

C. Renée James

ACADEMIC QUALIFICATIONS

Sam Houston State University, 2017-2019, M.Ed. (Curriculum and Instruction), May 2019

The University of Texas at Austin, 1995 – 2000, Ph.D. (Astronomy), May 2000

The University of Texas at Austin, 1991 – 1993, M.A. (Astronomy), December 1993

Rice University, 1987 – 1991, B.A. (Physics), May 1991

PROFESSIONAL EXPERIENCE

Professor, Sam Houston State University (Huntsville, TX), September 2011 – Present

Associate Professor, Sam Houston State University (Huntsville, TX), September 2005 – August 2011

Assistant Professor, Sam Houston State University (Huntsville, TX), September 2000 – August 2005

Instructor, Sam Houston State University (Huntsville, TX), September 1999 – August 2000

Teacher, Houston Independent School District (TX), January 1999 – June 1999

Instructor, Anne Arundel Community College (Arnold, MD), August 1997 – December 1998

Adjunct Faculty Member, Austin Community College (TX), 1995 – 1997

Teaching Assistant, The University of Texas at Austin, 1995 – 1997

Research Assistant, The University of Texas at Austin, 1992 – 1993, 1996

PUBLICATIONS

Books

Science Unshackled: How Obscure, Abstract, Seemingly Useless Scientific Research Turned Out to be the Basis for Modern Life, 2014, The Johns Hopkins University Press, Baltimore, MD

(Edited) Instructor's manual to accompany *The Physics of Everyday Phenomena*, 7/e, 2011 (ebook), McGraw-Hill Publishing, New York, NY

Seven Wonders of the Universe That You Probably Took for Granted, 2010, The Johns Hopkins University Press, Baltimore, MD

Physics 113/317 Astronomy Lab Manual, 2001, First Edition, RonJon Publishing, Inc. (C. R. James and F. Cooper)

Education Publications and Presentations

“A Little Learning: Dysfunction Junction,” (educational column). Miller, S.T. and James, C.R., 2022. *Mercury Magazine*, V. **51**, No. 1, p. 15.

“A Little Learning: Group Theory,” (educational column). Miller, S.T. and James, C.R., 2021. *Mercury Magazine*, V. **50**, No. 4, p. 12.

“A Little Learning: Not Your Grandmother’s Astronomy Class,” (educational column). James, C.R. and Miller, S.T. 2021. *Mercury Magazine*, V. **50**, No. 4, p. 12.

“A Little Learning: Navigating Unfamiliar Waters,” (educational column). James, C.R. and Miller, S.T. 2021. *Mercury Magazine*, V. **50**, No. 2, p. 12.

“A Little Learning: Mapping it Out,” (educational column). James, C.R. and Miller, S.T. 2021. *Mercury Magazine*, V. **50**, No. 1, p. 13.

“A Little Learning: Evidence of the Multiverse,” (educational column). James, C.R. and Miller, S.T., 2020. *Mercury Magazine*, V. **49**, No. 4, p 15.

“A Little Learning: This Doesn’t Bode Well,” (educational column). James, C.R. and Miller, S.T., 2020. *Mercury Magazine*, V. **49**, No 3. p. 17.

“A Little Learning: Light Curves and Coronavirus Curves.” (educational column). James C.R. and Miller S.T. 2020. *Mercury Magazine*, V. **49**, No. 2, p. 13.

“A Little Learning: Mission Accomplished.” (educational column). 2020. *Mercury Magazine*, V. **49**, No. 1, p. 24.

“A Little Learning: Relatable.” (educational column) 2019. *Mercury Magazine*, V. **48**, No. 4, p. 25.

“Using Collaborative Exams to Promote Learning.” 2019. Miller, S.T., and James, C.R. Presentation for 2019 PACE Teaching and Learning Conference, Sam Houston State University, 15 August 2019.

“A Little Learning: Just the Facts.” (educational column) 2019. *Mercury Magazine*, V. **48**, No. 3, p. 26.

