

# Curriculum Vita August 2024

 Name and Title: Adam Bowden – Instructor

 Academic Department: Mathematics

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## EDUCATION

- Master of Computer Science Texas A&M University – Commerce, December 2019
- Master of Mathematics
   Texas A&M University Commerce, August 2014
- Bachelor of Computer Science Texas A&M University – Commerce, August 2012
- Associates of Computer Science Paris Junior College, July 2010

# TEACHING EXPERIENCE

- August 2015 Present, Instructor of Mathematics, *Texas A&M University Commerce*
- August 2014 August 2015, Ad Interim Instructor of Mathematics, Texas A&M University – Commerce
- Summer I 2014, Summer I 2015, Fall 2023, Adjunct Instructor, Paris Junior College
- August 2012 May 2014, Graduate Assistant Teaching, Texas A&M University -Commerce

## PUBLICATIONS

- (In Review) N.M Sirakov, A. Bowden, Image Databases with Features Augmented with Singular Point Shapes for Enhanced Machine Learning, *Electronics*, 2024
- Igbasanmi, O., Sirakov, N.M., Bowden, A. CNN for Efficient Objects Classification with Embedded Vector Fields, 2024, In: García Márquez, F.P., Jamil, A., Ramirez, I.S., Eken, S., Hameed, A.A. (eds) Computing, Internet of Things and Data Analytics. ICCIDA 2023. Studies in Computational Intelligence, vol 1145. Springer, Cham. <u>https://doi.org/10.1007/978-3-031-53717-2\_29</u>
- N.M. Sirakov, A. Bowden, M. Chen, L.H. Ngo, M. Luong, Embedding vector field into image features to enhance classification, *Journal of Computational and Applied Mathematics*, Volume 441, 2024, 115685, ISSN 0377-0427, <u>https://doi.org/10.1016/j.cam.2023.115685</u>
- O. Igbasanmi, N.M. Sirakov, A. Bowden, CNN for Efficient Objects Classification with Embedded Vector Fields, Studies in Computational Intelligence, 2023
- Bowden, A., Sirakov, N.M. Active Contour Directed by the Poisson Gradient Vector Field and Edge Tracking. J Math Imaging Vis, 2021, <u>https://doi.org/10.1007/s10851-021-01017-3</u>
- Bowden, A. & Sirakov, N. M. Applications of the Euler Lagrange Poisson Active Contour in Vector Fields, Overcoming Noise, and Line Integrals. *Differential Equations* and Dynamical Systems – Series B, 2015
- Bowden, A., Todorov, M. D., & Sirakov, N. M. Implementation of the Euler-Lagrange and Poisson Equations to Extract One Connected Region. *AIP Conference Proceedings*, 2014, 1629(1), 400-407.

#### SERVICE

 Co-sponsor of the Math Clubs (Alpha Gamma Alpha and Council for Teaching Mathematics) (2019 – present)

Duties include: arranging monthly meetings for members, overseeing and recruiting club members and officers, and handling fundraising.

- Co-coach of the Math Bowl competition teams (2019 present)
   Duties include: raising funds for travel and registration, hosting practice activities, and arranging for transportation and oversight of teams to the competition.
- Dual Credit Coordinator for Math Classes Duties include serving as a point of contact for math dual credit instructors, sending course materials, and creating observation reports for math dual credit instructors.

- Math Department website coordinator
   Duties include insuring web information is up-to-date and accurate.
- Northeast Texas Algebra Competition (NTAC) question organizer
   Duties include creating competition presentation and organizing questions and answers
- Co-chair of the Mathematics Advisory Council (MAC) and Chair of MAC Action Plan Committee (Fall 2018 – Spring 2021)
   Duties included: arranging and leading two meetings each year, collecting council feedback, and leading the committee to take action on feedback.
- Served on hiring committee for new dual credit math faculty (2024).
- Assisted with the annual SCUDEM competition in the math department.
- Created the webpage for the 2017 Mathematical Association of America (MAA) Texas Section hosted on campus:

(https://inside.tamuc.edu/academics/colleges/scienceEngineeringAgriculture/department s/mathematics/archives/events/maa2017/default.aspx)

# PRESENTATIONS

- Improving Machine Learning Performance on Image Databases by Embedding Vector Fields, 103rd Annual Mathematical Association of America – Texas Section Conference, March 23, 2024
- CNN for Efficient Classification of Objects with Embedded Singularities (Co-presented with Oluwaseyi Igbasanmi and Dr. Nikolay M. Sirakov), 2nd International Conference on Computing, <u>July 21, 2023</u>
- Recent Experiences in Dual Credit, 101st Annual Mathematical Association of America Texas Section Conference, Denton, TX, <u>April 2, 2022</u>
- Answering HB2223 In Math: The Co-Requisite Model at TAMUC (Co-presented with Dr. Pamela Webster, Mrs. Laura Been, and Mrs. Rebecca Steward), Co-Requisite Courses Conference, Houston, TX, June 22, 2019
- Investigating Deep Euler-Lagrange-Poisson Segmentation Learning for Image Segmentation, 99th Annual Mathematical Association of America – Texas Section Conference, Stephenville, TX, <u>March 29, 2019</u>
- Strategies for Dual Credit Success: Building Connections, Rigor, and Quality, 2018 Dual Credit & Early College High School Conference, Denton, TX, <u>April 11, 2018</u>

- University Math at the High School: Addressing Challenges and Finding Strategies for Successful Dual Credit Classes, 98th Annual Mathematics Association of America Conference – Texas Section, Dallas, TX, <u>April 6, 2018</u>
- What Links Computers, Science, Engineering, and Medicine? The Answer and an Example (Co-presented with Dr. Nikolay Sirakov), Math Club, Texas A&M University – Commerce, Commerce, TX, February 9, 2018
- Teaching with Technology: Experiences from Dual Credit, Conference for the Advancement of Mathematics Teaching, Fort Worth, TX, July 7, 2017
- Splitting ELPAC and Its Applications, 97th Annual Mathematical Association of America – Texas Section Conference, Commerce, TX, <u>March 31, 2017</u>
- The Magical Mysteries of Math (Co-presented with Mrs. Rebecca Steward) Math Club, Texas A&M University – Commerce, Commerce, TX, <u>December 8, 2016</u>
- Enhancements to the Euler Lagrange Poisson Active Contour, 96th Annual Mathematical Association of America – Texas Section Conference, Nacogdoches, TX, <u>April 1, 2016</u>
- The Magical Mysteries of Math (Co-presented with Mrs. Rebecca Steward)
   Math Club, Texas A&M University Commerce, Commerce, TX, <u>December 3, 2015</u>
- Investigations Into the Noise and Multiple Region Segmentation Abilities of Euler-Lagrange Poisson Active Contour, The 9th International Conference on Differential Equations and Dynamical Systems, Dallas, TX, <u>May 14 2015</u>
- Handling Noise and Multiple Region Segmentation With an Euler Lagrange Poisson Active Contour, Math Department Colloquium, Texas A&M University – Commerce, Commerce, TX, <u>February 6 2015</u>
- Application of the Euler-Lagrange and Poisson Equations to Image Segmentation, 94th Annual Mathematics Association of America Conference – Texas Section, Laredo, TX, <u>April 5, 2014</u>