

M. Cheri Davis, EdD
East Texas A&M University
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903 468 8650 (ofc)

Education

| <u>East Texas A&M University</u> | | |
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| ➤ Ed.D. | Supervision Curriculum & Instruction in Higher Education: Educational Leadership | |
| | Minor in Science | 2013 |
| Dissertation | Mathematics and Science Education Attrition, Retention, & Migration: A Study of Three Urban School Districts in the State of Texas | |
| ➤ Master of Science | Broadfield Science focus in Physics | 2005 |
| Masters Research | K-12 Curriculum alignment differential between NSES & TEKS | |
| ➤ Bachelor of Science | Interdisciplinary Studies focus in Science | 2002-2004 |
| Teacher Certification | Composite Science-Texas | Current |

Professional Experience

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| ➤ East Texas A&M University | 2005-present |
| Planetarium Director | 2018-current |
| Professional Track Faculty-Physics & Astronomy | |

Texas A&M University-Commerce

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| Assistant Planetarium Director | 2005-2018 |
| Professional Track Faculty-Physics & Astronomy | |

○ Courses taught

- ASTR 1304 Solar System
- ASTR 1303 Stars & Universe
- ASTR 497 NASA Educational Astronomy Grant-Undergraduate
- ASTR 597 NASA Educational Astronomy Grant-Graduate
- IS 351 Science Inquiry I-Physics
- IS 352 Science Inquiry II-Chemistry
- IS 451 GLB/Historical Development of Science
- IS 489 Independent Studies-Undergraduate

- IS 1315/1415 Integrated Science
- PHYS 489 Independent Studies-Undergraduate
- UNCO 1301 Signature Course I: Egyptian Cultural Study: *Walk Like an Egyptian*
(Course developer)
- UNCO 1301 Signature Course II: Star Lore: The Mystery, Magic, & Mythology
(Course developer)
- CID 2301 The Human Experience: Technology & Futurism
(Course developer) (Regular and honors sections)

- Astronomy lab coordinator/instructor/assistant
 - ASTR 1104/1411/101 Solar System Lab
 - ASTR 1103/1412/102 Stars & Universe Lab
 - ASTR 260 Archaeoastronomy
 - ASTR 310 Observational Astronomy

Academic Service/Grants/Funding

Service

- TSGC Fellowship reviewer
- NASA MITTIC Grant evaluator
- Total Solar Eclipse Co-Sponsor (event planned for 10,000)
 - Several talks provided, organized for the departments of the planetarium and physics, served approx. 3500
- Community Outreach for Planetarium Services (current)
- Observatory Open House events 3-4 times annually (current)
- New course developed for College of Innovation & Design, The Human Experience (2023-current)
- Guest Speaker for the Cotton Museum (2021)
- U.S. Prep: Renewing Educator Preparation (2021-current)
- Around Texas with Chancellor Sharp (2021)
- Astronomy Education Research: Bridging Research & Practice, Garching, Munich, Germany (Sept 2019)
- 2019 S-STEM Symposium, NSF & AAAS Washington, DC (Sept 2019)
- Building Astronomy in Texas 2019 Conference
- Signature Course: *Star Lore*
- Training for Signature Course SI Leaders: 2018/2019/2022
- UNM Mentoring Institute Conference, PASS
- Curriculum Development and Manual Publication: (manuals) IS 351, IS 352, PHYS 1401, 1402, 2425, & 2426. Van-Griner Publishing
- Search Committee PHAS 2018

- Signature Course: *Walk like an Egyptian*, fall 2017, 2018
 - Research panel review
- APS National Mentoring Community, 2017-current
- TSGC Grant Reviewer NIP, K-12 Projects, & HIED 2014-current
- Region VIII Collaborative, Astronomy/Weather 2015
- Mentor Adjunct Instructors, 2011-current
- Search Committee SC&I, 2 positions, Math & Science, Sp 2015
- LeoTeach Council 2013-2023
- Texas Space Grant Representative (TSGC) (2006-current)
- TSGC Scholarship Committee
- Columbia Crew Scholarship Committee TAMU-C
- SARA Consortium/Undergraduate Research Group
- TExES Assessment Review Committee: THECB, ETS, & TEA
- Archaeoastronomy trip coordinator, New Mexico, (annually) 2011-current
- TAMUC Annual Research Symposium session chair (2013, 2015) ○ Faculty Search Committee-Math Department 2013
- Region 8 Service Center-Teacher Professional Development (Exo Planets)
- Noyse Scholars, Chemistry-Summer Program 2012
- Faculty Search Committee-Math Department 2012
- Metroplex Technology Business Council Member (2012-2017)
- REU Research Summer 2012, 2016
- Conference Committee for the 11th International Conference on Nucleus-Nucleus Collisions 2012
- Project Dream 2012
- Annual Research Symposium 2012-judge
- Region 8 Service Center Teacher Development Collaboration 2012 (Celestial Mechanics)
- Photometry and Lightcurve Analysis of Asteroids Research
- Region 8 Service Center Teacher Development Collaboration 2011 (Astronomy)
- Texas Section, American Physical Society Conference Coordinating Committee
- NSF Conference
- Project Dream 2011
- Consultant for planetarium facility: development/HR/budget/management
- Co-coordinator APS Conference-Texas Section
- Region 8 Service Center Teacher Development Collaboration 2010
- Photometry and Lightcurve Analysis of Asteroids-Feasibility Study 2010
- *Undergraduate/Graduate level course developed for preservice/in-service teachers-focus: pedagogy, mathematics, and science content*
- Organize and facilitate *Space Camp* for middle school students
 - Project co-administrator
 - Curriculum development
 - Instruction