- “Active Learning Strategies for Astronomy.” 2019. James, C.R., and Miller S.T. Half-day workshop presentation at the University of New South Wales, 18 July 2019.
- “Collaborative Exams in Large Lecture Classes.” 2019. James, C.R., and Miller, S.T. Invited colloquium at the University of New South Wales, 16 July 2019.
- “Do Gains in Secondary Teachers’ Content Knowledge Provide an ASSET to Student Learning? 2019. Miller, S.T., and James, C.R. Poster presentation at the Astronomical Society of Australia annual meeting. 8-12 July 2019.
- “What is the Impact of Collaborative Exams on Learning and Attitudes in Introductory Astronomy Classes?” 2019. James, C.R., and Miller, S.T. Oral presentation at the Astronomical Society of Australia annual meeting. 12 July 2019.
- “Catching the Wave: Incorporating Gravitational Wave Discovery into the Secondary Science Curriculum.” 2019. Horsley, L., and James, C.R. Presentation at the Conference of the Australian Science Teachers Association, Darwin, NT, 10 July 2019.
- “The Magical Mystery Tube: Modeling the Nature of Science with Active Learning Strategies.” 2019. Miller, S.T., and James, C.R. Presentation at the Conference of the Australian Science Teachers Association, Darwin, NT, 9 July 2019.
- “What Is The Impact Of Collaborative Exams On Learning And Attitudes In Introductory Astronomy Classes?” 2019, Miller, S. T., & James, C. R. *Journal of Astronomy & Earth Sciences Education (JAESE)*, 6(1), 17-30.
- “A Little Learning: The Dangers of Collaborative Learning” (educational column) 2019. *Mercury Magazine*, V. 48, No. 2, p. 22.
- “A Little Learning: Left to Their Own Devices” (educational column) 2019. *Mercury Magazine*, V. 48, No. 1, p. 22.
- “Analyzing Student Interactions During Collaborative Exams,” 2019. Cook, R.O., Miller, S.T., and James, C.R. *Bulletin of the American Astronomical Society*, 233, 244.10 [poster]
- “A Little Learning: Back in My Day,” (educational column) 2018. *Mercury Magazine*, V. 47, No. 4, p. 25.
- “Spaced-Out Scale Models.” 2018. Miller, S.T., and James, C.R. Educational materials created for the ARC Centre of Excellence for Gravitational Wave Discovery for use in SCIVR (<https://www.scivr.com.au/education-material>).

- “The Rainbow Connection.” 2018. James, C.R. and Miller, S.T. Educational materials created for the ARC Centre of Excellence for Gravitational Wave Discovery for use in SCIVR (<https://www.scivr.com.au/education-material>).
- “Stories in the Waves: Exploring the Electromagnetic Spectrum (with a Gravitational Wave Bonus!)” 2018. James, C.R. and Miller, S.T. Educational materials created for the ARC Centre of Excellence for Gravitational Wave Discovery for use in SCIVR (<https://www.scivr.com.au/education-material>).
- “A Little Learning: Live and Learn,” (educational column) 2018. *Mercury Magazine*, V. 47, No. 3, p. 26.
- “Active Learning in STEM Classes,” 16 July 2018. Presentation to students, education faculty, and physics faculty of University of Southern Queensland.
- “The Gateway Science: A Review of Astronomy in the School Curriculum around the OECD Countries.” Salimpour, S., Bartlett, S., Fitzgerald, M.T., Cutts, K.R., McKinnon, D., **James, C.R.**, Miller, S.T., Danaia, L., Hollow, R., Cabezon, S., Faye, M., Tomita, A., Max, C., de Korte, M., Baudouin, C., Birkenbauma, D., Kallery, M., Anjos, S., Wu, Q., Chu, H., Slater, E., and Ortiz-Gil, A. Annual Scientific Meeting of the Astronomical Society of Australia, June 2018. [poster]
- “Active Learning in STEM Classes,” 31 May – 1 June 2018. Presentations to SCE 2101 and SCE 3121 students at Edith Cowan University.
- “A Little Learning: Who Knew?” (educational column) 2018. *Mercury Magazine*, V. 47, No. 2, p. 19.
- “A Little Learning: An Astronomical Wager,” (educational column) 2018. *Mercury Magazine*, V. 47, No. 1, p. 20.
- “Do Collaborative Exams Really Promote Learning?” S.T. Miller and C. R. James, 2018. *Bulletin of the American Astronomical Society*, 231, 256.01 [poster].
- “Robotic Telescopes and Student Research in the School Curriculum around the OECD Countries,” Salimpour, S., Bartlett, S., Fitzgerald, M.T., Cutts, K.R., **James, C.R.**, Miller, S.T., Danaia, L., Cabezon, S., Faye, M., Baudouin, C., Birkenbauma, D., Anjos, S., Wu, Q., Chu, H., and Slater, E. 2018. *Robotic Telescopes, Student Research and Education Proceedings*. V. 1, No. 1, pp. 33-40.
- “Robotic vs. Simulated vs. ‘The Real Thing:’ Faculty and Student Perspectives on Observing.” C. R. James and S.T. Miller. 2018. *Robotic Telescopes, Student Research and Education Proceedings*. V. 1, No. 1, pp. 155-169.

“STEM Teaching Enhancement Workshop,” C. R. James, S. Koether, and T. Primm, Center for Teaching and Learning Enhancement, Lamar University, Beaumont, Texas, 16-17 November 2017.

“Robotic vs. Simulated vs. ‘The Real Thing: Faculty and Student Perspectives on Observing,” invited presentation at the Robotic Telescopes, Student Research and Education Conference, San Diego, CA, 21 June 2017

“PULSE@Parkes,” presentation at the Conference of the Australian Science Teachers Association, Brisbane, QLD, 4 July 2016

“It’s Just a Phase – Phases and Transits,” presentation at the Conference of the Australian Science Teachers Association, Brisbane, QLD, 3 July 2016

“Come Together: A Primer on Fusion,” presentation at the Science Teachers Association of New South Wales, University of Sydney, Sydney, NSW, 6 June 2016

“Channeling Your Inner Astronomer,” presentation for Edith Cowan Institute for Education Research, Perth, WA, 17 May 2016

“Astronomy Summer School of East Texas,” day-long professional development, funded by extension of NASA Grant NNH11ZDA001N-EPOESS, Amarillo, Texas, ESC Region 16, 2-3 July 2015

“Oh My STAARs and Galaxies,” C. R. James, S.T. Miller, and A. Foster. Conference for the Advancement of Science Teaching (CAST) 2014, Dallas, TX, 8 November 2014, half-day professional development.

