

Joseph B. Jensen

Professor of Physics, Utah Valley University
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Education:

B.S. in astronomy with honors, Caltech, 1992

M.S. in astronomy, University of Hawaii, 1995

Ph.D. in astronomy, University of Hawaii, 1997

Dissertation: "Infrared Surface Brightness Fluctuations and the Extragalactic Distance Scale" (Advisors: G. L. Luppino and J. L. Tonry)

Professional Experience:

Managing Editor, Astronomical Society of the Pacific Conference Series (Sept. 2009 – present). I oversee publication of a popular series of books containing contributions to professional astronomical conferences. I manage an office staff of four individuals.

Professor of Physics, Utah Valley University (July 2015 – present)

Associate Professor of Physics, Utah Valley University (July 2009 – June 2015)

I teach undergraduate astronomy and physics courses, mentor undergraduate physics students in astronomy-related projects, and conduct independent research.

Head of Instrumentation, Gemini Observatory (Sept. 2006 – July 2009)

I was responsible for managing the design, fabrication, and testing of all new instrumentation for the two 8-m Gemini telescopes. I worked with a team of engineers, scientists, project managers and lawyers to manage the Gemini instrument development program.

Instrument Program Scientist, Gemini Observatory (Jan. 2004 – Sept. 2006)

I provided technical and scientific oversight of feasibility studies, design studies, and construction contracts for several new Gemini instruments.

Assistant Astronomer, Gemini Observatory (Jan. 2001 – Sept. 2006)

Gemini Near-IR Imager (NIRI) Instrument Scientist (Aug. 1997 – Dec. 2003).

I was responsible for all aspects of NIRI operations including repairs of faulty mechanisms, executing observations and calibrations, software development, user support, data distribution, and maintenance of public web pages.

Gemini Science Fellow, Gemini Observatory (Aug. 1997 – Jan. 2001)

My primary duties included leading the calibration and commissioning efforts for NIRI, supporting observations with the Hawaii adaptive optics system "Hokupaa," writing data reduction software for NIRI and Hokupaa, procuring and implementing

site monitoring equipment, and supporting telescope commissioning and early science observations at Gemini.

Graduate Assistant, University of Hawaii Institute for Astronomy (Aug. 1992 – Aug. 1997)

As a graduate student, my primary research efforts were to extend the surface brightness fluctuation technique for measuring extragalactic distances into the infrared using the new generation of IR focal plane arrays.

Lecturer, Introduction to Astronomy, University of Hawaii (1995, 1996)

I developed the curriculum, lectured, conducted lab exercises, and administered exams.

Summer Intern, Lawrence Livermore National Laboratory (1992)

During the summer of 1992 I assembled a nanosecond-resolution optical spectrograph in support of physics experiments at LLNL.

Summer Research Assistant, Big Bear Solar Observatory (1991)

I was a member of the team that executed submillimeter observations of the July 11, 1991 solar eclipse at the Caltech Submillimeter Observatory on Mauna Kea, and analyzed the data while working at Big Bear Solar Observatory.

Undergraduate Research Assistant, Caltech (1987, 1989 – 1992)

As an undergraduate I measured ages of Magellanic Cloud globular clusters by fitting isochrones to optical photometric data.

Summer Research Assistant, Caltech Applied Physics department (1990)

At Caltech I worked in an optics lab, exploring the possibility of using non-linear lithium niobate crystals as a holographic information storage medium.

Awards and Honors:

Graduated with honors, Caltech (1992)

Achievement Rewards for College Scientists (ARCS) Foundation Scholar (1994)

Faculty Excellence Award, Utah Valley University (2013)

Dean's Award for Teaching, Utah Valley University (2018)

Professional Organizations:

American Astronomical Society

Astronomical Society of the Pacific

Professional Service:

Managing Editor, Astronomical Society of the Pacific Conference Series (2009 – present)

NSF Review Panel Chair, Large Synoptic Survey Telescope Project Status Review and Commissioning Plan Review (August 2018)

NSF Review Panel for the Division of Astronomical Sciences (May 2016)

