

SLOBODAN VUCETIC

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RESEARCH INTERESTS

Machine Learning: Deep Learning, Learning with Human in the Loop, Hybrid Intelligence, Visual Analytics, Structured Learning, Transfer Learning, Self-Supervised Learning, Semi-Supervised Learning, Spatial-Temporal Data Analysis, Federated Learning, Online Learning, Hierarchical Bayes Models, Clustering, Feature Selection, Dimensionality Reduction, Label Ranking, Multi-Label Learning, Multi-Instance Learning, Multi-Source Learning, Support Vector Machines, Boosting, Neural Networks, Regularization, Biased Data, Missing and Corrupted Data, Class Imbalance.

Applications: Electronic Health Records, Alternative Augmentative Communication, Education, Epidemiology, Robotics, Remote Sensing, Intelligent Transportation Systems, Materials Science, Industrial Informatics, Social Media Analytics, Computational Advertising, Collaborative Filtering, Financial Engineering, Power Systems, Precision Agriculture.

Big Data: Learning on a Budget, Scalability, Sampling, Indexing, Distributed Learning, Data Intensive and Cloud Computing.

Bioinformatics: Protein Function and Structure Prediction, Genomics, Drug Discovery.

Data Visualization, Convex Optimization, Data Compression, Algorithms, Nonlinear Systems, Signal Processing

TEACHING INTERESTS

Undergraduate and graduate courses related to Data Science, Machine Learning, Artificial Intelligence, Bioinformatics, Databases, Algorithms, Discrete Math, Data Structures, Programming.

EDUCATION

Ph.D., Electrical Engineering, Washington State University, 2001

M.S., Electrical Engineering, University of Novi Sad, 1997

B.S., Electrical Engineering, University of Novi Sad, 1994

APPOINTMENTS

(2018 - now) **Director** of the *Center for Hybrid Intelligence (CHI)*, College of Science and Technology, Temple University, Philadelphia.

(2017 - now) **Professor** at the *Department of Computer and Information Sciences*, Temple University, Philadelphia.

(2016 - 2018) Chair at the *Department of Computer and Information Sciences*, Temple University, Philadelphia.

(2015 - 2016) Vice Chair at the *Department of Computer and Information Sciences*, Temple University, Philadelphia.

(2008 - 2017) Associate Professor at the *Department of Computer and Information Sciences*, Temple University, Philadelphia.

(2002 - 2008) Assistant Professor at the *Computer and Information Sciences, Temple University, Philadelphia*.

(2001 - 2002) Visiting Assistant Professor at the *Center for Information Sciences and Technology, College of Science and Technology, Temple University, Philadelphia*.

AWARDS AND ACCOMPLISHMENTS

- Recipient of **NSF CAREER Award**, 2006.
- **Outstanding paper** at IJCAI 2013: Best paper in the AI and Computational Sustainability Track.
- **Best Reviewer Award** for the research track at **KDD 2018**.
- **Top 10 paper** at SDM 2012.
- Team leader of a 3-member team that was **among the top ranked teams** (among 60 teams) in gene/protein function prediction at the Second **Critical Assessment of Function Annotations** (CAFA 2013-14).
- Team leader of a 4-member team that was **among the top ranked teams** (among 45 teams) in gene/protein function prediction at the First **Critical Assessment of Function Annotations** (CAFA 2010-12).
- Member of a 5-member team that achieved the **highest accuracy** in protein disorder prediction at 5th, 6th, and 7th Community Wide Experiment on the **Critical Assessment of Techniques for Protein Structure Prediction** (CASP) in 2002, 2004, 2006.

TEACHING EXPERIENCE

- CIS 3715 **Principles of Data Science** (Undergraduate Course): 2015, 2017, 2018, 2019, 2020
- CIS 5526 **Machine Learning** (Graduate Course): 2002, 2003, 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026.
- CIS 1166 **Mathematical Concepts in Computing I** (Undergraduate Course): 2015
- CIS 2166 **Mathematical Concepts in Computing II** (Undergraduate Course): 2012, 2015
- CIS 1001 **Introduction to CIS** (1 credit Undergraduate Course): 2009, 2010, 2012, 2013
- CIS 3223 **Algorithms and Data Structures** (Undergraduate Course): 2008
- CIS 071 **Introduction to Computing and Computer Programming** (Undergraduate Course): 2006, 2007
- CIS 611 **Data Management** (Graduate Course): 2006
- CIS 595 **Bioinformatics** (Graduate Course): 2005
- CIS 616 **Data Management** (Graduate Course): 2005
- CIS 527 **Data Warehousing, Filtering, and Mining** (Graduate Course): 2004
- CIS 525 **Neural Computation** (Graduate Course): 2004
- CIS 595 **Bioinformatics** (Graduate Course): 2003
- CIS 670 **Advanced Topics in Database Systems** (Graduate Course): 2002
- Program Design and Development, Visual BASIC Programming, Electrical Circuits Laboratory, Electronics (Undergraduate Courses)
- Fundamentals of Electrical Engineering (Undergraduate Course)

FUNDING

Ongoing

- MacNeil, S., Dragut, E., **Vucetic, S.**, (Sep 2025 – Sep 2030), “The Rehabilitation Engineering Research Center on Augmentative and Alternative Communication”, University of Arkansas subcontract from Department of Health and Human Services (HHS), \$1,499,233.
- Hantula, D., **Vucetic, S.**, Dragut, E., Tincani, M., (Sep 2024 – Sep 2026), “Collaborative Research: Planning: CRISES: Center for Neurodiversity Development and Advancement”, National Science Foundation (NSF), \$67,550.