“Astronomy Summer School of East Texas: Stars, Galaxies and Cosmology,” C. R. James, S.T. Miller, A. Foster. Two-week professional development, funded by NASA Grant NNH11ZDA001N-EPOESS, Huntsville, Texas, 14-25 July 2014

“Twinkle, Twinkle Little Star,” presentation, ESC Region VI MINI-Conference for the Advancement of Science Teaching, February 2014

“Astronomy Summer School of East Texas: Solar System Astronomy,” C. R. James, S.T. Miller, and A. Foster. Two-week professional development, funded by NASA Grant NNH11ZDA001N-EPOESS, Huntsville, Texas, 15-26 July 2013

“Gains in Content Knowledge an ASSET to East Texas Secondary Teachers,” 2014, Lewis, C., Miller, S., Foster, A. & James, C.R., *Bulletin of the American Astronomical Society*, 223, 448.12 [poster]

“The Power of Affect: A Comparison of Astronomy/Science Attitudes Among Students and Secondary Teachers.” 2014. Kareva, A., Miller, S., Foster, A. & James, C.R. *Bulletin of the American Astronomical Society*, 223, 448.11 [poster]

“The Life and Death of Bob (a.k.a. NGC 6397) in an Introductory College Level Astronomy Course,” 2011, *Bulletin of the American Astronomical Society*, 218, 209.02 (oral)

“The Effect of Animations Within Powerpoint Presentations on Learning Introductory Astronomy,” Scott Miller & C. R. James, 15 July 2011, *Astronomy Education Review*

Popular Publications (Magazine)

“The Ripple Effect: Five Years of Gravitational Wave Science,” 2020, *Mercury Magazine*, V. 49, No. 4, p. 24.

“Pulsars at 50 – Still Going Strong,” 2017, *Astronomy*, V. 45, Issue 5, p. 22

“Confessions of a Master Sketcher,” 2017, *Astronomy*, V. 45, Issue 2, p. 58

“The Hubble Deep Field: The Picture Worth a Trillion Stars,” (republication), 2016, *Discover*, V. 37, Issue 6, p. 78

“How Astronomers ‘Predicted’ a Supernova,” 2016, *Astronomy*, V. 44, Issue 8, p. 44

“The Hubble Deep Field: The Picture Worth a Trillion Stars,” 2015, *Astronomy*, V. 43, Issue 11, p. 44

“Kepler Spacecraft’s New Lease on Life,” 2015, *Astronomy*, V. 43, Issue 1, p. 44

“How Astronomers Measure the Cosmos,” 2014, *Astronomy*, V. 42, Issue 11, p. 44

“What Has Astronomy Done for You Lately?” 2012, *Astronomy*, V. 40, Issue 4, p. 30

“Neptune Comes Full Circle,” co-authored with William Sheehan, 2011, *Sky & Telescope*, V. 122, No. 1, p. 28

“The Kepler Spacecraft Search for Other Worlds,” 2010, *Astronomy*, V. 38, No. 11, p. 21

“The Universal Jet Set,” 2010, *Sky & Telescope*, V. 119, No. 4, p. 20

“The Ugly Side of Gravity,” 2009 (republication), *Astronomy 2009 Collector’s Edition: Cosmology’s Greatest Discoveries*, October 2009

“Seven Wonders of the Universe,” 2008, *Mercury: The Magazine of the Astronomical Society of the Pacific*, V. 37, No. 4, p. 24

- “StarStruck: Where Did the Elements in Our Bodies Come From?” 2008, *Current Science*, Issue 6 (November 14), p. 10
- “Where Did You Come From? (The Astrophysical Origins of the Elements of Life)” 2008, *Sky & Telescope*, **V. 115**, No. 3, p. 32
- “The REAL Stars of Harry Potter,” 2007, *Mercury: The Magazine of the Astronomical Society of the Pacific*, **V. 36**, No. 4 p. 20
- “The Ugly Side of Gravity,” 2007, *Astronomy*, **V. 35**, No. 8, p. 34
- “Solar Forecast: Storm Ahead,” 2007, *Sky & Telescope*, **V. 114**, No. 1, p. 36
- “X-Treme Stars,” 2006, *Astronomy*, **V. 34**, No. 4, p.35, C. R. James & G. H. Marion
- “The Woman Who Cracked the Stellar Code,” 2006, *Astronomy*, **V. 34**, No. 1, p. 56
- “Reading Between the Lines: The Search for Stellar Recipes,” 2005, *Mercury: The Magazine of the Astronomical Society of the Pacific*, **V. 34**, no. 1
- “Debating Origins,” 2003, *Astronomy*, **V. 31**, no. 9, p. 28
- “Edward and Mina: How a Maid and her Master Changed the Face and Gender of Astronomy Forever,” 2002, *Astronomy*, **V. 30**, No. 7
- “Astronomer Wanted: Job Description - ???” Insert essay written for *Explorations 3e*, by Thomas Arny, 2001: McGraw-Hill Publishing
- “An Unforgettable Anatomy Lesson,” 1997, *Astronomy*, **V. 25**, No. 9, p. 87
- “Standing on the Shoulders of Giants,” 1995, *Astronomy*, **V. 23**, No. 9, p. 16 (C.R. Beveridge [James])
- “So You Want to Be a Professional Astronomer?” 1994, *Astronomy*, **V. 22**, No. 2, p. 13 (C.R. Beveridge [James])

