 2007.
3. V. Megalooikonomou, D. Kontos, **D. Pokrajac**, A. Lazarevic, Z. Obradovic, "An Adaptive Partitioning Approach for Mining Discriminant Regions in 3D Image Data," *Journal of Intelligent Information System*, Vol. 31, No. 3, pp. 217-242, 2008.
4. V. Aleksandrovic, M. Milovanovic, **D. Pokrajac**, "Towards Serbian National Sound Archives-Information System for Storage, Access and Retrieval of Restored Sound Recordings," *Review of the National Center for Digitization*, Vol. 13, pp. 41-48, 2008.
5. D. Milovic, M. Stefanovic, **D. Pokrajac**, "Stochastic approach for output SINR computation at SC diversity systems with correlated Nakagami- m fading," *European Transactions on Telecommunications*, Vol. 20, pp. 1-5, 2009.
6. M. A. Reiter, M. Saintil, Z. Yang, **D. Pokrajac**, "Derivation of a GIS-Based Watershed-Scale Conceptual Model for the St. Jones River, Delaware from Habitat-Scale Conceptual Models," *J. Environ. Manag.*, Vol. 90, No.11, pp. 3253-3265, 2009.

Peer Reviewed Conference Proceedings

D. Pokrajac, A. Lazarevic, L.J. Latecki, "Incremental Local Outlier Detection for Data Streams," *Proc. IEEE Symposium on Computational Intelligence and Data Mining, 2007.*

Z. Peric, J. Nikolic, **D. Pokrajac**, "Average Complexity Analysis of Scalar Quantizer Design," *Proc. WSEAS 2007.*

D. Pokrajac, N. Reljin, M. Reiter, S. Stotts, R. Scarborough, "Signal Processing of St. Jones River, Delaware Water Level Data," *Proc. ETRAN 2007*, in press.

L. J. Latecki, A. Lazarevic, **D. Pokrajac**, "Outlier Detection with Kernel Density Functions," 6th Industrial Conference on Data Mining ICDM'2007, Leipzig, 2007.

Dragoljub Pokrajac, Natasa Reljin, Michael Reiter, Stephanie Stotts, Robert Scarborough, Jelena Nikolic, "Adaptive Filters for Water Level Data Processing," *Proc. TELSIKS 2007.*

Dragoljub Pokrajac, Longin Jan Latecki, Aleksandar Lazarevic, Jelena Nikolic, "Variable Width Elliptical Gaussian Kernels for Probability Density Estimation," *Proc. TELSIKS 2007.*

Dragoljub Pokrajac, Janko Milutinovic, Imabong Ikanem, "Application of Electrostatic Method for Uniform Placement of Points on Hypersphere," *Proc. PES 2007.*

D. Pokrajac, M. Petkovic, L. J. Latecki, A. Lazarevic, N. Reljin, J. Milutinovic, "Computational Geometry Issues of Reverse Nearest Neighbor Algorithm," *Proc. 7th Annual Hawaii International Conference on Statistics, Mathematics and Related Fields, 2008.* *

M. Petkovic, **D. Pokrajac**, L. J. Latecki, A. Lazarevic, N. Reljin, J. Milutinovic, "Algorithms for Spherical Coverage Verification," *Proc. ICM, 2008.* *

R. Mieziako, **D. Pokrajac**, "Detecting and Recognizing Abandoned Objects," *Proc. ICVS 2008.* *

R. Mieziako, **D. Pokrajac**, "Texture Dissimilarity Measures for Background Change Detection," *Proc. International Conference on Image Analysis and Recognition ICIAR 2008.* *+

R. Mieziako, **D. Pokrajac**, "People Detection in Low-resolution Infrared Videos," *Proc. OTCBVS08, 2008*

Profile – D. Pokrajac

R. Mieziako, **D. Pokrajac**, "Localization of Detected Objects in Multi-Camera Network," *Proc. ICIP 2008*.*+

. N. Reljin, D. Pokrajac, "The Application of Support Vector Machines for Classification of Audio Signals," *Proc. ICESS 2008*.*+

D. Pokrajac, N. Reljin, N. Pejic, A. Lazarevic, "Incremental Connectivity-Based Outlier Factor Algorithm," *Proc. Visions In Computer Science, 2008*

N. Reljin, **D. Pokrajac**, "Classification of Performers using Support Vector Machines," *Proc. NEUREL 2008*. *+

R. Mieziako, D. Pokrajac, "Detecting Changes in Multilayered Orthoimages with Spatiotemporal Texture Blocks," *Proc. ICPR, 2008*

A. Lazarevic, **D. Pokrajac**, A. Marcano, and N. Melikechi, "Support Vector Machine based Classification of Fast Fourier Transform Spectroscopy of Proteins," *Proc. SPIE Photonic West, 2009*.

N. Pejic, N. Reljin, S.McDaniel, **D. Pokrajac**, A.Lazarevic, "Detection of Moving Objects using Incremental Connectivity Outlier Factor Algorithm," *Proc. ACM SE Conf.*, 2009.

Xingwei Yang, Longin Jan Latecki, and **Dragoljub Pokrajac**. Outlier Detection with Globally Optimal Exemplar-Based GMM. *SIAM Int. Conf. on Data Mining (SDM09)*, Sparks, Nevada, April/May, 2009.

Pokrajac, N. Reljin, N. Pejic, T. Vance, S. McDaniel, A. Lazarevic, R. Mieziako, "Detection of suspicious activity using incremental outlier detection algorithms," *Proc. SPIE Signal and Data Processing on Small Targets 2009*.

D.Pokrajac, C. Borcean, A. Johnson, A. Hobbs, L. Agodio, S. Nieves, M. Balbes, L. McCauley, J. Tice, N. Dare, J. McKie, B. Lombardo, BJ Self, J. Austin, "Evaluation of Automated License Plate Reader Accuracy," *TELSIKS 2009*.

N. Reljin, N. Pejic, **D. Pokrajac**, A. Lazarevic, L. J. Latecki, T. Vance, "Small Moving Targets Detection using Outlier Detection Algorithms," *Proc. SPIE Signal and Data Processing on Small Targets 2010*.

T.Vance, **D. Pokrajac**, A. Marcano, Y. Markushin, S. McDaniel, N. Melikechi, A. Lazarevic, "Classification of LIBS Protein Spectra Using Multi-layer Perceptrons," *Proc. International Conference on Mass Data Analysis of Images and Signals in Medicine, Biotechnology, Chemistry and Food Industry, Berlin, 2010*.

T.Vance, N. Reljin, A. Lazarevic, **D. Pokrajac**, V. Kecman, N. Melikechi, A. Marcano, Y. Markushin, S. McDaniel, "Classification of LIBS Protein Spectra using Support Vector Machines and Adaptive Local Hyperplanes", *Proc. International Joint Conference on Neural Networks, IJCNN 2010, Barcelona, 2010*.

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