- **Vucetic, S.**, Wu, J. (Oct 2021 – Oct 2026), “Collaborative Proposal: Collaborative Research: CNS Core: Medium: Data Augmentation and Adaptive Learning for Next Generation Wireless Spectrum Systems”, National Science Foundation (NSF), \$720,000.
- **Vucetic, S.**, Hantula, D., Dragut, E., Tincani, M., Hong, S. (Sep 2020 – Sep 2026), “FW-HTF-RL: Personalized Virtual Job Assistants to Prepare Individuals with Neurodevelopmental Disabilities for Entry Level IT Jobs”, National Science Foundation (NSF), \$2,310,269.
- Tagai, E., Hall, M., **Vucetic, S.**, (May 2024 - May 2027), " Development of a Natural Language Processing-based System to Improve Patient-Reported Outcomes among Patients Receiving Genetic Testing Results", Lewis Katz School of Medicine, Temple University, \$50,000.
- Tagai, E., Bauman, J.R., **Vucetic, S.**, (March 2024 - March 2027), " Design, Implementation, and Evaluation of a Natural Language Processing-based Symptom Reporting System to Enhance Patient-Provider Communication for Patients with Head and Neck Cancer", Fox Chase Cancer Center, \$50,000.

Past

- Souvenir, R., Bai, L., **Vucetic, S.**, Obradovic, Z., Seibold, B. (Jan 2022 - Jun 2025), "Analytical Framework for AI/AA", Army Research Laboratory - DEVCOM DAC, \$8,750,000.
- **Vucetic S.**, MacNeil, S., Dragut, E. (Jan 2023 - Dec 2024), " NSF Convergence Accelerator Track H: Next Generation Augmentative and Alternative Communication Technology Powered by Artificial Intelligence", Subcontract to University of Arkansas’ National Science Foundation (NSF), \$364,000.
- **Vucetic, S.**, (Jan 2024 – Dec 2024), “Research Gift to Center for Hybrid Intelligence”, Penn Mutual Life Insurance Company, \$70,000.
- Dames, P., **Vucetic, S.**, Hantula, D. (Jan 2022 – Dec 2025), RoboSNAP: Robot Social Navigation Among Pedestrians, Catalytic Collaborative Research Initiative Program OVPR Temple, \$416,000.
- Dragut, E., **Vucetic, S.**, Nickerson, D., Tallapragada, M., Hardy, B., Holbert, R. (Jan 2022 – Dec 2025), Center for Epistemic Security: Preserving a Democratic Society's Epistemic Security, Catalytic Collaborative Research Initiative Program OVPR Temple, \$195,000.
- Klein, M., **Vucetic, S.**, Obradovic, Z., Seibold, B., Muto, A., Bai, L., Fauzia, A., (October 2022 - March 2024), " Advanced Terrain Analytics to Support Tactical Scale Planning and Operations over Varied Environments", USACE/ERDC, \$1,075,000.
- Suri, R., Tao, R., Biswas, S.K., Andaluri, G., **Vucetic, S.**, Balciunas, D., Kant, K. (Jan 2022 – Dec 2023), Center for Smart Technologies for Environmental and Energy Sustainability, Catalytic Collaborative Research Initiative Program OVPR Temple, \$130,000.
- Masucci, M., Bai, L., Ahmad, F., Dames, P., **Vucetic, S.**, Thomson, B. (Oct 2019 - Jan 2023), "Advanced Additive Technologies for Sustainment of Navy Assets", National Center for Manufacturing Sciences, \$ 1,060,658.
- **Vucetic, S.**, (2019-2023), “Research Gift to Center for Hybrid Intelligence”, Penn Mutual Life Insurance Company, \$350,000.
- Kumar, S., Levy, R., **Vucetic, S.**, Carnevale, V. (Oct 2019 – Aug 2022), “GCR: Understanding Epistasis: the Key for Genotype to Phenotype Mapping”, National Science Foundation, \$1,446,121.
- Henry, K., **Vucetic, S.**, Stroup, A. (Dec 2016 – Aug 2020), “Incorporating Residential Histories into Space-Time Models for Health Geographic Analysis”, National Science Foundation, \$300,000.
- **Vucetic, S.**, (2019), “Research Gift to Center for Hybrid Intelligence”, Cicero Inc., \$15,000.
- **Vucetic, S.** (Aug 2016 – Aug 2019) “SBIR Phase II: Using Data Mining to Optimally Customize Therapy for Individuals with Autism”, National Science Foundation, \$250,000.
- Kant, K., Wu, J., **Vucetic, S.** (2015 – 2019), “BDD: Dynamic Evolution of Smart-Phone Based Emergency Communications Network”, National Science Foundation, \$300,000.
- Egleston, B., **Vucetic, S.**, Bleicher, R., (2015 – 2018) “R21: Deep Learning for Representation of Codes Used for SEER-Medicare Claims Research”, National Institutes of Health, \$405,000.
- **Vucetic, S.** (2015 – 2015) “SBIR Phase I: Using Data Mining to Optimally Customize Therapy for Individuals with Autism”, National Science Foundation, \$33,000.
- **Vucetic, S.** (2013 – 2014) “Computational Advertising”, Yahoo! Labs, \$30,000.
- **Vucetic, S.**, Obradovic, Z. (2011 - 2016) "III Small: A Discriminative Modeling Framework for Mining of Spatio-Temporal Data in Remote Sensing", National Science Foundation, \$500,000.