Other Peer-reviewed Publications and Presentations

- “Stellar Leftovers for Sale: The Good, the Bad, and the Bizarre,” 2018. *The Journal of Science and Popular Culture*, **V. 1**, No. 2, p. 177.
- “The Carina Project IV: Radial Velocity Distribution,” 2011, *Publications of the Astronomical Society of the Pacific*, **123**, No. 902, pp 384-401. (M. Fabrizio, M. Nonino, G. Bono, I. Ferraro, P. Francois, G. Iannicola, M. Monelli, F. Thevenin, P.B. Stetson, A.R. Walker, R. Buonanno, F. Caputo, C.E. Corsi, M. Dall’Ora, R. Gilmozzi, C. R. James, T. Merle, L. Pulone, M. Romaniello)

- “Seeking Chemical and Kinematic Correlations Within the Carina Dwarf Spheroidal,” 2005, American Astronomical Society Meeting #205, G.K. Nevils, D.L. Koger, C.R. James, M. Monelli, and M. Nonino (poster)
- “Chemical Substructure in the Milky Way Halo: A New Population of Old Stars,” 2003, *Astrophysical Journal*, **592**, 906 (I.I. Ivans, Christopher Sneden, C. R. James, G.W. Preston, J.P. Fulbright, P.A. Hoflich, B.W. Carney, and J.C. Wheeler).
- “Data Acquisition and Instrument Control via a Web Page Using Linux,” 2003, *Journal of Chemical Education*, Volume **80**, no. 2, p. 221 (James, C.R. & McCann, M.P.).
- “Determining Oxygen Abundances in Metal-Poor Subdwarfs from the O I Triplet,” 2003, American Astronomical Society Meeting #201, C.R. James, C.A. Pilachowski, T. Beers, C. Sneden, and R.M. Cavallo (poster)
- “Spectroscopic Study of the Chemically Unusual Metal-Poor Halo Stars G4-36 and BD+80 245,” 2000, American Astronomical Society Meeting #196, C.R. James (poster)
- “The 1995-96 Decline of R Coronae Borealis: High-Resolution Optical Spectroscopy,” 1999, *Monthly Notices of the Royal Astronomical Society*, **310**, 717 (Kameswara Rao, N., Lambert, D.L., Adams, M.T., Doss, D.R., Gonzalez, G., Hatzes, A.P., James, C.R., Johns-Krull, C.M., Luck, R.E., Pandey, G., Reinsch, K., Tomkin, J., Woolf, V.M.
- “Chemical and Kinematic Populations in the Galactic Halo,” 1998, American Astronomical Society Meeting #193, (poster)
- “The Chemical Composition of Two Nitrogen-Rich, Metal-Poor Halo Dwarf Stars,” 1994, *Astronomical Journal*, **108**, 285 (Beveridge [James], C.R. and Sneden, C.)

GRANT PARTICIPATION

- PI, “Things That Go Bump in the Universe.” June 2021 – May 2022. Alfred P. Sloan Foundation Program for the Public Understanding of Science, Technology, and Economics Grant G2021-16716. (\$40,804)
- Co-I, “STEM Scholarship of Teaching and Learning: Evaluating the Learning Assistant Model in Large Introductory Astronomy Classes.” August 2021 – May 2022. S.T. Miller and C.R. James. STEM Center Mini-Grant. (\$1500)
- Co-I, “STEM Course Enhancement: Introducing the Learning Assistant Model in Large Introductory Astronomy Classes.” August 2021 – May 2022. C.R. James and S.T. Miller. STEM Center Mini-Grant. (\$2000)

Co-I, “Engaging Spaces: Transforming a Large Classroom into an Active Learning Environment.” 2020. S.T. Miller and C.R. James, Sam Houston State University. (\$150,000)

Content Expert/University Partner, Texas Regional Collaborative for Excellence in Science and Mathematics Teaching Grant, PI Susan Bohan, May – August 2017 (\$115,000)

Co-PI, “ASSET: Astronomy Summer School of East Texas,” NASA NNH11ZDA001N-EPOESS (Opportunities in Education and Public Outreach for Earth and Space Science), Co-PI Dr. Scott Miller, May 2012 – August 2014; extended through August 2015 (\$205,811)

Content Expert/University Partner, Texas Regional Collaborative for Excellence in Science and Mathematics Teaching Grant, PI Susan Bohan, May – August 2013 (\$115,000)

