Ana Stanescu

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PROFESSIONAL APPOINTMENTS

University of West Georgia, Department of Computing and Mathematics, Carrollton, GA

- **Associate Professor** of Computer Science — 2022 – now
- **Assistant Professor** of Computer Science — 2017 – 2022

Icahn Institute of Genomics and Multiscale Biology, Icahn School of Medicine at Mount Sinai
Department of Genetics and Genomic Sciences, New York, NY

- **Postdoctoral Research Fellow** in Machine Learning and Computational Biology — 2015 – 2017

EDUCATION

Ph.D., Computer Science

- Kansas State University, Computing and Information Sciences Department, Manhattan, KS — 2015
  Dissertation: "Semi-supervised Learning for Biological Sequence Classification"

M.S., Computer Science – Secure Software Systems

- James Madison University, Computer Science Department, Harrisonburg, VA — 2008

B.S., Economic Informatics

- Romanian American University, Faculty of Managerial Informatics, Bucharest, Romania — 2006

GRANTS

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

AWARDS

Outstanding Undergraduate Teacher — 2021

- Based on the votes of the Computer Science undergraduate students (AY2020 – 2021)

Young Investigator Award — 2018

- National Institutes of Health - Big Data to Knowledge (NIH/BD2K)
  26th Conference on Intelligent Systems for Molecular Biology (ISMB) Chicago, IL

PUBLICATIONS

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.** In: *PLOS Digital Health* (2023) [link] — 2023

- 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** In: International Society for Photogrammetry and Remote Sensing - *International Journal of Geo-Information: Vol. 12, Issue 3, Article 130 (ISPRS IJGI 2023)* [link] — 2023

- 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** In: *Int'l Journal of Geospatial and Environmental Research: Vol. 9, No. 1, Article 1. (IJGER 2022)* — 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**.
  In: *Journal of the Korean Geographical Society, Vol. 56, No. 3, pages 177-187. (JKGS 2022)*
  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**
  In: *Journal of the Korean Geographical Society, Vol. 56, No. 3, pages 265 - 276*
  2021
- 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**.
  In: *International Journal of Geospatial and Environmental Research, Vol. 7, No. 1, Article 1 (IJGER2020)*
  2020
- 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.**
  In: *The Geographical Journal of Korea, Vol. 53, No. 4, pp. 495-508*
  2020
- 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.**
  In: ***Nature Communications*** ([9:4418](#))
  2018
- **Ana Stanescu** and Doina Caragea – **An empirical study of self-training and data balancing techniques for splice site prediction**
  In: *International Journal of Bioinformatics Research and Applications, Vol. 13, No. 1, pp. 40-61*
  2017
- **Ana Stanescu**, Karthik Tangirala, and Doina Caragea – **Predicting Alternatively Spliced Exons Using Semi-Supervised Learning**
  In: *International Journal of Data Mining and Bioinformatics; Volume 14, No. 1, pp. 1-21*
  2016
- **Ana Stanescu** and Doina Caragea – **An empirical study of ensemble-based semi-supervised learning approaches for imbalanced splice site datasets.**
  In: *BMC Systems Biology; Volume 9, Supplement 5, S1*
  2015

Refereed Conference Papers

- Sanghoon Ji, Jeong Seong, Yubin Lee, **Ana Stanescu**, Chul Sue Hwang – **Rush Hour Crashes and Speeding Analysis with Traffic Big Data**
  In: *Sustainable Development & The Future, US-Korea Conference (UKC 2020)*
  2020
- Steven Benzel and **Ana Stanescu** – **Histogram methods for unsupervised clustering.**
  In: The Annual ACM Southeast Conference (ACMSE 2020) Tampa, FL [Acceptance rate: 45%]
  2020
- Jonathan Corley, **Ana Stanescu**, Lewis Baumstark, Michael Orsega – **Paper Or IDE? The Impact of Exam Format on Student Performance in a CS1 Course.**
  In: *The 51st ACM Technical Symposium on Computer Science Education Proceedings (ACM SIGCSE 2020), Portland, OR*
  2020
- **Ana Stanescu** and Gaurav Pandey – **Learning parsimonious ensembles for unbalanced computational genomics problems.**
  In: *Pacific Symposium on Biocomputing (PSB 2017) Kohala Coast, Big Island, HI*
  2017
- **Ana Stanescu**, Karthik Tangirala, and Doina Caragea – **Study of transductive learning and unsupervised feature construction methods for biological sequence classification.**
  In: *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)**
  2016
- **Ana Stanescu** and Doina Caragea – **Transductive Learning Approaches for Predicting Cassette Exons.**
  In: *Proceedings of the Conference on Computational Intelligence in Bioinformatics and Computational Biology (IEEE CIBCB 2014),* Niagara Falls, Canada [Regular Paper]
  2015

- **Ana Stanescu** and Doina Caragea – **Ensemble-based Semi-supervised Learning Approaches for Imbalanced Splice Site Datasets.**
  In: *Proceedings of the 2014 International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2014),* Belfast, United Kingdom

  2014

- **Ana Stanescu** and Doina Caragea – **Semi-supervised Self-training Approaches for Imbalanced Splice Site Datasets**.
  In: *Proceedings of the 6th International Conference on Bioinformatics and Computational Biology (BICoB 2014),* Las Vegas, NV [Regular Paper]

  2014

- **Ana Stanescu**, Swapnil Nagar, Doina Caragea – **A Hybrid Recommender System: User Profiling from Keywords and Ratings.**
  In: *Proceedings of the 2013 IEEE/WIC/ACM International Conference on Web Intelligence (IEEE WI)*

