

Kent Alan Montgomery

Education **1990-1995** **Boston University** **Boston, MA**

- Ph.D., in Astronomy

1988-1990 **San Diego State University** **San Diego, CA**

- M.S., in Astronomy

1981-1987 **Montana State University** **Bozeman, MT**

- B.S., in Mathematics and Physics

Doctoral Thesis: *"Old Stellar Systems: A Study in Stellar and Galactic Evolution"*, Professor Kenneth Janes, Advisor

Master's Thesis: *"Surface Photometry of the Peculiar Galaxy NGC 6239"*, Professor Ronald Angione, Advisor

Employment **2005-Present** **Texas A&M University-Commerce** **Commerce, TX**
Department Head

- Appointed Physics and Astronomy Department Head beginning September 2018
- Co-PI on NSF PASS grant for \$570,782 promoting undergraduate physics majors and their research
- Serving as Interim Department Head for Physics and Astronomy Department beginning November 2017
- 2017 Co-PI on \$331,863 NSF MRI grant to build new telescope at observatory
- Mentored REU (Research Experience for Undergraduates) students doing research on asteroid light curve photometry during Summer 2011 through 2016
- 2014 and 2015 was facilitator in teaching in-service teachers about astronomy and physics as part of region 8 teacher service center grants
- Served as Interim Department Head for Physics and Astronomy Department for 2011-2012 school year
- 2011 Won Fall 2011 Teaching Excellence Award from the Texas A&M University System Office
- 2010 Won Spring 2010 Teaching Excellence Award from the Texas A&M University System Office
- 2010 Won Paul W. Barrus award for Teaching Excellence
- 2010 Developed and taught observational astronomy course which teaches students the techniques for using telescopes and astronomical imaging
- 2010 Co-pi on grant from Texas Space Grant Consortium for \$30,000 to create a summer graduate course and instruct in-service teachers

with new techniques for teaching astronomy with a focus on solar system exploration

- 2010 Developed and taught archaeoastronomy class which concentrates on ancient astronomical sites looking for possible astronomical alignments
- 2009 In conjunction with the Department Head developed astronomy minor at the University
- 2009 Co-PI on grant for \$25,000 from the Texas Space Grant Consortium which was used to develop a course for teaching in-service teachers about astronomy with a focus on lunar exploration
- 2009 Introduced Honors component to both the ASTR 101 and 102 classes using the observatory
- 2008 Supervised HIED 650 course for student developing techniques and manuals for imaging procedures using the 16-inch telescope at the observatory
- 2008 Constructed off-site observatory with several medium size telescopes and began using it for classes and public outreach
- 2007 Supervised HIED 650 course for student doing immersive visualization of close binary star interactions
- 2007 Organized and lead a summer space camp for 24 middle school students teaching them astronomy through activities and projects
- 2006 Worked as part of Teacher Quality grant in leading a three week summer teacher workshop on astronomy for about 40 area elementary and middle school teachers
- 2006 Created and began teaching Astronomy 101 Class on solar system and history of astronomy
- 2006 Started teaching Astronomy 102 class on stars, galaxies and the universe
- Created promotional material for planetarium shows including mailings, brochures, newspaper articles and radio interviews.
- January 2006 Hired staff, installed and began public and school group performances in planetarium
- 2005 Oversaw installation of planetarium dome, projection, lighting and sound equipment

1995–2005 Young Harris College Young Harris, GA
Planetarium Director and Tenured Professor

- Managed planetarium with a 40-foot dome; duties included: budgets, personnel, show scheduling, maintenance and operation
- Taught undergraduate astronomy classes
- 2003 Won award for Teacher of the Year
- 2002 Wrote successful grant proposal and installed new \$400,000 planetarium projector
- 2002 Wrote successful grant (\$100,000) then built observatory located just off campus
- 1999-2002 Taught undergraduate mathematics
- 1998 Wrote grant proposal and helped build computer lab for Math and Science building
- 1996-1997 Taught undergraduate physics
- Dec. 1996-Aug. 1997 Created and administered college web pages