Participating Scientist, “Middle School Science for English Language Learners (MSSELL)” National Science Foundation Award 0822153, PI Beverly Irby, September 2008 – August 2010 (\$465,228)

Participating Scientist, “Engaging Hispanics into the Math/Science Pipeline,” United States Department of Agriculture (USDA) – Cooperative State Research, Education, and Extension Service (CSREES) grant, PI Bobby Lane and Maya Durnovo, June 2006 – June 2007 (\$240,000)

PI, “The Carina Dwarf Spheroidal: The Rosetta Stone of Dwarf Galaxy Evolution,” Research Corporation, June 2005 – August 2006 (\$44,000)

PI, Faculty Research Enhancement Grant for “The Carina Dwarf Spheroidal: The Rosetta Stone for Dwarf Galaxy Evolution,” Summer 2004 (\$5,000)

PI, Women’s International Science Collaboration Grant from the American Association for the Advancement of Science, “The Carina Dwarf Spheroidal: The Rosetta Stone for Dwarf Galaxy Evolution,” December 2003 (\$3,000)

PI, Faculty Research Enhancement Grant for “Determining the Nucleosynthetic Origins of the Oldest Galactic Stars,” Summer 2001 (\$5,000)

AWARDS AND HONORS

Recipient, Sam Houston State University Excellence in Teaching Award, Spring 2022

Recipient, Sam Houston State University Faculty Development Leave, January - May 2022

Recipient, Texas State University System Regents' Teacher Award, August 2021.

Finalist, Sam Houston State University Excellence in Teaching Award, Spring 2020.

Finalist, Sam Houston State University Excellence in Teaching Award, Spring 2019.

Invited Visiting Professor, Swinburne University of Technology, Melbourne, VIC, Australia, 25 May – 1 August 2018.

Alternate, Fulbright Senior Scholar Award, February 2018.

Silver Jubilee Visiting Professor, Edith Cowan Institute for Education Research, Edith Cowan University, Perth, WA, Australia, 3-22 November 2016

Distinguished Visitor, Commonwealth Scientific and Industrial Research Organisation (CSIRO) Astronomy and Space Sciences, Marsfield, NSW, Australia, 5 February – 18 July 2016

Recipient, Sam Houston State University Faculty Development Leave, Spring 2016

Semi-finalist, American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship, 2014

Nominated, AAAS Science Journalism Award 2012

Nominated, the Keck Futures Initiative Communication Awards 2012

Nominated, the American Institute of Physics Science Communication Awards 2012

Finalist, Sam Houston State University Excellence in Teaching Award, Spring 2012

Speaker of the Year, Texas Astronomical Society, December 2011

Finalist, Sam Houston State University Excellence in Research Award, Spring 2011

Winner, Sagan Day Essay Contest, sponsored by NASA/Kepler, November 2010

NASA/IGES "Gold Star" (given to 10 educators nationwide) for Inspiring Uses of Hubble in Education, July 2010

NASA/IGES "Top Star" for Inspiring Uses of Hubble in Education, June 2010

2008 Solar Physics Division Popular Writing Award, American Astronomical Society, May 2008

Professor of the Year, Physics Department, SHSU, April 2008

Finalist, Sam Houston State University Excellence in Teaching Award, March 2008

Elected, Astronomy Education Board of American Astronomical Society, May 2003 – May 2006

Special Recognition Award for Outstanding Contributions to the College of Arts and Sciences, August 2004

PROFESSIONAL DEVELOPMENT

Completion of Graduate Education Unit CIED 5342: “Socio-Cultural Forces in Education.” (May 2019)

Completion of Graduate Education Unit CIED 5333: “Professional Educator’s Role.” (May 2019)

Completion of Online Course Redesign and Faculty Certification Program (hosted by SH Online). 6-8 August 2018.

Completion of Graduate Education Unit CIED 5390: “Advanced Methods of Classroom Management.” (May 2018)

Completion of Graduate Education Unit CIED 5393: “Assessment of Learning.” (May 2018)

Completion of Graduate Education Unit: CIED 5383: “Integrating Current Technology in Teaching” (December 2017)

Completion of Graduate Education Unit: CIED 5085 - “Current Issues in Education.” (December 2017)

Completion of Graduate Education Unit: CIED 5370 – “Research in Teaching.” (December 2017)

Attended Critical Thinking Assessment Applications Workshop, 29 September 2017, Sam Houston State University.

Completion of Graduate Education Unit: CIED 6394 – “Developing Curriculum for Adults.” (June 2017)

Completion of Graduate Education Unit: CIED 5360 - “Advanced Techniques and Methods of Instruction.” (May 2017)

Completion of Graduate Education Unit: CIED 5384 – “Curricular Trends for Classroom Teachers.” (May 2017)

Certified College and Career Readiness Initiative Regional Trainer, June 2012

Participant, “Success in College Science: CCRS and Scientific Applications of Mathematics,” San Antonio, TX, March 2012

Online Faculty Certification, SHSU, August 2008

Participant, Learner-Centered Astronomy: A Teaching Excellence Workshop, NASA/Center for Astronomy Education, 17-21 July 2006

Participant, Improving the Introductory Astronomy Courses for Non-Science Majors through Active Learning, January 2006

Participant, Teaching Excellence Workshop, NASA/Center for Astronomy Education, January 2005; January 2003; June 2001; June 2000; January 1999

SERVICE

Service to University

Member, Distinguished Professor Review Committee, September 2022 to present.