- **Vucetic, S.** (2010 – 2012) "Machine Learning for Distributed Fault Diagnosis", ExxonMobil Research and Engineering Company, \$90,000.
- Bai, L., **Vucetic, S.** (2009 - 2010) "MOSAIC: Multi-agent-based Oil-refinery System Analysis and Intelligent Control" ExxonMobil Research and Engineering Company, \$143,000.
- **Vucetic, S.**, (2006 – 2012) "CAREER: Memory-Constrained Predictive Data Mining," National Science Foundation, \$475,000.
- Obradovic, Z., **Vucetic, S.**, Z. Li (2006 - 2011) "Collaborative Research: Data Mining Support for Retrieval and Analysis of Geophysical Parameters," National Science Foundation, \$600,000.
- Soprano, D.R., Soprano, K.J., Obradovic, Z., **Vucetic, S.** (2005 - 2009) "PBX and Retinoic Acid-Dependent Differentiation," National Institutes of Health, \$1,125,000.
- Obradovic, Z. and **Vucetic, S.** (2004 - 2004) "Research Infrastructure and Expertise for Gene Expression Data Analysis," The Pennsylvania Department of Health, \$70,000.
- Obradovic, Z. and **Vucetic, S.** (2004 - 2008) "Applications of Bioinformatics Data Analysis to Cardiovascular and Cancer Research," Pennsylvania Department of Health, \$250,000.
- Obradovic, Z. and **Vucetic, S.**, (2004 - 2004) "REU Supplement for ITR: Task-Specific Data Reduction and Mining for Spatial-Temporal Domains," National Science Foundation, \$12,000.
- **Vucetic, S.** (2003 - 2004) "Bioinformatics Approach to Protein Disorder Characterization," Pennsylvania Department of Health, \$33,000.
- Wolfgang, P., Lakaemper, R., Megalooikonomou, V., Obradovic, Z., and **Vucetic, S.** (2003 - 2004) "Visualization and Analysis of Commercial Flight Data," Lockheed Martin Corp, \$55,000.
- Obradovic, Z. and **Vucetic, S.** (2002 - 2006) "ITR/SMALL/Scientific Frontiers: Task-Specific Data Reduction and Mining in Spatial-Temporal Domains," National Science Foundation, Grant 0219736, \$210,120.

PUBLICATIONS

Journal publications

1. Chanda, A.K., Talebianaraki, E., Mahzoon, V., Vucetic, Z., Vucetic, S., Concordance Analysis Between KDIGO Definition of Acute Kidney Injury and Its Coding in Clinical Practice. *Kidney Medicine*, p.101374, 2026. (IF: 4.10)
2. Garrison, E., MacNeil, S., Hantula, D.A., West, M., Dragut, E., Tincani, M., **Vucetic, S.**, Exploring the challenges and assistive technology for autistic job seekers across employment pathways. *Research in Developmental Disabilities*, 167, p.105155, 2025. (IF: 2.90)
3. West, M., Tincani, M., Hantula, D., Hong, S.R., **Vucetic, S.**, Dragut, E., Applying data science practices to identify characteristics of postsecondary autism support programs from their websites. *Journal of Autism and Developmental Disorders*, pp.1-47, 2025. (IF: 2.60)
4. Holyfield, C., O'Neill Zimmerman, T., MacNeil, S., Sammarco Caldwell, N., Patel, P., Griffen, B., Lorah, E., Dragut, E., **Vucetic, S.**, Preliminary Investigation of Context-Aware Augmentative and Alternative Communication with Automated Just-in-Time Cloze Phrase Response Options for Social Participation from Children on the Autism Spectrum. *Folia Phoniatria et Logopaedica*, 77(3), pp.269-283, 2025. (IF: 0.70)
5. Allard, J.B., Sharma, S., Patel, R., Sanderford, M., Tamura, K., **Vucetic, S.**, Gerhard, G.S., Kumar, S., Evolutionary Sparse Learning Reveals the Shared Genetic Basis of Convergent Traits. *Nature Communications*, 16(1), p.3217, 2025. (IF: 14.70)
6. Niknami, N., Mahzoon, V., **Vucetic, S.**, Wu, J., Enhanced Meta-IDS: Adaptive Multi-Stage IDS with Sequential Model Adjustments. *High-Confidence Computing*, p.100298, 2025. (IF: 9.00)
7. Lorah, E.R., MacNeil, S., Zimmerman, T., Rackensperger, T., Holyfield, C., Caldwell, N., Dragut, E.C., **Vucetic, S.**, Spurring Innovation in AAC Technology through Collaborative Dreaming and Needs Finding with Individuals with Developmental Disabilities Who Use AAC. In *Seminars in Speech and Language*. Thieme Medical Publishers, Inc., 45(05), pp. 461-474, 2024. (IF: 1.00)
8. Enayati, S., **Vucetic, S.**, Leveraging Shortest Dependency Paths in Low-Resource Biomedical Relation Extraction, *BMC Medical Informatics and Decision Making*, 24(205), 2024. (IF: 3.50)
9. Holyfield, C., MacNeil, S., Caldwell, N., O'Neill Zimmerman, T., Lorah, E., Dragut, D., **Vucetic, S.**, Leveraging Communication Partner Speech to Automate Augmented Input for Children on the Autism Spectrum Who Are Minimally Verbal: Prototype Development and Preliminary

