

# Ana Stanescu

<http://www.westga.edu/~astanesc/>  
[astanesc@westga.edu](mailto:astanesc@westga.edu)

**Office Address:** University of West Georgia, 1601 Maple Street, Carrollton, GA 30118  
 Office: TLC Building, Room 2-217  
 Phone: 678.839.6294; Fax: 678.839.6486

## CURRENT POSITION

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<b>Associate Professor of Computer Science</b>	2017 –
<b>Department of Computing and Mathematics, University of West Georgia</b>	present

Courses taught:

- Undergraduate
  - CS 1020: Computers and Society (online)
  - CS 1030: Intro to Computer Concepts (online)
  - CS 1301: Computer Science 1
  - CS 1302: Computer Science 2
  - CS 3270: Intelligent Systems
  - CS 3280: Systems Programming
  - CS 4225: Distributed and Cloud Computing
  - CS 4275: Machine Learning Foundations
  - CS 4981: Independent Study
    - Deep Learning for American Sign Language Gloss (2019)
    - Deep Q-Networks for Atari 2600 (2021)
    - Multimodal Deep Learning (2022)
  - CS 4985: Special Topics – Introduction to Machine Learning
  - COMP2300: Fundamentals of Computing
  - COMP2320: Principles of Programming
- Graduate:
  - CS 6251: Web Development I

## EDUCATION

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<b>Postdoctoral Fellowship</b> in Machine Learning and Computational Biology	2017
<ul style="list-style-type: none"> <li>• <b>Icahn School of Medicine at Mount Sinai, Icahn Institute of Genomics and Multiscale Biology</b>, Department of Genetics and Genomic Sciences, New York, NY</li> </ul> Development of novel machine learning algorithms to extract enhanced predictions and actionable knowledge from crowdsourcing operations	
<b>Ph.D., Computer Science</b>	
<ul style="list-style-type: none"> <li>• <b>Kansas State University</b>, Computing and Information Sciences Department, Manhattan, KS</li> </ul> Dissertation: “Semi-supervised Learning for Biological Sequence Classification”	2015
<b>M.S., Computer Science – Secure Software Systems</b>	
<ul style="list-style-type: none"> <li>• <b>James Madison University</b>, Computer Science Department, Harrisonburg, VA</li> </ul>	2008
<b>B.S., Economic Informatics</b>	
<ul style="list-style-type: none"> <li>• <b>Romanian American University</b>, Faculty of Managerial Informatics, Bucharest, Romania</li> </ul>	2006

## GRANTS

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J.C. Seong (PI), <b>Ana Stanescu (co-PI)</b>	2019 – 2023
High-Potential Individuals Global Training Program Subaward (4 rounds of yearly fundings)	
Funding Agency: Ministry of Science & Information and Communication Technology (ICT), Planning & Evaluation	

**AWARDS**

<b>Outstanding Undergraduate Teacher</b>	Academic year
<ul style="list-style-type: none"> <li>Based on the votes of the Computer Science undergraduate students</li> </ul>	2020 - 2021
<b>Young Investigator Award</b>	
<ul style="list-style-type: none"> <li>National Institutes of Health - Big Data to Knowledge (NIH/BD2K) 26<sup>th</sup> Conference on Intelligent Systems for Molecular Biology (ISMB) Chicago, IL</li> </ul>	2018