1990-1994 **Boston University** **Boston, MA**

College Instructor

- Taught introductory astronomy courses
- Taught astronomy laboratory sections
- Researched old open clusters, globular clusters, and elemental abundances
- Worked with colleague on revising laboratory exercises
- 1991 Awarded Teaching Fellow of the year award

1988–1990 **San Diego State University** **San Diego, CA**

College Instructor

- Taught introductory astronomy courses
- Taught astronomy laboratory sections
- Researched peculiar galaxies and binary stars
- 1990 Received award for best service to the department

1987-1988 **Terry High School** **Terry, MT**

High School Teacher

- Taught physics and mathematics courses
- Coached basketball, and track

**Research
Experience**

Texas A&M University-Commerce

- Built observatory with a number of small telescopes, 8 to 16 inch range, including support facilities and a 12-foot dome. The observatory is used for teaching classes, undergraduate research involving CCD imaging and broadband filter photometry, and public outreach
- Created undergraduate research program to study select asteroids in order to determine colors, orbital characteristics and rotational periods
- Operated the SARA (Southeastern Association for Research in Astronomy) telescopes located in Kitt Peak Arizona, La Serena, Chile and Canary Islands

Young Harris College

- Built small observatory with a 16-inch Schmidt-Cassegrain telescope housed in a 15-foot dome and a number of smaller telescopes, which are used for public observing and undergraduate research projects.
- Computerized 16-inch telescope and integrated CCD imaging in order to facilitate undergraduate research program.

Boston University

- CCD Photometry using 0.9-meter telescope at Cerro Tololo Inter-American Observatory, La Serena, Chile. Studied globular clusters
- CCD Photometry using 0.9-meter telescope at Kitt Peak National Observatory, Tucson Arizona. Studied globular and open clusters
- Objective Prism Spectroscopy using Burrell-Schmidt 1-meter telescope at Kitt Peak National Observatory, Tucson Arizona. Studied open clusters

San Diego State University

- CCD photometry using 1-meter telescope at Mount Laguna Observatory, San Diego, California. Did photometric studies interacting galaxies.

Grants

1. 2017 Replaced Matt Wood as Co-Pi on PASS (NSF grant, Physics and Astronomy Scholarship for Success) \$570,782.
2. 2017 Co-PI on \$331,863 NSF MRI grant to build new telescope at observatory
3. 2010 Co-PI on grant from Texas Space Grant Consortium for \$30,000 to create a summer graduate course and instruct in-service teachers with new techniques for teaching astronomy with a focus on solar system exploration
4. 2009 Co-PI on grant for \$25,000 from the Texas Space Grant Consortium which was used to develop a course for teaching in-service teachers about astronomy with a focus on lunar exploration
5. 2002 PI on grant to install new \$400,000 planetarium projector
6. 2002 awarded grant (\$100,000) to build observatory located just off campus

Publications

1. Fuller, K., Sanchez, C., and Montgomery, K., "Rotational Periods and Lightcurves of Four Asteroids," 2019, *Minor Planet Bul.*, **46-1**, 1-2.
2. 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.
3. Cantu, S., Kozdon, J., Montgomery, K. and Lyons, V., "*Lightcurves of Asteroids 800 Kressmania, 3494 Purple Mountain and 25891 2000 WK9*," 2016, *Minor Planet Bul.*, **43-3**, 210-212.
4. Kozdon, J., Cantu, S. and Montgomery, K., "*Lightcurves of Asteroids 891 Gunhild, and 1614 Goldschmidt*," 2016, *Minor Planet Bul.*, **43-2**, 171.
5. Becker, A., Montgomery, K., Hunyh, M. and Santistevan, I., "*Lightcurves of Asteroids 4271 Novosibirsk, and 6335 Nicoleraappoport*," 2015, *Minor Planet Bul.*, 42-2, 107.
6. Adolphson, M., Cantu, S., Montgomery, K. and Renshaw, T., "*Using the Parallax Method to Determine the Distance to an Asteroid*," 2015, *Minor Planet Bul.*, 42-1, 25-27.