- Efficacy Investigation, *American Journal of Speech-Language Pathology*, 33(3), 1174-1192, 2024. (IF: 2.67)
10. Garrison, E., Singh, D., Hantula, D., Tincani, M., Nosek, J., Hong, S.R., Dragut, E., **Vucetic, S.**, Understanding the Experience of Neurodivergent Workers in Image and Text Data Annotation. *Computers in Human Behavior Reports*, p.100318, 2023. (IF: 2.60)
 11. Maiti, A., Shi, S., **Vucetic, S.**, An Ablation Study on the Use of Publication Venue Quality to Rank Computer Science Departments: Publication Quality is Strongly Correlated with the Subjective Perception of Research Strength. *Scientometrics*, pp.1-22, 2023. (IF: 3.80)
 12. Egleston, B.L., Bleicher, R.J., Fang, C.Y., Galloway, T.J., **Vucetic, S.**, Benefits Versus Drawbacks of Delaying Surgery Due to Additional Consultations in Older Patients with Breast Cancer. *Cancer Reports*, 6(5), p.e1805, 2023. (IF: 1.70)
 13. Tincani, M., Ji, H., Upthegrove, M., Garrison, E., West, M., Hantula, D., **Vucetic, S.**, Dragut, E., Vocational Interventions for Individuals with ASD: Umbrella Review. *Review Journal of Autism and Developmental Disorders*, pp.1-37, 2023. (IF: 3.75)
 14. Egleston, B.L., Chanda, A.K., Bai, T., Fang, C.Y., Bleicher, R.J., **Vucetic, S.**, Using Pointwise Mutual Information for Breast Cancer Health Disparities Research with SEER-Medicare Claims. *Methodology: European journal of research methods for the behavioral & social sciences*, 19(1), p.43, 2023. (IF: 0.90)
 15. Lindner, G., Shi, S., **Vucetic, S.**, Miskovic, S., Transfer Learning for Radioactive Particle Tracking, *Chemical Engineering Science*, 248, p.117190, 2022. (IF: 4.89)
 16. Chanda, A.K., Bai, T., Yang, Z., **Vucetic, S.**, Improving Medical Term Embeddings Using UMLS Metathesaurus, *BMC Medical Informatics and Decision Making*, 22(1), pp.1-12, 2022. (IF: 2.79)
 17. Wiese, D., Lynch, S.M., Stroup, A.M., Maiti, A., Harris, G., **Vucetic, S.**, Henry, K.A., Examining Socio-Spatial Mobility Patterns Among Colon Cancer Patients After Diagnosis, *SSM-Population Health*, 17, p.101023, 2022. (IF: 2.80)
 18. McGee, F., Novinger, Q., Hauri, S., **Vucetic, S.**, Levy, R.M., Carnevale, V., Haldane, A., Generative Capacity of Probabilistic Protein Sequence Models, *Nature Communications*, 12(1), p. 1-14, 2021. (IF: 17.69)
 19. Banjade, H.R., Hauri, S., Zhang, S., Ricci, F., Gong, W., Hautier, G., **Vucetic, S.**, Yan, Q., Structure Motif-Centric Learning Framework for Inorganic Crystalline Systems, *Science Advances*, 7(17), p.eabf1754, 2021. (IF: 14.14)
 20. Henry, K.A., Wiese, D., Maiti, A., Harris, G., **Vucetic, S.**, Stroup, A.M., Geographic Clustering of Cutaneous T-Cell Lymphoma in New Jersey: an Exploratory Analysis using Residential Histories, *Cancer Causes & Control*, pp.1-11, 2021. (IF: 2.51)
 21. Lachaud, A., Marcus, A., **Vucetic, S.**, Miskovic, I., Study of the Influence of On-Deposit Locations in Data-Driven Mineral Prospectivity Mapping: A Case Study on the Iskut Project in Northwestern British Columbia, Canada, *Minerals*, 11(6), p.597, 2021. (IF: 2.45)
 22. Wiese, D., Stroup, A.M., Maiti, A., Harris, G., Lynch, S.M., **Vucetic, S.**, Gutierrez-Velez, V.H., Henry, K.A., Measuring Neighborhood Landscapes: Associations between a Neighborhood's Landscape Characteristics and Colon Cancer Survival, *International Journal of Environmental Research and Public Health*, 18(9), p.4728, 2021. (IF: 3.39)
 23. Wiese, D., Stroup, A.M., Maiti, A., Harris, G., Lynch, S.M., **Vucetic, S.**, Henry, K.A., Residential Mobility and Geospatial Disparities in Colon Cancer Survival. *Cancer Epidemiology and Prevention Biomarkers*, 29(11), pp.2119-2125, 2020. (IF: 4.34)
 24. Egleston, B.L., Bai, T., Bleicher, R.J., Taylor, S.J., Lutz, M.H., **Vucetic, S.**, Statistical Inference for Natural Language Processing Algorithms with a Demonstration Using Type 2 Diabetes Prediction from Electronic Health Record Notes. *Biometrics*, published online July 22, 2020. (IF: 1.71)
 25. Wiese, D., Stroup, A.M., Maiti, A., Harris, G., Lynch, S.M., **Vucetic, S.**, Henry, K.A., Socioeconomic Disparities in Colon Cancer Survival: Revisiting Neighborhood Poverty using Residential Histories. *Epidemiology*, 31(5), pp.728-735, 2020. (IF: 4.53)
 26. Shapovalov, M., Dunbrack Jr, R.L., **Vucetic, S.**, Multifaceted Analysis of Training and Testing Convolutional Neural Networks for Protein Secondary Structure Prediction. *PloS One*, 15(5), p.e0232528, 2020. (IF: 2.74)