Member, Quality Enhancement Plan Assessment Group, July 2019; May 2017; December 2016; December 2015; May 2015; December 2014; May 2014; December 2013; May 2013; December 2012

Member, Faculty Senate, September 2016 – December 2018; September 2009 – August 2014; September 2006 – August 2008

Member, Common Reader Author’s Forum Organizing Committee, March 2016 – November 2016

Member, Faculty Grievance Committee, September 2009 – August 2015 (committee dissolved)

Member, Web Governance Council, September 2012 – August 2014

Co-chair, Founder’s Day Academics Committee, September 2012 – August 2014

Chair, Faculty Senate, September 2013 – August 2014

Chair-Elect, Faculty Senate, September 2012 – August 2013

Chair, Faculty Senate Subcommittee for Academic Affairs, September 2011 – August 2012; September 2009 – August 2010

Member, Faculty Search Committee, Department of Physics, Spring 2011

Member, Tenure Hearing Committee, September 2009 – August 2010

Faculty Advisor, Society of Physics Students, September 2000 – December 2009

Faculty Advisor, SHSU Chapter of Sigma Pi Sigma (National Physics Honor Society),
September 2000 – December 2009

Member, Excellence in Teaching Committee, September 2005 – August 2008

Member, Quality Enhancement Plan Committee, March 2008 – July 2008

Member, Faculty Search Committee, Department of Physics, Spring 2008

Chair, Faculty Centennial Scholarship Committee, May 2003 – August 2004

Co-Chair, Faculty Centennial Scholarship Committee, May 2002 – May 2003

Member, Faculty Centennial Scholarship Committee, August 2001 – May 2002

Service to Profession

Member, Texas State University System Regents' Teacher Selection Committee, June
2022 to present.

Astronomy Education Columnist, *Mercury Magazine*, January 2018 – Present

Reviewer, *The Electronic Journal for Research in Science & Mathematics Education*,
March 2021.

Reviewer, *The Electronic Journal for Research in Science & Mathematics Education*,
July 2020.

Co-editor, *Proceedings for Robotic Telescopes, Student Research, and Education
Conference*, August 2017 – September 2018

Member, Board of Reviewers for the *Journal of Astronomy and Earth Sciences
Education*, November 2015 – Present

SHSU Representative to “Building Astronomy in Texas” (multi-university working
group), February 2015 – Present

Mentor, Conference for Undergraduate Women in Physics (Sponsored by the American
Institute of Physics), Rice University, 13 – 15 January 2017

Textbook Reviewer, *Understanding Our Universe, 3rd Edition*, August – September 2016

Panelist, National Science Foundation Astronomy Grant Review, 17-18 February 2015

External Book Reviewer for Johns Hopkins University Press, February 2013; December 2012; September 2012; August 2011; October 2010

Textbook Reviewer, *The Physics of Everyday Phenomena 7E*, January 2010

Judge, Chambliss Astronomy Achievement Student Award, 215th Meeting of the American Astronomical Society, January 2010

Judge, Chambliss Astronomy Achievement Student Award, 211th Meeting of the American Astronomical Society, January 2008

Co-organizer, ASTRO 101 Education Sessions for 207th – 211th Meetings of the American Astronomical Society, January 2006 – January 2008

Co-chair, American Astronomical Society Astronomy Education Board subcommittee on “Research on the Teaching and Learning of Astronomy,” March 2006

Panelist, NASA Space Telescope Science Institute IDEAS Grant, November 2005

Co-organizer, ASTRO 101 Education Session for 206th Meeting of the American Astronomical Society, June 2005

Co-organizer, ASTRO 101 Education Session at 203rd Meeting of the American Astronomical Society, January 2004

Service to Community

Coordinator/presenter, “Space Science Research Badge” for Girl Scouts of San Jacinto Council, Spring, Texas, 8-9 February 2020

Coordinator/presenter, “Space Science Adventurer Badge” for Girl Scouts of San Jacinto Council, Huntsville, Texas, 13 October 2018.

Volunteer, “Reach for the Stars” STEM Festival, Rice University, 21 April 2018

Co-organizer/presenter, Montgomery High School field trip, Huntsville, TX, 12-13 December 2016

Astronomy Presenter, Kent Road Public School, Eastwood, NSW, 24 May 2016

Science consultant, Rotary Club, Huntsville, TX, USA, May 2016

Co-organizer, Public Solar Eclipse Viewing, SHSU, 23 October 2014

Judge, Montgomery High School Science Fair, Montgomery, TX, USA, December 2013

Moderator, Academic Challenge, SHSU, Huntsville, TX, March 2011; November 2009;
April 2006; April 2004; November 2003

Organizer, Public Lecture at SHSU by Dr. George Coyne, Huntsville, TX, 9 November
2010

