Curriculum Vita

Adam Bowden

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, *East Texas A&M University*
- **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

- 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. https://doi.org/10.1007/978-3-031-53717-2_29

- 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, https://doi.org/10.1016/j.cam.2023.115685

- 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, https://doi.org/10.1007/s10851-021-01017-3

- 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.

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, July 21, 2023

- *Recent Experiences in Dual Credit*, 101st Annual Mathematical Association of America – Texas Section Conference, Denton, TX, April 2, 2022

- *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, March 29, 2019

- *Strategies for Dual Credit Success: Building Connections, Rigor, and Quality*, 2018 Dual Credit & Early College High School Conference, Denton, TX, April 11, 2018

- *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, April 6 2018

- *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, March 31, 2017

- *The Magical Mysteries of Math* (Co-presented with Mrs. Rebecca Steward)
  Math Club, Texas A&M University – Commerce, Commerce, TX, December 8, 2016

- *Enhancements to the Euler – Lagrange Poisson Active Contour*, 96th Annual Mathematical Association of America – Texas Section Conference, Nacogdoches, TX, April 1 2016

- *The Magical Mysteries of Math* (Co-presented with Mrs. Rebecca Steward)
  Math Club, Texas A&M University – Commerce, Commerce, TX, December 3, 2015

- *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, May 14 2015

- *Handling Noise and Multiple Region Segmentation With an Euler – Lagrange Poisson Active Contour,* Math Department Colloquium, Texas A&M University – Commerce, Commerce, TX, February 6 2015

- *Application of the Euler-Lagrange and Poisson Equations to Image Segmentation*, 94th Annual Mathematics Association of America Conference – Texas Section, Laredo, TX, April 5 2014

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-chaired 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 committees for AI academic standards use and campus strategic planning.
- Served on hiring committees for hiring new faculty and staff.
- 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/departments/mathematics/archives/events/maa2017/default.aspx)