NASA Postdoctoral Program Reviewer (August 2014)
NSF Review Panel for the Division of Astronomical Sciences (April 2013)
NSF Review Panel for the Division of Astronomical Sciences (May 2012)
NSF Review Panel for the Division of Astronomical Sciences (Feb. 2012)
Gemini Selection Panel, Gemini High-resolution Optical Spectrograph Conceptual Design Study (Aug. 2011)
NSF Review Panel for the Division of Astronomical Sciences (March 2011)
NSF Review Panel for the Division of Astronomical Sciences (April 2010)
Organizing Committee, “Cosmology Near and Far: Science with WFMOS,” Joint Gemini-Subaru conference (2008)
Organizing Committee, “Probing the Dark Universe with Subaru and Gemini” Conference (2005)
Gemini Staff Time Allocation Committee (2005 – 2006)
NSF Review Committee for the Center for Adaptive Optics (2004)
Thirty-meter Telescope (TMT) Science Advisory Committee (2003 – 2006)
Site Monitoring Working Group for Mauna Kea (1998 – 2003)
Gemini Science Committee (Gemini representative, 1997 – 1999)
Referee for the Astrophysical Journal, Astronomical Journal, Astronomy & Astrophysics, Publications of the Astronomical Society of the Pacific, Monthly Notices of the Royal Astronomical Society, and the Journal of the Utah Academy of Sciences, Arts, and Letters

Teaching Experience:

Professor of Physics, Utah Valley University (2015 – present)
Associate Professor of Physics, Utah Valley University (2009 – 2015)
Lecturer, Introduction to Astronomy, University of Hawaii (spring 1995, spring 1996)
Substitute lecturer, Introduction to Astronomy, University of Hawaii, Hilo (2002, 2003)
Invited Public Lecturer, University of Hawaii and Onizuka Center for International Astronomy (June 2001)
Instructor, hands-on holography class, Oregon Museum of Science and Industry (1986)

Classes Taught:

Elementary Astronomy, ASTR 1040
Physics for Scientists and Engineers (with calculus), PHYS 2210
Astrophysics II: Galaxies and Cosmology, ASTR 3060
Modern Physics I and II, PHYS 3740, PHYS 3110, and PHYS 3120
Astrophysics Research Techniques, ASTR 4350

Observing Experience:

Optical and infrared imaging and spectroscopy (Hubble Space Telescope, Gemini North and South, UH 2.2m, NASA Infrared Telescope Facility, Canada France Hawaii Telescope, Keck, Palomar)
Near-infrared Adaptive Optics imaging (Gemini)
Submillimeter solar observations (Caltech Submillimeter Observatory)
Observational solar astronomy (Big Bear Solar Observatory)

Instrumentation Experience:

Gemini Head of Instrumentation and Instrument Program Scientist responsibilities: I oversaw the design and construction of new instrumentation for the Gemini Observatory. (2004 – 2009)

NIRI Instrument Scientist responsibilities: I worked with the instrument builders during the construction and commissioning phase of NIRI, and was later responsible for the maintenance, use, and trouble-shooting of the instrument. Gemini Observatory (1997 – 2003)

Assembled a nanosecond-resolution spectrometer, Lawrence Livermore National Laboratory (1992)

Opto-mechanical layout and analysis of experimental holographic information storage systems, Caltech (1990)

Holographic research fellowship, Oregon Museum of Science and Industry (1984 – 1986)

Management Experience:

Astronomical Society of the Pacific Conference Series Managing Editor: I manage a staff of five employees and an annual budget of about \$500,000. Duties of the Managing Editor include marketing, contract negotiations, staff hiring and retention, publication and technical oversight, and customer service. (2009 – present)

Gemini Head of Instrumentation responsibilities: I was responsible for a multi-million dollar instrument development program at Gemini. The responsibilities of the position include strategic planning, observatory-wide task prioritization, budget tracking, contract negotiations, supervising observatory development staff, coordinating engineering and science staff in a matrix-management environment, and hiring of new observatory development staff. (2006–2009)

Languages:

Fluent in Spanish

Experienced in several astronomical data processing languages, including IRAF and IDL
Proficient in UNIX, linux, Windows, Fortran, and C

Grants and Awards:

NASA STScI (2017–2019, \$46,328): “A Second Ladder: Testing for Bias in the Type Ia Distance Scale with SBF,” faculty and student support summer 2017 and 2018, travel, and publications.

NASA STScI (2016–2018, \$45,752): “Homogeneous Distances and Central Profiles for MASSIVE Survey Galaxies with Supermassive Black Holes,” faculty support summer 2016, travel, and publications.

Scholarly Activities Award, Utah Valley University (May 2014 – June 2015, \$8680):
“Probing the Source of Local Group Motion Using Surface Brightness
Fluctuations,” faculty summery support plus student travel support for summer
2014 through the 2014-2015 academic year.

Scholarly Activities Award, Utah Valley University (May 2013 – June 2014, \$8430): “A
Precision Measurement of the Rate of Universal Expansion,” faculty summery
support plus travel support for summer 2013 through the 2013-2014 academic
year.