27. Zhou, N., Jiang, Y., ... **Vucetic, S.**, ... Friedberg, I., The CAFA Challenge Reports Improved Protein Function Prediction and New Functional Annotations for Hundreds of Genes Through Experimental Screens. *Genome Biology*, 20(1), pp.1-23, 2019. (IF: 10.81)
28. Shapovalov, M., **Vucetic, S.**, Dunbrack, R.L., A New Clustering and Nomenclature for Beta Turns Derived from High-Resolution Protein Structures, *PLoS Computational Biology*, 15 (3), 2019. (IF: 4.38)
29. **Vucetic, S.**, Chanda, A.K., Zhang, S., Bai, T., Maiti, A., Faculty Citation Measures are Highly Correlated with Peer Assessment of Computer Science Doctoral Programs, *Communications of the ACM*, 2018. (IF: 4.55)
30. Bai, T., Chanda, A.K., Egleston, B.L., **Vucetic, S.**, EHR Phenotyping via Jointly Embedding Medical Concepts and Words into a Unified Vector Space, *BMC Medical Informatics and Decision Making*, 2018. (IF: 2.79)
31. Jiang, Y., et al. An Expanded Evaluation of Protein Function Prediction Methods Shows an Improvement in Accuracy, *Genome Biology*, Vol. 17(1), 184, 2016. (IF: 10.81)
32. Djuric, N., Kansakar, L., **Vucetic, S.**, Semi-Supervised Combination of Experts for Aerosol Optical Depth Estimation, *Artificial Intelligence Journal*, Vol. 230, pp. 1-13, 2016. (IF: 6.63)
33. Zhang, K., Lan, L., Kwok, T.J., **Vucetic, S.**, Parvim, B., Large Scale Semi-Supervised Learning via Sparse Nonparametric Prototype Model, *IEEE Transactions on Neural Networks and Learning Systems*, Vol. 26 (3), pp. 444-457, 2015. (IF: 12.18)
34. Djuric, N., Radosavljevic, V., Obradovic, Z., **Vucetic, S.**, Gaussian Conditional Random Fields for Aggregation of Operational Aerosol Retrievals, *IEEE Geoscience and Remote Sensing Letters*, Vol. 12, no. 4, pp. 761-765, 2014. (IF: 2.89)
35. Djuric, N., Lan, L., **Vucetic, S.**, Wang, Z., BudgetedSVM: A Toolbox for Scalable SVM Approximations, *Journal of Machine Learning Research*, Vol. 14, pp.3813-3817, 2013. (IF: 5.31)
36. Grbovic M., Li W., Subrahmanya N. A., Usadi A. K., **Vucetic, S.**, Cold Start Approach for Data Driven Fault Detection, *IEEE Transactions on Industrial Informatics*, Vol. 9(4), pp. 2264 – 2273, 2013. (IF: 8.48)
37. Lan, L., **Vucetic, S.**, Multi-task Feature Selection in Microarray Data by Binary Integer Programming, *BMC Bioinformatics*, Vol. 7(Suppl 7):S5, 2013. (IF: 2.61)
38. Grbovic, M., Djuric, N., Guo, S., **Vucetic, S.**, Supervised Clustering of Label Ranking Data using Label Preference Information, *Machine Learning Journal*, Vol. 93 (2-3), pp 191-225, 2013. (IF: 2.73)
39. Grbovic M., **Vucetic S.**, Decentralized Estimation using Distortion Sensitive Learning Vector Quantization, *Pattern Recognition Letters*, Vol. 34 (9), pp. 963-969, 2013. (IF: 3.94)
40. Lan, L., Djuric, N., Guo, Y., **Vucetic, S.**, MS-kNN: Protein Function Prediction by Integrating Multiple Data Sources, *BMC Bioinformatics*, Vol. 14 (suppl. 3):S8, 2013. (IF: 2.61)
41. Radivojac, P., Clark, W. T., ..., Toppo, S., Lan, L., Djuric, N., Guo, Y., **Vucetic, S.**, Bairoch, A., Linial, M., Babbitt, P. C., et al., A Large-scale Evaluation of Computational Protein Function Prediction, *Nature Methods*, Vol. 10(3), pp. 221-229, 2013. (IF: 28.47)
42. Wang, Z., Crammer, K., **Vucetic, S.**, Breaking the Curse of Kernelization: Budgeted Stochastic Gradient Descent for Large-Scale SVM Training, *Journal of Machine Learning Research*, Vol. 13, pp. 3103-3131, 2012. (IF: 5.31)
43. Grbovic M., Weichang L., Peng X., Usadi A. K., **Vucetic S.**, Decentralized Fault Detection and Diagnosis via Sparse PCA based Decomposition and Maximum Entropy Decision Fusion, *Journal of Process Control*, Vol. 22, pp. 738- 750, 2012. (IF: 3.91)
44. Coric, V., Djuric, N., **Vucetic, S.**, Traffic State Estimation from Aggregated Measurements using Signal Reconstruction Techniques, *Transportation Research Record: Journal of the Transportation Research Board*, Traffic Flow Theory and Characteristics, no. 2315, pp. 121-130, 2012. (IF: 0.69)
45. Wang, Z., Lan, L. **Vucetic, S.**, Mixture Model for Multiple Instance Regression and Applications in Remote Sensing, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 50 (6), pp. 2226 – 2237, 2012. (IF: 6.12)
46. Ristovski, K., **Vucetic, S.**, Obradovic, Z., Uncertainty Analysis of Neural Network-Based Aerosol Retrieval, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 50 (2), pp. 409-414, 2012. (IF: 6.12)