Grants/Funding

- McFarland Science renovations (100,00) 2025
- Planetarium Projector Upgrade; Sony lasers (\$550,000) 2024
- U.S. Prep: Renewing Educator Preparation, Curriculum Design Retreat 2021-2023
- NSF Grant Participant: A Model of Educational Transformation: Developing a Community of Faculty Implementing Next Generation Physical Science and Everyday Thinking (Award #1626496) 2017-2023
- TAMUC Planetarium renovation/upgrade planetarium system to Cosm: Evans & Sutherland's Digistar 7, include facility upgrade seating/carpet/paint, 2020
- NSF Grant PASS: Physics and Astronomy Scholarships for Success (Awarded) BaoAn Li (PI), Cheri Davis, and Matt Wood, NSF, \$570,782, May 1, 2016-April 30, 2016 (resubmitted/awarded March 20, 2017) 2022
- TAMUC Planetarium renovation/upgrade planetarium system to Evans & Sutherland's Digistar 5, dlp projectors, (\$518,000 contract) 2013
- *Aerospace Educational Services Project-AESP Grant-Explorations of the Solar System* Funded through the National Space Grant Foundation, Grant PI (Award \$28,888) 2010
 - *Undergraduate/Graduate level course developed for preservice/in-service science teachers-focus: delivery methods and astronomy content*
- *Math, Science and Technology Teacher Academy (MASTA)* Grant funded through the Texas Higher Education Coordinating Board (Award \$685,000) 2009-2010 Senior member, Instructor, site visits
- *Aerospace Educational Services Project-AESP Grant-Lunar Exploration* Funded through the National Space Grant Foundation, Grant PI (Award \$25,314) 2009
 - *Graduate level course developed for inservice science teachers with a focus on delivery methods and astronomy content*
 - Grant PI, instructor, curriculum development, on-site school visits, exhibit procurement

Job requirements

- Assistant Professor: teaching university courses, science education preservice teacher preparation, curriculum development, pedagogical standards, assessments and outcomes, testing strategies, mentor/adviser
- Planetarium operations
 - Administrative Oversight: Contract negotiations, hire assistant/manager and staff, promotional material, public relations and media releases, public speaking engagements, special programs coordinator, computer programming and show development, hire/manage/train staff, equipment procurement, budget management, presenter for live planetarium shows.
 - Equipment Oversight: procurement, maintenance, and training

- Create and manage department website & social media sites for planetarium and observatory
- Work with school districts; content delivery, staff support, program development
- Train GA's for planetarium lab utilization
- Special programs: Boy Scouts, Girl Scouts, Girls in Science

Observatory Operations

- Construction, expansion
- Observatory facilitation: Astronomical CCD Imaging, Astronomical computer programs: Maxtor, MaxIm DL, SBIG, Meade, InFocus, the SkyX, MPO Canopus, & astronomical observation with astronomy students, host public open houses, photometric research analysis, feasibility study, labs
- Instructor astronomy labs, content development, astronomical imaging, developed user manuals for the observatory and imaging equipment
- Student projects: radio/TV

Professional Associations

- NASA Texas Space Grant Consortium Representative (2006-current)
University representative
 - Annual reviewer of grant proposals: New Investigations, Higher Education Programs, K-12 Educational Programs
 - Scholarship/Fellowship review and promotion
- Professional Organizations
 - International Astronomical Union; Archaeoastronomy & Astronomy Cultural Studies (IAU), IAU Division C Education, Outreach & Heritage
 - SARA Consortium-The Southeastern Association for Research in Astronomy
 - American Astronomical Society (AAS)
 - Association of American Colleges & Universities (AACU)
 - American Physical Society (APS)
 - ASCD-Association for Supervision and Curriculum Development
 - Association of Texas Professional Educators (ATPE)
 - Digistar Users Group (DUG)
 - International Planetarium Society (IPS)
 - National Science Teachers Association (NSTA)
 - Science Teachers Association of Texas (STAT)
 - Metroplex Technology Business Council (MTBC)

Research, Awards, and Publications

- Around Texas With Chancellor Sharp, Season 2 Episode 8, Chancellor's Program 2021;
<https://www.youtube.com/watch?v=hTxaC0lkghA> ;
<https://www.youtube.com/watch?v=clqDvDiKNC0>
- Faculty Senate Award for Professional Excellence 2019-2020
- Chancellor's Academy of Teacher's Excellence Award 2019-2020

- Baxter, N., Vent, A., Montgomery, K., Davis, C., Cantu, S. and Lyons, V., "Lightcurves and Rotational Periods of Five Main Belt Asteroids," 2019, Minor Planet Bul., 46-2, 111-114.
- Honorary Membership Phi Eta Sigma Honor Society, Signature Classes-First Year Development, 2018
- Davis, Margaret Cheri. *Mathematics and Science Education Attrition, Retention, and Migration: A Study of Three Urban School Districts in the State of Texas*, Order No. 3595285 Texas A&M University - Commerce, 2013 Ann ArborProQuest. 15 Oct. 2014
- Montgomery, K.A., Davis, C., Renshaw, T., & Rolen, J., *Photometric Study of 5 Asteroids at A&M Commerce Observatory*, Minor Planet Bulletin, 2013
- Texas A&M Commerce President's Meritorious Service Award 2011
- NASA Texas Space Grant Fellowship Award, 2010
- AESP Grant-Explorations of the Solar System 2010
- MASTA Grant, Senior Member 2009-2010
- Texas Space Grant Fellowship Award, 2009
- AESP Grant-Lunar Explorations, 2009
- Texas Space Grant Fellowship Award, 2008
- TxCept Grant Recipient, 2004
- A National Study of Baccalaureate Degree Completions in the Sciences: An Overview of Institutional Success by Public, Private, and Proprietary, Academic Leadership, Volume 7 - Issue 4, Dec 7, 2009