USTAR Technology Commercialization Grant (Aug. – Dec. 2011, \$30,000):
“Geometrical Optics for Interactive 3D Holograms,” a joint project with the
Holorad corporation to explore computer optical and mechanical modeling for
commercial holographic applications.

Scholarly Activities Award, Utah Valley University (May 2011 – June 2012, \$11,773):
“HST Measurements of Extragalactic Distances,” faculty summery support plus
student salary and travel support for summer 2011 through the 2011-2012
academic year.

Center for Engaged Learning: ASP Conference Series Internship (October 2009, \$1500):
the ASP Conference Series has sponsored interns from the English department at
Utah Valley University and Brigham Young University who help with the editing
and proofreading of proceedings volumes before going to print.

Bibliography

Google Scholar citations <https://scholar.google.com/citations?user=u5rjYWEAAAAAJ&hl=en>

Total citations: 1611 (as of 9 Dec 2019)

h-index: 14

NASA ADS total citations: 1567 (as of 9 Dec 2019)

h-index: 18

Refereed Publications (25):

- Nguyen, D. D., den Brok, M., Seth, A. C., Davis, T. A., Greene, J. E., Cappellari, M., **Jensen, J. B.**, et al. 2020, “The MBHBM_{*} Project – I: Measurement of the Central Black Hole Mass in Spiral Galaxy NGC 3504 Using Molecular Gas Kinematics,” *Astrophysical Journal*, in press
- Goullaud, Charles; **Jensen, Joseph B.**, Blakeslee, John P.; Pei, Ma, Chung-Pei; Green, Jenny E., Thomas, Jens 2018, “The MASSIVE Survey. IX. Photometric Analysis of 35 High-mass Early-type Galaxies with HST WFC3/IR,” *Astrophysical Journal*, 856, 11
- Cantiello, Michele; **Jensen, Joseph B.**; Blakeslee, J. P.; Berger, E.; Levan, A. J.; Tanvir, N. R.; Raimondo, G.; Brocato, E.; Alexander, K. D.; Blanchard, P. K.; Branchesi, M.; Cano, Z.; Chornock, R.; Covino, S.; Cowperthwaite, P. S.; D’Avanzo, P.; Eftekhari, T.; Fong, W.; Fruchter, A. S.; Grado, A.; Hjorth, J.; Holz, D. E.; Lyman, J. D.; Mandel, I.; Margutti, R.; Nicholl, M.; Villar, V. A.; Williams, P. K. G. “A Precise Distance to the Host Galaxy of the Binary Neutron Star Merger GW170817 Using Surface Brightness Fluctuations,” *Astrophysical Journal Letters*, 854L, 31
- Czerny, Bozena; Beaton, Rachael; Bejger, Michal; Cackett, Edward; Dall’Ora, Massimo; Holanda, R. F. L.; **Jensen, Joseph B.**; Jha, Saurabh W.; Lusso, Elisabeta; Minezaki, Takeo; Risaliti, Guido; Salaris, Maurizio; Toonen, Silvia; Yoshii, Yuzuru 2018, “Astronomical Distance Determination in the Space Age. Secondary Distance Indicators,” *Space Science Review*
- Cho, Hyejeon; Blakeslee, John P.; Chies-Santos, Ana L.; Jee, M. James; **Jensen, Joseph B.**; Peng, Eric W.; Lee, Young-Wook 2016, “The Globular Cluster System of the Coma cD Galaxy NGC 4874 from Hubble Space Telescope ACS and WFC3/IR Imaging,” *Astrophysical Journal*, 822, 95
- Jensen, Joseph B.**; Blakeslee, John P.; Gibson, Zachary; Lee, Hyun-chul; Cantiello, Michele; Raimondo, Gabriella; Boyer, Nathan; Cho, Hyejeon 2015, “Measuring Infrared Surface Brightness Fluctuation Distances with HST WFC3: Calibration and Advice,” *Astrophysical Journal*, 808, 91