**PUBLICATIONS**

<b>Refereed Conference Papers</b>	
<ul style="list-style-type: none"> <li>Sanghoon Ji, Jeong Seong, Yubin Lee, <b>Ana Stanescu</b>, Chul Sue Hwang – <b>Rush Hour Crashes and Speeding Analysis with Traffic Big Data</b> 2020 In: <i>Sustainable Development &amp; The Future, US-Korea Conference (UKC 2020)</i></li> <li>Steven Benzel and <b>Ana Stanescu</b> – <b>Histogram methods for unsupervised clustering.</b> 2020 In: The Annual ACM Southeast Conference (ACMSE 2020) Tampa, FL [Acceptance rate: 45%]</li> <li>Jonathan Corley, <b>Ana Stanescu</b>, Lewis Baumstark, Michael Orsega – <b>Paper Or IDE? The Impact of Exam Format on Student Performance in a CS1 Course.</b> 2020 In: <i>The 51st ACM Technical Symposium on Computer Science Education Proceedings (ACM SIGCSE 2020), Portland, OR</i></li> <li><b>Ana Stanescu</b> and Gaurav Pandey – <b>Learning parsimonious ensembles for unbalanced computational genomics problems.</b> 2017 In: <i>Pacific Symposium on Biocomputing (PSB 2017) Kohala Coast, Big Island, HI</i></li> <li><b>Ana Stanescu</b>, Karthik Tangirala, and Doina Caragea – <b>Study of transductive learning and unsupervised feature construction methods for biological sequence classification.</b> 2016 In: <i>Proceedings of the International Symposium on Network Enabled Health Informatics, Biomedicine and Bioinformatics, part of the Proceedings of the 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2016) San Francisco, CA (Best Paper Award)</i></li> <li><b>Ana Stanescu</b> and Doina Caragea – <b>Transductive Learning Approaches for Predicting Cassette Exons.</b> 2015 In: <i>Proceedings of the Conference on Computational Intelligence in Bioinformatics and Computational Biology (IEEE CIBCB 2014), Niagara Falls, Canada [Regular Paper]</i></li> <li><b>Ana Stanescu</b> and Doina Caragea – <b>Ensemble-based Semi-supervised Learning Approaches for Imbalanced Splice Site Datasets.</b> 2014 In: <i>Proceedings of the 2014 International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2014), Belfast, United Kingdom</i></li> <li><b>Ana Stanescu</b> and Doina Caragea – <b>Semi-supervised Self-training Approaches for Imbalanced Splice Site Datasets.</b> 2014 In: <i>Proceedings of the 6<sup>th</sup> International Conference on Bioinformatics and Computational Biology (BICoB 2014), Las Vegas, NV [Regular Paper]</i></li> <li><b>Ana Stanescu</b>, Swapnil Nagar, Doina Caragea – <b>A Hybrid Recommender System: User Profiling from Keywords and Ratings.</b> 2013 In: <i>Proceedings of the 2013 IEEE/WIC/ACM International Conference on Web Intelligence (IEEE WI)</i></li> <li>Srilaxmi Cheeti, <b>Ana Stanescu</b>, and Doina Caragea – <b>Cross-Domain Sentiment Classification Using an Adapted Naïve Bayes Approach and Features Derived from Syntax Trees.</b> 2013 In: <i>Proceeding of the 5<sup>th</sup> International Conference on Knowledge Discovery and Information Retrieval (KDIR 2013), Vilamoura, Portugal, [Acceptance rate 39%]</i></li> <li><b>Ana Stanescu</b> and Doina Caragea – <b>Semi-supervised Learning of Alternatively Spliced Exons Using Expectation Maximization Type Approaches.</b> 2012 In: <i>Proceedings of the 3rd International Conference on Bioinformatics Models, Methods and Algorithms (BIOINFORMATICS2012), Vilamoura, Algarve, Portugal (SciTePress Digital Library)</i></li> </ul>	

### Refereed Journal Articles

- Solveig K. Sieberts, Henryk Borzymowski, Yuanfang Guan, (12 authors), **Ana Stanescu**, (3 authors), the BEAT-PD DREAM Challenge Consortium et al. – **Developing better digital health measures of Parkinson’s disease using free living data and a crowdsourced data analysis challenge.** 2023  
In: *PLOS Digital Health* (2023) [[link](#)]
- Jeong Seong, Yunsik Kim, Hyewon Goh, Hyunmin Kim, and **Ana Stanescu** – **Measuring Traffic Congestion with Novel Metrics: A Case Study of Six U.S. Metropolitan Areas** 2023  
In: International Society for Photogrammetry and Remote Sensing - *International Journal of Geo-Information: Vol. 12, Issue 3, Article 130 (ISPRS IJGI 2023)* [[link](#)]
- Jeong Seong, Chul Sue Hwang, **Ana Stanescu**, Youngho Lee, Yubin Lee – **What Geographers Research: An Analysis of Geography Topics, Clusters, and Trends Using a Keyword Network Analysis Approach and the 2000-2019 AAG Conference Presentations** 2022  
In: *Int’l Journal of Geospatial and Environmental Research: Vol. 9, No. 1, Article 1. (IJGER 2022)*
- **Ana Stanescu**, Jeong Chang Seong, Yubin Lee, and Chul Sue Hwang – **A Picture of Geography Revealed by a Keyword Network Analysis of the 2020 AAG Conference.** 2022  
In: *Journal of the Korean Geographical Society, Vol. 56, No. 3, pages 177-187. (JKGS 2022)*
- Sanghoon Ji, Jeong Seong, Ana Stanescu, Chul Sue Hwang, Yubin Lee – **Construction of spatio-temporal data and analysis of congestion patterns using real-time traffic information from Google - Case of Montgomery County, Maryland, USA** 2021  
In: *Journal of the Korean Geographical Society, Vol. 56, No. 3, pages 265 - 276*
- Youngho Lee, Yubin Lee, Jeong Seong, **Ana Stanescu**, Chul Sue Hwang – **A Comparison of Network Clustering Algorithms in Keyword Network Analysis: A Case Study with Geography Conference Presentations.** 2020  
In: *International Journal of Geospatial and Environmental Research, Vol. 7, No. 1, Article 1 (IJGER2020)*
- Yubin Lee, Youngho Lee, Jeong Seong, **Ana Stanescu**, Taegun Hwang, Chul Sue Hwang – **Analysis of GIS Research Trends in US with AAG Conference Presentations from 2000-2019.** 2020  
In: *The Geographical Journal of Korea, Vol. 53, No. 4, pp. 495-508*
- Fourati S, Talla A, Mahmoudian M, Burkhart JG, Klen R, (10 authors), **Ana Stanescu**, Vogel R, The Respiratory Viral DREAM Challenge Consortium, Pandey G, (6 authors), Mangravite LM, Sieberts SK. – **A crowdsourced analysis to identify ab initio molecular signatures predictive of susceptibility to viral infection.** 2018  
In: *Nature Communications* ([9:4418](#))
- **Ana Stanescu** and Doina Caragea – **An empirical study of self-training and data balancing techniques for splice site prediction** 2017  
In: *International Journal of Bioinformatics Research and Applications, Vol. 13, No. 1, pp. 40-61*
- **Ana Stanescu**, Karthik Tangirala, and Doina Caragea – **Predicting Alternatively Spliced Exons Using Semi-Supervised Learning** 2016  
In: *International Journal of Data Mining and Bioinformatics; Volume 14, No. 1, pp. 1-21*
- **Ana Stanescu** and Doina Caragea – **An empirical study of ensemble-based semi-supervised learning approaches for imbalanced splice site datasets.** 2015  
In: *BMC Systems Biology; Volume 9, Supplement 5, S1*