47. Djuric, N., Radosavljevic, V., Coric, V., **Vucetic, S.**, Travel Speed Forecasting by Means of Continuous Conditional Random Fields, *Transportation Research Record: Journal of the Transportation Research Board*, Network Modeling 2011, pp. 131-139, 2011.
48. Lan, L., **Vucetic, S.**, Improving Accuracy of Microarray Classification by a Simple Multi-Task Feature Selection Filter, *International Journal of Data Mining and Bioinformatics*, Vol. 5 (2), pp. 189-208, 2011.
49. Wang, Z., **Vucetic, S.**, Online Training on a Budget of Support Vector Machines using Twin Prototypes, *Statistical Analysis and Data Mining Journal*, Vol 3 (3), pp. 149-169, 2010.
50. Radosavljevic, V., **Vucetic, S.**, Obradovic, Z., A Data Mining Technique for Aerosol Retrieval Across Multiple Accuracy Measures, *IEEE Geoscience and Remote Sensing Letters*, Vol 7 (2), pp. 411 – 415, 2010.
51. Uversky, V.N., Oldfield, C.J., Midic, U., Xie, H., Xue, B., **Vucetic, S.**, Iakoucheva, L.M., Obradovic, Z., Dunker, A.K., Unfoldomics of Human Diseases: Linking Protein Intrinsic Disorder with Diseases, *BMC Genomics*, 10(Suppl 1):S7, 2009.
52. **Vucetic, S.**, Han, B., Mi, W., Li, Z., Obradovic, Z., A Data Mining Approach for the Validation of Aerosol Retrievals, *IEEE Geoscience and Remote Sensing Letters*, 5 (1), 113-117, 2008.
53. Krynetskaia, N., Xie, H., **Vucetic, S.**, Obradovic, Z., Krynetskiy, E., High Mobility Group Protein B1 is an Activator of Apoptotic Response to Antimetabolite Drugs, *Molecular Pharmacology*, 73, 260-269, 2008.
54. Xie, H., **Vucetic, S.**, Iakoucheva, L.M., Oldfield, C.J., Dunker, A.K., Uversky, V.N., Obradovic, Z., Functional Anthology of Intrinsic Disorder. I. Biological Processes and Functions of Proteins with Long Disordered Regions, *Journal of Proteome Research*, 6 (5), 1882 -1898, 2007.
55. **Vucetic, S.**, Xie, H., Iakoucheva, L.M., Oldfield, C.J., Dunker, A.K., Obradovic, Z., Uversky, V.N., Anthology of Intrinsic Disorder. II. Cellular Components, Domains, Technical Terms, Developmental Processes and Coding Sequence Diversities Correlated with Long Disordered Regions, *Journal of Proteome Research*, 6 (5), 1899 -1916, 2007.
56. Xie, H., **Vucetic, S.**, Iakoucheva, L.M., Oldfield, C.J., Dunker, A.K., Obradovic, Z., Uversky, V.N., Functional Anthology of Intrinsic Disorder. III. Ligands, Postranslational Modifications and Diseases Associated with Intrinsically Disordered Proteins, *Journal of Proteome Research*, 6 (5), 1917 -1932, 2007.
57. Han, B., Obradovic, Z., Hu, Z.Z., Wu, C. H., **Vucetic, S.**, Substring Selection for Biomedical Document Classification, *Bioinformatics*, Vol. 22 (17), pp. 2136-2142, 2006.
58. Han, B., **Vucetic, S.**, Braverman, A., Obradovic, Z., A Statistical Complement to Deterministic Algorithms for the Retrieval of Aerosol Optical Thickness from Radiance Data, *Engineering Applications of Artificial Intelligence*, Vol. 19, No. 7, pp. 787-795, 2006.
59. Peng, K., Radivojac, P., **Vucetic, S.**, Dunker A.K, Obradovic, Z., Length-Dependent Prediction of Protein Intrinsic Disorder, *BMC Bioinformatics*, vol. 7 (1), 208, 2006.
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 184. Vucetic, S., Substring Selection for Biomedical Document Classification, ACM First International Workshop on Text Mining in Bioinformatics, 2006. (Invited Talk)
 185. Hu, Z.Z., Liu, H., Han, B., Huang, H., Mazumder, R., Yuan, X., Obradovic, Z., Vijay-Shanker, K., Vucetic, S., Wu, C.H., Literature Mining at the Protein Information Resource (PIR), International Conference on Intelligent Systems for Molecular Biology, Fortaleza, Brazil, August, 2006. (Poster)
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 190. Drossu, R., Fiez, T., Lazarevic, A., Pokrajac, D., Vucetic, S., Obradovic, Z., Use of Terrain Analysis in Yield Map Interpretation, 1st Int. Conf. on Geographical Information Systems in Agriculture and Forestry, Orlando, FL, 1998. (Poster)