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- Howell, J. H., Mazzarella, J. M., Chan, B. H. P., Lord, S., Surace, J. A., Frayer, D. T., Appleton, P. N., Armus, L., Evans, A. S., Bothun, G., Ishida, C. M., Kim, D.-C., **Jensen, J. B.**, Madore, B. F., Sanders, D. B., Schulz, B., Vavilkin, T., Veilleux, S., Xu, K. 2007, "Tracing PAHs and Warm Dust Emission in the Seyfert Galaxy NGC 1068," *Astronomical Journal*, 134, 2086
- Davidge, T. J. & **Jensen, J. B.** 2007, "The Brightest Stars in M32: Comparing Predictions from Spectra with the Resolved Stellar Content," *Astronomical Journal*, 133, 576
- Davidge, T. J., **Jensen, J. B.**, & Olsen, K. A. G. 2006, "The Central Regions of M31 in the 3–5 μm Wavelength Region," *Astronomical Journal*, 132, 521
- Jensen, J. B.** 2006, "Searching for 'First Light' with the Gemini Telescopes," *New Astronomy Reviews*, 50, 40
- Bremer, M. N., **Jensen, J. B.**, Lehnert, M. D., Forster Schreiber, N. M., & Douglas, L. 2004, "Gemini H-band Imaging of the Field of a $z=10$ Candidate," *Astrophysical Journal Letters*, 615, L1
- Jensen, J. B.**, Tonry, J. L., & Blakeslee, J. P. 2004, "The Extragalactic Distance Scale," in Carnegie Observatories Astrophysics Series Vol. 2: Measuring and Modeling the Universe, ed. W. L. Freedman (Cambridge: Cambridge Univ. Press)
- Hodapp, K. W., **Jensen, J. B.**, Irwin, E. M., Yamada, H., Chung, R., Fletcher, K., Robertson, L., Hora, J. L., Simons, D. A., Mays, W., Nolan, R., Bec, M., Merrill, M., & Fowler, A. M. 2003, "The Gemini Near-Infrared Imager (NIRI)," *Proceedings of the Astronomical Society of the Pacific*, 115, 1388
- Kaspi, V. M., Gavriil, F. P., Woods, P. M., **Jensen, J. B.**, Roberts, M. S. E., & Chakrabarty, D. 2003, "A Major SGR-like Outburst and Rotation Glitch in the No-Longer-So-Anomalous X-ray Pulsar 1E 2259+586," *Astrophysical Journal Letters*, 588, L93
- Jensen, J. B.**, Tonry, J. L., Barris, B. J., Thompson, R. I., Liu, M. C., Rieke, M. J., Ajhar, E. A., & Blakeslee, J. P. 2003, "Measuring Distances and Probing Unresolved Stellar Populations of Galaxies Using Infrared Surface Brightness Fluctuations," *Astrophysical Journal*, 583, 712

- Jensen, J. B.**, Tonry, J. L., Thompson, R. I., Ajhar, E. A., Lauer, T. R., Rieke, M. J., Postman, M., & Liu, M. C. 2001, "The Infrared Surface Brightness Fluctuation Hubble Constant," *Astrophysical Journal*, 550, 503)
- Richtler, T., **Jensen, J. B.**, Tonry, J. L., Barris, B. J., and Drenkhahn, G. 2001, "The Brightness of SN1991T and the Uniformity of Ia Absolute Magnitudes," *Astronomy & Astrophysics*, 368, 391
- Jensen, J. B.**, Tonry, J. L., & Luppino, G. A. 1999, "The Infrared Surface Brightness Fluctuation Distances to the Hydra and Coma Clusters," *Astrophysical Journal*, 510, 71
- Jensen, J. B.**, Tonry, J. L., & Luppino, G. A. 1998, "Measuring Distances Using Infrared Surface Brightness Fluctuations," *Astrophysical Journal*, 505, 111
- Jensen, J. B.**, Luppino, G. A., & Tonry, J. L. 1996, "Infrared Surface Brightness Fluctuations in Virgo Cluster Elliptical Galaxies," *Astrophysical Journal*, 468, 519
- Ewell, M., Zirin, H., **Jensen, J. B.**, & Bastian, T. 1993, "Submillimeter Observations of the 11 July 1991 Total Solar Eclipse," *Astrophysical Journal*, 403, 426
- Mould, J. R., **Jensen, J. B.**, & Da Costa, G. S. 1992, "The Age of the Small Magellanic Cloud Cluster Lindsay 11," *Astrophysical Journal Supplement*, 82, 489
- Mould, J. R., Kristian, J., Nemec, J., Aaronson, M., & **Jensen, J. B.** 1989, "The Age of the LMC Globular Cluster NGC 1783," *Astrophysical Journal*, 339, 84
- Jensen, J. B.**, Mould, J. R., & Reid, N. 1988, "The Continuity of Cluster Formation in the Large Magellanic Cloud," *Astrophysical Journal Supplement*, 67, 77

Other Publications and Conference Contributions (49):