### Posters and Talks

- Jeong Seong, Yunkik Kim, Hyewon Goh, **Ana Stanescu** – **Development of a Traffic Congestion Index from Spatiotemporal Big Data for Urban Transportation Research and Applications** 2023  
In: AAG Annual Meeting (AAG 2023)
- Yunkik Kim, Jeong Seong, Hyewon Goh, **Ana Stanescu** – **Modeling the Probabilities of Vehicle Crashes Using Machine Learning Methods with Congestion Amounts and Spatiotemporal Features at Montgomery County, Maryland** 2023  
In: AAG Annual Meeting (AAG 2023)

- Hyewon Goh, Jeong Seong, Yunkik Kim, **Ana Stanescu** – **Does Traffic Congestion Increase Vehicle Crashes? A Regional Scale Study with a Novel Congestion Index and Machine Learning Methods** 2023  
In: AAG Annual Meeting (AAG 2023)
- Mautusi Mitra, **Ana Stanescu**, Kevin Nguyen, Taylor Berry – **Whole genome sequencing of a novel bacterial strain isolated from a contaminated green-micro algal culture plate provides insight into its metabolome involved in heavy metal tolerance and xenobiotic biodegradation.** 2022  
In: International Seminar on Plants and Microbes: Health & Food (12/28-29/2022) Calcutta, India
- Seorim Cho, Hyeokjin Hong, Hyunmin Kim, JC Seong, **Ana Stanescu**, Chul Sue Hwang – **Detecting Water Quality Changes by Landsat 8 OLI: A Case Study of Taedong River, North Korea** 2022  
In: AAG Annual Meeting (AAG 2022)
- Hyeokjin Hong, Hyunmin Kim, Seorim Cho, JC Seong, **Ana Stanescu**, Chul Sue Hwang – **Traffic Big-data Analysis with Google Maps: Atlanta, Georgia, 2021** 2021  
In: 76th Annual Meeting of the Southeastern Division of the American Association of Geographers (SEDAAG 2021) Florence, AL
- Youngho Lee, Yubin Lee, **Ana Stanescu**, Jeong Seong – **Summarizing the 2019 AAG Conference Presentations Using Keyword Network Analysis.** 2019  
In: The 74th Annual Meeting of the Southeastern Division of the American Association of Geographers (SEDAAG 2019) Wilmington, NC
- Adel Abunawass, **Ana Stanescu**, Alexandra Young, and Edwin Rudolph – **It Taketh a Village: Social Equity and Educational Access in Higher Ed.** 2019  
In: *Conference on Meaningful Living and Learning in a Digital World*; February 4-6, 2019, Savannah, GA
- **Ana Stanescu** and Gaurav Pandey – **Integrating heterogeneous predictive models using Reinforcement Learning.** 2018  
In: *26<sup>th</sup> Conference on Intelligent Systems for Molecular Biology (ISMB)- Machine Learning in Computational and Systems Biology (MLCSB) track*; July 6-11, 2018, Chicago, IL  
[20-minute talk and poster presentation, acceptance rate 12%]
- **Ana Stanescu**, Mehmet Eren Ahsen, Robert Vogel, Gustavo Stolovitzky, Solveig K. Sieberts, and Gaurav Pandey – **Crowdsourced ensembles for the DREAM Respiratory Viral (RV) Challenge.** 2017  
In: *RECOMB/ISCB Conference on Regulatory and Systems Genomics, with DREAM Challenges (RECOMB/ISCB RSG 2017)* November 19-22, 2017, New York, NY
- **Ana Stanescu** and Gaurav Pandey – **Learning parsimonious ensembles for biomedical prediction problems and DREAM challenges.** 2016  
In: *RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges and Cytoscape Workshop (RECOMB/ISCB 2016)*
- **Ana Stanescu** and Doina Caragea – **Semi-supervised learning of alternatively spliced exons.** 2011  
In: *Proceedings of the 2011 Regional ACM/MINK-WTC Conference*, October 7-8, 2011, Kansas City, MO (**Best Poster Award**)
- **Ana Stanescu**, Doina Caragea, and Susan J. Brown – **Semi-supervised learning approaches for biological sequences.** 2011  
In: *ACM/CRA-W Grad Cohort Workshop*, April 1-2, 2011, Boston, MA