STUDENT ADVISING

Current Ph.D. students

Zhuoan Zhou, Vahid Mahzoon, Elmira Talebianaraki.

Graduated Ph.D. students

Zhuang John Wang (2010, Staff Software Engineer, Facebook)
 Vuk Malbasa (2011, Assistant Professor, University of Novi Sad)
 Mihajlo Grbovic (2012, Principal Machine Learning Scientist, Airbnb)
 Liang Lan (2012, Assistant Professor, Hong Kong Baptist University)
 Nemanja Djuric (2013, Staff Engineer and Tech Lead Manager, Aurora)
 Vladimir Coric (2014, Lead Data Scientist, SEI Investments)
 Shanshan Zhang (2019, Senior Research Scientist, Facebook)
 Tian Bai (2019, Software Engineer, Google)
 Maxim Shapovalov (2019, Postdoc, Fox Chase Cancer Center)
 Aniruddha Maiti (2022, Assistant Professor, West Virginia State University)
 Ashis Chanda (2022, Senior Data Scientist, American Express)
 Sandro Hauri (2022, Machine Learning Engineer, Swiss Rails)
 Ziyu Yang (2024, Software Engineer, Google)
 Hanzi Xu (2024, Software Engineer, Netflix)

Elizabeth Garrison (2025, startup founder)
Sai Shi (2026, Applied Scientist, Amazon)

Ph.D. Committee Member

Michael West, Abdullah Aljebreen, Jumanah Alshehri, Marija Stanojevic, Zhijia Chen, Sanjeev Sondur, Lihong He, Shoumik Roychouduri, Chao Han, Xi Hang Cao, Min Xiao, Xin Li, Ivan Stojkovic, Jelena Stojanovic, Djordje Gligorijevic, Peiyi Li, Jesse Glass, Athanasia Polychronopoulou, Dusan Ramljak, Zhuo Deng, Amir Harati, Le Shu, Debasish Das, Uros Midic, Mohamed Ghalwash, Kosta Ristovski, Vladan Radosavljevic, Peng Zhang, Quiang Liu, Qifang Xu, Nagesh Adluru, Hongbo Xie, Bo Han, Kang Peng, Roland Miezaninko, Predrag Radivojac.

Master's Thesis Advisor

Saman Enayati, Mathew Kuruvilla, Tamara Katic, Piyush Borole, Lakesh Kansakar, Yi Jia, Hao Sun, Pooja Hegde, Swetha Nandyala, Vladimir Vacic.