7. Cantu, S., Adolphson, M., Montgomery, K., and Renshaw, T., "Lightcurves of Asteroids 2007 McCuskey, 2669 Shostakovich, 3544 Borodino, and 7749 Jackschmitt," 2015, *Minor Planet Bul.*, 42-1, 28-29.
8. Montgomery, K. A., Davis, C., Renshaw, T. and Rolen, J., "Photometric Study of Four Asteroids at Texas A&M Commerce Observatory," 2013, *Minor Planet Bul.*, 40-4, 212-213.
9. Montgomery, Kent. A "Forum article on the use of the Planetarium to disseminate information", 2002, *Planetarian*, 31, 22.
10. Montgomery, K. A., Janes, K. A. and Phelps, R. L., "Reddening, and Metallicity of NGC 6791", 1994, *AJ*, 108, 585.
11. Phelps, R. L., Janes, K. A. and Montgomery, K. A., "The Development of the Galactic Disk: A Search for the Oldest Open Clusters", 1994 *AJ*, 107, 1079.
12. Montgomery, K. A., Janes, K. A. and Phelps, R. L., "Reddening, Metallicity, and Age of NGC 6791", 1994, *Bull. Am. Aston. Soc.*, 25, 1454.
13. Janes, K. A., Phelps, R.L., and Montgomery, K. A., "The Oldest Open Clusters", 1994, *Bull. Am. Aston. Soc.*, 25, 1455
14. Montgomery K. A., and Janes, K. A., "Population II Horizontal Branches: A Photometric Study of Globular Clusters", 1994, *Hot Stars in the Halo*, eds. Adelman, S. J., Upgren, A. and Adelman, C.J., Cambridge University Press, Schenectady, 136.
15. Phelps, R. L., Janes, K. A. and Montgomery, K. A., "Population I Horizontal Branches Stars: Probing the Halo-to-Disk Transition", 1994, *Hot Stars in the Halo*, eds. Adelman, S. J., Upgren, A. and Adelman, C.J., Cambridge University Press, Schenectady, 175.
16. Montgomery, K. A., Marschall, L.A., Janes, K. A., "CCD Photometry of the Old Open Cluster M67", 1993, *AJ*, 106, 181.
17. Janes, K. A., Friel, E., Montgomery, K., Phelps, R. L., and Marschall, L., "Open Clusters as Standard Candles – The Age Metallicity Relation and Metallicity Gradients", 1992, in *Memorie della Societa Astronomica Italiana*, 63, 283.
18. Montgomery, K., Marschall, L., Janes, K., "CCD Photometry of the Old Open Cluster M67", 1990, *Bul. Am. Astron. Soc.*, 22, 1288.

**Teaching
Experience**

Courses Taught

PHYS 2425	University Physics I
ASTR 1104	Solar System Lab
ASTR 1304	Solar System
ASTR 260	Archaeoastronomy
ASTR 491	Honors Reading
ASTR 490	Honors Thesis

ASTR 1303	Stars and Universe
ASTR 1103	Stars and Universe Lab
ASTR 310	Observational Astronomy
ASTR 489	Independent Studies
PHYS 489	Independent Studies

Students Advised

Honors Thesis Advisor for:

Andy Kroll, Title of thesis: *3D Model of Binary Black Holes during Galactic Collisions using Open-Source methods.*

Cole Humphrey, Title of thesis: *Praise the Rock: A Rockstronomy Album*

Chris Voss, Title of thesis: *Design and Implementation of an Automation System for the Dome at the Observatory at Texas A&M University–Commerce*

Rebecca Bosnams, Title of thesis: *Calculating and Analyzing Night Sky Brightness for the Commerce/Greenville, Texas Area*

Conner Kelley, Title of thesis: *A Study on Extrasolar Transits*

Masters Thesis Advisor for:

Nathan McReynolds, Title of thesis: *Exploring Color Variations in Rotating Asteroids*

Ph.D. Committee member

Tom Hooten Ph.D. dissertation titled: *An Analysis of Science versus Pseudoscience.*

References:

Dr. Matt Wood, Texas A&M University-Commerce (903) 886-5487
 Dr. Kurtis Williams, Texas A&M University-Commerce (903) 886-5516
 Dr. Cheri Davis, Texas A&M University-Commerce (903) 468-8650