Science Saturdays at Sam Scientist/Facilitator, Huntsville, TX, November 2010; February
2010; November 2009

Organizer, Astronomy Week at Sam, Huntsville, TX, 19-25 April 2010

Judge, Academic Challenge, Huntsville, TX, April 2010; November 2002; April 2002;
November 2000

Scientist/Leader, Scout Day at Sam, Huntsville, TX, February 2008

Sponsor, Camp Invention, sponsored by the National Inventor's Hall of Fame,
Huntsville, TX, July 2007

Organizer, Mercury Transit Authority (public event), SHSU Observatory, Riverside, TX,
November 2006

Director, Camp Invention, sponsored by the National Inventor's Hall of Fame,
Huntsville, TX, July 2006

Organizer, Mars Opposition Party (public event), SHSU Observatory, Riverside, TX,
August 2003

Judge, SHSU Debate and Speech Tournament, Huntsville, TX, October 2002

CURRICULUM DEVELOPMENT

Co-creator, faculty-led study-abroad sections of PHYS 1403 (Stars and Galaxies) and
PHYS 1404 (Solar System Astronomy), with Dr. Scott Miller, for July –
August 2017

Adapted PHYS 1404 (Solar System Astronomy) for Academic Community Engagement
credit, August 2015

Creator, ASTR 3383 (Cosmic Catastrophes, junior-level astronomy class for non-science
majors), approved by University Academic Affairs Council, December 2016

Creator, online section of PHYS 1404 (Stars and Galaxies for non-science majors),
May 2016

Member, SHSU Core Curriculum Committee, April 2012 – August 2014

Co-creator, core curriculum proposals for introductory astronomy (with Dr. Scott Miller and Dr. Dave Pooley), September 2012 – August 2013

Co-creator, faculty-led study-abroad sections of PHYS 1403 (Stars and Galaxies) and PHYS 1404 (Solar System Astronomy), with Dr. Scott Miller, May/June 2012

Member, College of Arts and Sciences Curriculum Committee, September 2006 – August 2008

Creator, PHYS 1403 (Stars and Galaxies) and PHYS 1404 (Solar System Astronomy) from previous “universe-in-a-semester” class, 2006

STUDENT SUPERVISION

Ph.D. Dissertation Examiner, *Observational Aspects of Globular Cluster and Halo Stars in the GALAH Survey*, Mohd Hafiz Mohd Sadaan, University of New South Wales, Australia, October 2020 – November 2020.

Honours contract supervisor, Jocelyn Renteria. “Developing a Custom Solar System Astronomy Textbook from Lecture Transcripts.” August 2020 – December 2020.

Honours contract supervisor, Reagan Wren. “Developing a Custom Stars and Galaxies Textbook from Lecture Transcripts.” January 2019 – May 2019.

Lab coordinator/supervisor, PHYS 1403 (Stars and Galaxies) and PHYS 1404 (Solar System Astronomy) undergraduate lab instructors, August 2003 to present.

Undergraduate research supervisor, Victor Johnston and Richard Toback. “Creating an Interactive Pulsar for Undergraduate Astronomy Instruction,” July 2017 – August 2017.

Honours contract supervisor, Victor Johnston. “Seeking Variations in Dispersion Measures Using PULSE@Parkes Archived Data.” August 2016 – December 2016.

Undergraduate research supervisor, Jacob Crocker. “The Effect of Group Exams on Student Retention.” August 2016 – December 2016.

Undergraduate research co-supervisor, Cale Lewis (with S.T. Miller and A. Foster). “Gains in Content Knowledge an ASSET to East Texas Secondary Teachers.” June 2013 – January 2014.

INVITED PRESENTATIONS

Invited Speaker, West Virginia University Department of Astronomy, 4 November 2021.

Invited Speaker, North Houston Astronomy Club, 11 December 2020

Invited Speaker, Seven Lakes High School Astronomy Club, 10 December 2020

Invited Speaker, Austin Astronomical Society, Austin, Texas, 9 November 2018.

Keynote Speaker, All Clubs Meeting (annual combined meeting of the Astronomical Society of South East Texas, Humble/Insperity Observatory Society, Fort Bend Astronomy Club, Houston Astronomical Society, Huntsville Amateur Astronomy Society, Johnson Space Center Astronomical Society, North Houston Astronomy Club, George Observatory), Houston Museum of Natural Science, Houston, Texas, 14 September 2018.

Invited Speaker, University of New South Wales, Sydney, Australia, 3 September 2018.

Invited Discussion Leader, A Night With Education, SHSU College of Education, 2 November 2017.

Invited Speaker, Eldorado Star Party, 20 October 2017.