Undergraduate Research (2018 - 2025)

Kenneth Miller, Alexander Russakoff, Dassie Galapo, Annica Chiu, Dariia Dragunova, Tuan Lam, Sameera Rachakonda, Shakirah Cooper, Carlos Gonzalez, Abigail Liu, Paul Hutchings, Dalvir Singh, Harith Siddiqui, Phong Ha, Hoang Ho, Kevin Esslinger, Quang Pham.

UNIVERSITY SERVICE

- (2018-now) Director, Center for Hybrid Intelligence, CST, Temple
- (2018-now) Steering Committee Member and Faculty, Bioinformatics Ph.D. Program
- (2023-now) Advisory Board Member, Temple University Health System AI Committee
- (2021-now) Advisory Board Member, Loretta C. Duckworth Scholars Studio
- (2020-2022, 2024-2026) CST Tenure and Promotion Committee, Chair in 2025/26
- (2020, 2021, 2026) Chair of CIS Hiring Committee
- (2016-2018) CIS Department Chair
- (2015-2016) CIS Department Vice Chair
- (2009-2012) Chair of CS Undergraduate Committee
- (2013, 2014) Chair of CIS Future of Computing Competition
- (2014-2015) Chair of Teaching Assistant Assignment Committee
- (2006, 2007, 2008, 2012, 2014, 2018) CIS Faculty Search Committee
- (2009-2015, 2018) CIS Tenure and Promotion Committee
- (2008-2014) CS Undergraduate Committee
- (2011, 2012) CST Undergraduate Committee
- (2009, 2010, 2011, 2012) CIS Undergraduate Liaison Committee
- (2010, 2012) CIS Future of Computing Competition Judge
- (2007, 2008, 2009, 2018) CIS Merit Committee
- (2005, 2006, 2007) CIS Research Committee
- (2005) Future Direction of the CIS Department Committee
- (2005, 2006) CIS Technology Committee.

PROFESSIONAL SERVICE

- (2021-now) Advisory Board Member, The Institute for Artificial Intelligence of Serbia.
- (2021-now) Associate Editor, IEEE Transactions on Network Science and Engineering.
- (2024) Co-organizing 5th Workshop on Data Science with Human in the Loop (DaSH) at NAACL.
- (2022) Guest Associate Editor, Perspectives on Behavior Science Journal.
- (2022) Co-organizing 4th Workshop on Data Science with Human in the Loop (DaSH) at Empirical Methods in Natural Language Processing Conference (EMNLP).
- (2021) Co-organizing 3rd Workshop on Data Science with Human in the Loop (DaSH) at ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD).

- (2021) Co-organizing 2nd Workshop on Data Science with Human in the Loop (DaSH) at NAACL.
- (2020) Co-organizing 1st Workshop on Data Science with Human in the Loop (DaSH) at ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD).

Program committee member, panelist

- AAAI Conference on Artificial Intelligence (AAAI), 2015, 2016, 2017, 2018, 2026 (**Area Chair**).
 - ACM International Conference on Supporting Group Work (GROUP), 2026 (**Associate Chair**)
 - International Joint Conference on Artificial Intelligence (IJCAI), 2015, 2016, 2017, 2019, 2020 (Senior PC), 2021 (Area Chair), 2022 (Senior PC), 2023, 2024, 2025 (**Area Chair**).
 - International Conference on Artificial Intelligence in Statistics (AISTATS), 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2023.
 - The Web Conference (WWW), 2018, 2019, 2020, 2021, 2022, 2023, 2024.
 - (reviewer) International Conference on Learning Representations (ICLR), 2018, 2019, 2020, 2023, 2024.
 - ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD), 2011, 2013, 2014, 2015, 2016, 2017, 2018 (**Best Reviewer Award**), 2019.
 - International Conference on Machine Learning (ICML), 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020.
 - Annual Meeting of the Association for Computational Linguistics (ACL), 2019.
 - Empirical Methods in Natural Language Processing Conference (EMNLP), 2019, 2022, 2025.
 - Conference on Information and Knowledge Management (CIKM), 2016, 2017, 2018, 2019.
 - (reviewer) International Conference on Intelligent Systems for Molecular Biology (ISMB), 2006, 2007, 2019.
 - (reviewer) Neural Information Processing Systems (NIPS), 2009, 2014, 2015, 2016, 2017, 2018.
 - IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018.
 - IEEE International Conference on Big Data, 2013, 2017, 2018.
 - SIAM International Conference on Data Mining (SDM), 2009, 2011, 2012, 2014 (Local Chair), 2017.
 - Transportation Research Board, 2011, 2012, 2016.
 - IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2016.
 - International Conference on Information Visualization Theory and Applications (IVAPP), 2014, 2015.
 - International Conference on knowledge Discovery and information retrieval (KDIR), 2014.
 - ACM Conference on Bioinformatics, Computational Biology and Biomedicine (BCB), 2011.
 - Pacific Symposium on Biocomputing (PSB), 2006, 2007, 2008.
 - NSF Panel Member 2004, 2006, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025.
 - NIH Panel Member 2024.
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