#### Other Publications

- Mautusi Mitra and [Ana Stanescu](#) – *Microbacterium sp. Clip185* chromosome, complete genome: 2023  
[https://www.ncbi.nlm.nih.gov/nuccore/NZ\\_CP117996.1](https://www.ncbi.nlm.nih.gov/nuccore/NZ_CP117996.1) (comprises 1 sequence)  
In: NCBI (National Center for Biotechnology Information)
- Mautusi Mitra and [Ana Stanescu](#) – *Acidovorax temperans* strain LMJ chromosome, complete genome: 2023  
<https://www.ncbi.nlm.nih.gov/nuccore/CP117193.1> (comprises 3 sequences)  
In: NCBI (National Center for Biotechnology Information)

- Mautusi Mitra and [Ana Stanescu](#) – *Sphingobium yanoikuyae* strain CC4533 chromosome, complete genome: <https://www.ncbi.nlm.nih.gov/nuccore/CP115456.1> (comprises 5 sequences) 2023  
In: NCBI (National Center for Biotechnology Information)
- Jeong Chang Seong, Sanghoon Ji, **Ana Stanescu**, and Chul Sue Hwang – **What will be presented at the 2021 AAG Meeting?** [[article](#)] 2021  
In: The American Association of Geographers Newsletter, April 2, 2021
- Jeong Chang Seong, Chul Sue Hwang, **Ana Stanescu**, Yubin Lee, and Youngho Lee – **What will be presented at the 2020 AAG Meeting?** [DOI: [10.14433/2017.0068](https://doi.org/10.14433/2017.0068)] 2020  
In: The American Association of Geographers Newsletter, February 25, 2020
- **Ana Stanescu**, Ramon A. Mata-Toledo, Pranshu Gupta – **Machine Learning** 2018  
In: McGraw-Hill Education [Research Review in [AccessScience](#)]
- Pranshu Gupta, **Ana Stanescu**, Ramon A. Mata-Toledo – **Internet of Things** 2018  
In: McGraw-Hill Education [Research Review in [AccessScience](#)]
- **Ana Stanescu** – **XML (Extensible Markup Language)** 2014  
In: McGraw-Hill Education Encyclopedia/Yearbook of Science & Technology [Research Review in [AccessScience](#)]

## PROFESSIONAL SERVICE

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### Grant Panel Reviewer

- NSF Computer and Information Science and Engineering (CISE) 2021

### Journal Article Reviewer

- IEEE Transactions on Neural Networks and Learning Systems 2018 - present
- ACM Transactions on Knowledge Discovery from Data 2018
- IEEE Transactions on Cybernetics 2016, 2018, 2023
- IEEE Transactions on Computational Biology and Bioinformatics 2017
- IEEE Access 2017

### Conference Article Sub-reviewer

- IEEE International Conference on Data Science and Advanced Analytics 2019 - present
- ISMB European Conf. on Computational Biology 2019
- IJCAI Bioinformatics and Artificial Intelligence Workshop 2016
- ACM Conference on Bioinformatics, Computational Biology, and Health Informatics 2015
- IEEE International Symposium on Bioinformatics Research and Applications 2012 - 2015
- IEEE International Conf. on Bioinformatics and Biomedicine 2013
- IEEE International Conf. on Computational Advances in Bio and Medical Sciences 2012

## INVITED TALKS

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- The University System of Georgia Women in Technology (WIT) Summit, Carrollton, GA 2018
- *Speaker Series* in the Computer Science Dept. at James Madison University, Harrisonburg, VA 2014

## CERTIFICATES

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### NASA's Applied Remote Sensing Training Program

- Certification of completion - [Using Google Earth Engine for Land Monitoring Applications](#) 2021

### United States Committee on National Security Systems

- Certification for Information Systems Security Professionals 2008