  2013

- Srilaxmi Cheeti, **Ana Stanescu**, and Doina Caragea – **Cross-Domain Sentiment Classification Using an Adapted Naïve Bayes Approach and Features Derived from Syntax Trees.**
  In: *Proceeding of the 5th International Conference on Knowledge Discovery and Information Retrieval (KDIR 2013),* Vilamoura, Portugal, [Acceptance rate 39%]

  2013

- **Ana Stanescu** and Doina Caragea – **Semi-supervised Learning of Alternatively Spliced Exons Using Expectation Maximization Type Approaches.**
  In: *Proceedings of the 3rd International Conference on Bioinformatics Models, Methods and Algorithms* (*BIOINFORMATICS2012*)*,* Vilamoura, Algarve, Portugal (SciTePress Digital Library)

  2012

Other Technical or Data Publications

- Mautusi Mitra and Ana Stanescu – **Complete Genome Sequence of *Acidovorax temperans* strain LMJ from a contaminated *Chlamydomonas reinhardtii* culture plate.**
  In: DOE KBase (Department of Energy Systems Biology Knowledgebase)
  https://commons.datacite.org/doi.org/10.25982/161632.357/2228677
  https://kbase.us/n/161632/357/

  2023

- Mautusi Mitra and Ana Stanescu – ***Microbacterium sp. Clip185* chromosome, complete genome**: https://www.ncbi.nlm.nih.gov/nuccore/NZ_CP117996.1 (comprises 1 sequence)
  In: NCBI (National Center for Biotechnology Information)

  2023

- Mautusi Mitra and Ana Stanescu – ***Acidovorax temperans* strain *LMJ* chromosome, complete genome**: https://www.ncbi.nlm.nih.gov/nuccore/CP117193.1 (comprises 3 sequences)
  In: NCBI (National Center for Biotechnology Information)

  2023

- Mautusi Mitra and Ana Stanescu – ***Sphingobium yanoikuyae* strain *CC4533* chromosome, complete genome**: https://www.ncbi.nlm.nih.gov/nuccore/CP115456.1 (comprises 5 sequences)
  In: NCBI (National Center for Biotechnology Information)

  2023

- Jeong Chang Seong, Sanghoon Ji, **Ana Stanescu**, and Chul Sue Hwang – **What will be presented at the 2021 AAG Meeting?** [article]
  In: The American Association of Geographers Newsletter, April 2, 2021

  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]
  In: The American Association of Geographers Newsletter, February 25, 2020

  2020

- **Ana Stanescu**, Ramon A. Mata-Toledo, Pranshu Gupta – **Machine Learning**
  In: McGraw-Hill Education [Research Review in [AccessScience]

  2018

- Pranshu Gupta**, Ana Stanescu**, Ramon A. Mata-Toledo – **Internet of Things**
  In: McGraw-Hill Education [Research Review in AccessScience]

  2018

- **Ana Stanescu – XML (Extensible Markup Language)**
  In: McGraw-Hill Education Encyclopedia/Yearbook of Science & Technology [Research Review in AccessScience]

  2014

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**
  In: AAG Annual Meeting (AAG 2023)
  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**
  In: AAG Annual Meeting (AAG 2023)
  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**
  In: AAG Annual Meeting (AAG 2023)
  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.**
  In: International Seminar on Plants and Microbes: Health & Food (12/28-29/2022) Calcutta, India
  2022

- 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**
  In: AAG Annual Meeting (AAG 2022)
  2022

- Hyeokjin Hong, Hyunmin Kim, Seorim Cho, JC Seong, **Ana Stanescu**, Chul Sue Hwang – **Traffic Big-data Analysis with Google Maps: Atlanta, Georgia, 2021**
  In: 76th Annual Meeting of the Southeastern Division of the American Association of Geographers (SEDAAG 2021) Florence, AL
  2021

- Youngho Lee, Yubin Lee, **Ana Stanescu**, Jeong Seong – **Summarizing the 2019 AAG Conference Presentations Using Keyword Network Analysis.**
  In: The 74th Annual Meeting of the Southeastern Division of the American Association of Geographers (SEDAAG 2019) Wilmington, NC
  2019

- Adel Abunawass, **Ana Stanescu**, Alexandra Young, and Edwin Rudolph – **It Taketh a Village: Social Equity and Educational Access in Higher Ed.**
  In: *Conference on Meaningful Living and Learning in a Digital World;* February 4-6, 2019, Savannah, GA
  2019

- **Ana Stanescu** and Gaurav Pandey – **Integrating heterogeneous predictive models using Reinforcement Learning.**
  In: *26th 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%]
  2018

- **Ana Stanescu**, Mehmet Eren Ahsen, Robert Vogel, Gustavo Stolovitzky, Solveig K. Sieberts, and Gaurav Pandey – **Crowdsourced ensembles for the DREAM Respiratory Viral (RV) Challenge**.
  In: *RECOMB/ISCB Conference on Regulatory and Systems Genomics, with DREAM Challenges (RECOMB/ISCB RSG 2017)* November 19-22, 2017, New York, NY
  2017

- **Ana Stanescu** and Gaurav Pandey – **Learning parsimonious ensembles for biomedical prediction problems and DREAM challenges.**
  In: *RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges and Cytoscape Workshop (RECOMB/ISCB 2016)*
  2016

- **Ana Stanescu**, Doina Caragea – **Semi-supervised learning of alternatively spliced exons.**
  In: *Proceedings of the 2011 Regional ACM/MINK-WIC Conference*, October 7-8, 2011, Kansas City, MO **(Best Poster Award)**
  2011

- **Ana Stanescu**, Doina Caragea, and Susan J. Brown – **Semi-supervised learning approaches for biological sequences.**
  In: *ACM/CRA-W Grad Cohort Workshop*, April 1-2, 2011, Boston, MA
  2011

PROFESSIONAL SERVICE

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

- 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

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