Invited Speaker, Fort Bend Astronomy Club, 19 May 2017

Discussion Leader, Academic Community Engagement Center “ACE Challenges Solved” workshop, 7 April 2017

Invited Guest, “Education Matters” radio show, WGTD, 21 January 2017

Invited Speaker, Silver Jubilee Professorship, Edith Cowan University, Perth, WA, 15 November 2016

Featured Speaker, Author’s Forum, Sam Houston State University Common Reader Program, Huntsville, TX, 3 November 2016

Invited Presenter, 13th Annual SHSU Teaching and Learning Conference, Huntsville, Texas, 18 August 2016

Invited Speaker, CSIRO – Astronomy and Space Science, Marsfield, NSW, 22 June 2016

Invited Speaker, Edith Cowan University, Perth, Western Australia, 17 May 2016

Invited Speaker, South Pacific Star Party, Wiruna, NSW, 6 May 2016

- Invited Speaker, Astronomical Society of New South Wales, Epping, NSW, 18 March 2016
- Invited Speaker, Fort Bend Astronomy Club, Sugarland, TX, 20 November 2015
- Invited Speaker, Astronomy on Tap TX, Austin, TX, 17 November 2015
- Invited Speaker, Community Conversation, College Station, TX, 20 October 2015
- Invited Speaker, Science Café, Texas A&M, College Station, TX, 20 October 2015
- Invited Speaker, Houston Astronomical Society, Houston, TX, 10 July 2015
- Invited Speaker, Rotary Club of Huntsville, Huntsville, TX, 7 July 2015
- Invited Guest, “Brazos Valley Magazine” television show (KAMU), College Station, Texas, 25 February 2015
- Invited Speaker, Texas A&M University, College Station, Texas, 23 February 2015
- Invited Speaker, Sigma Xi, Kearney, Nebraska, 10 February 2015
- Invited Speaker, University of Nebraska, Kearney, Department of Physics, 10 February 2015
- Invited speaker, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, 15 January 2015
- Presenter, Barnes and Noble, The Woodlands, TX, 9 January 2015
- Invited Speaker, North Houston Astronomy Club, Houston, TX, 24 October 2014
- Invited Presenter, Sally Ride Science Festival, Rice University, Houston, TX 25 October 2014
- Keynote Speaker, Texas Astronomical Society Annual Banquet, Dallas, TX, 8 December 2012
- Invited Speaker, North Houston Astronomy Club, Houston, TX, 27 January 2012
- Public Talk, SHSU Physics Department, Huntsville, TX, 2 November 2011
- Invited Speaker, Texas Astronomical Society, Dallas, Texas, 26 August 2011
- Invited Speaker, Texas Star Party, Ft. Davis, TX, 3 June 2011

Keynote speaker, Science MINI-Conference for the Advancement of Science Teaching, Beaumont, TX, 26 February 2011

Planetarium Show Host, Alpha Omega 7th Grade Science Classes, Huntsville, TX, 16 November 2010

Invited Speaker, Fort Bend Astronomy Club, Sugarland, TX, 17 September 2010

Invited Speaker, Houston Astronomical Society, Houston, TX, 3 September 2010

Invited Speaker, Astronomical Society of Southeast Texas, Beaumont, TX, 9 July 2010

Invited Speaker, North Houston Astronomy Club, Houston, TX, 25 June 2010

Invited Speaker, Johnson Space Center Astronomical Society, Clear Lake, TX, 11 June 2010

Speaker, SHSU National Astronomy Week, Huntsville, TX, 21 April 2010

Speaker, Physics Department Colloquium, Huntsville, TX, 6 April 2010

Distinguished Lecturer, Conroe Academy for Science and Health, Conroe, TX, March 2010

Planetarium Show Host, Alpha Omega 7th Grade Science Classes, October 2009

Planetarium Show Host, Peach Creek Elementary School group, Huntsville, TX, October 2008

Invited Speaker, "Let's Talk: A Night of Conversation" SHSU Honors Benefit, Huntsville, TX, 27 March 2008

Distinguished Lecturer, Conroe Academy of Science and Technology, Conroe, TX, January 2008

Invited Speaker, North Houston Astronomy Club, Houston, TX, 29 August 2005

Invited Speaker, Stardate: The First Meeting of the Huntsville Amateur Astronomy Society, Huntsville, TX, 30 October 2004

Speaker, Physics Colloquium, Sam Houston State University, Huntsville, TX, 6 October 2004

Invited Speaker, Family Science Night at Sam Houston Elementary, Huntsville, TX, January 2004

Invited Guest, KSAM 101.7 FM, for Mars Opposition, Huntsville, TX, August 2003

Planetarium show host, Pre-K class of WMC, Huntsville, TX, August 2003

Invited Speaker, Parmley Elementary School, Willis, TX, January 2003

Invited Speaker, Colloquium for Women's History Month at SHSU, Huntsville, TX, 21 March 2002

Invited Speaker/Planetarium tour guide, Bryan-College Station Home-School Group, Huntsville, TX, March 2002

Speaker, Physics Colloquium, Sam Houston State University, Huntsville, TX, 13 February 2003

Invited Speaker, Bentwater Country Club, Willis, TX, May 2001

Speaker, Stellar Seminar, University of Texas at Austin, Austin, TX, 12 April 2000

Speaker, Physics Colloquium, Sam Houston State University, Huntsville, TX, 9 March 2000

PROFESSIONAL MEMBERSHIPS

Astronomical Society of Australia

Astronomical Society of the Pacific

American Astronomical Society

International Astronomical Union

Society of Physics Students

Sigma Pi Sigma (Society of Physics Students Honor Society)