- Jensen, Joseph B.** 2019, "Utah Valley University's Eclipse Events," in *Celebrating the 2017 Great American Eclipse: Lessons Learned from the Path of Totality*, S. Buxner, L. Shore, and J. B. Jensen, eds, ASP Conference Series Vol. 516, 59
- Blakeslee, J. et al. 2019, "Probing the Time Domain with High Spatial Resolution," *BAAS*, 51, 529
- Jensen, Joseph B.** 2018, "The Infrared Surface Brightness Fluctuation Distance Scale," in *Stellar Populations and the Distance Scale*, ASP Conference Series Vol. 514, J. Jensen, R. M. Rich, and R. de Grijs, eds. (ASP: San Francisco), 171

- Potter, Cicely; **Jensen, Joseph B.**; Blakeslee, John; Milne, Peter; Garnavich, Peter M.; Brown, Peter 2018, "Calibrating the Type Ia Supernova Distance Scale Using Surface Brightness Fluctuations," BAAS, 232, 312.02
- Jensen, Joseph B.**; Goullaud, Charles; Blakeslee, John; Mitchiner, Casey; Ma, Chung-Pei; Greene, Jenny E.; McConnell, Nicholas J.; Thomas, Jens 2017, BAAS, 229, 143.04
- Bartier, Crystal-Lynn; **Jensen, Joseph**; Blakeslee, John 2017, "A New Distance Measurement to NGC 4874 in the Coma Cluster," BAAS, 229, 143.05
- Gibson, Zachary; **Jensen, Joseph B.**; Blakeslee, John; Schirmer, Mischa 2016, "A First Calibration of SBF Using Multi-Conjugate Adaptive Optics," BAAS, 227, 439.02
- Jensen, Joseph B.**; Blakeslee, John; Cho, Hyejeon; Lee, Hyun-chul; Bartier, Crystal-Lynn; Gibson, Zachary 2015, "The Surface Brightness Fluctuation Distance to the Coma Cluster," BAAS, 225, 253.05
- Ajhar, Edward A.; Blakeslee, John; **Jensen, Joseph B.** 2015, "The Theoretical Basis of Surface Brightness Fluctuations for Precision Cosmology and Stellar Population Studies," BAAS, 225, 230.03
- Cho, Hyejeon; Blakeslee, John P.; Lee, Young-Wook; Peng, Eric W.; **Jensen, Joseph B.** 2015, "Optical and Near-Infrared Photometry of Globular Clusters in the Coma cD NGC 4874," BAAS, 225, 523.003
- Jensen, J. B.**, Gibson, Z. J., Lee, H.-c., & Blakeslee, J. P. 2014, "Probing Stellar Populations in the Virgo and Fornax Clusters with Infrared Surface Brightness Fluctuations," BAAS, 224, 322.02
- Lee, H.-c., Le Grice, V., Blakeslee, J. P., **Jensen, J. B.**, & Lee, Y. 2014, "Stellar Populations of 16 Galaxies from the Hubble Space Telescope WFC3/IR Surface Brightness Fluctuation Observations," BAAS, 223, 152.01
- Jensen, J. B.** 2014, "Student Engagement and Success in the Large Astronomy 101 Classroom," *Ensuring STEM Literacy: a National Conference on STEM Education and Public Outreach*, ASP Conference Series Vol. 483 (San Francisco: Astronomical Society of the Pacific), 287
- Jensen, J. B.**, Boyer, N. E., Blakeslee, J. P., & Lee, H.-c. 2013, "Hubble Space Telescope IR Surface Brightness Fluctuation Color Measurements in the Virgo and Fornax Clusters," BAAS, 222, 116.12
- Cho, H., **Jensen, J. B.**, Blakeslee, J. P., French, B. S., Lee, H.-c., & Lee, Y.-W. 2013, "Near-Infrared Surface Brightness Fluctuation Measurements with the Hubble Space Telescope WFC3/IR Channel," Proc. IAU Symposium 289, 371

- Lee, H., Guzman, J. M., Blakeslee, J. P., **Jensen, J. B.**, French, B. S., Cho, H., & Lee, Y. 2013, "Comparison of Hubble Space Telescope WFC3/IR Surface Brightness Fluctuation Measurements to Models," *BAAS*, 221, 147.16
- Jensen, J. B.** 2012, "Surface Brightness Fluctuation PSF Fitting Techniques with Natural Guide Star Adaptive Optics," *BAAS*, 220, 332.01
- French, B. S., **Jensen, J. B.**, & Blakeslee, J. P. 2012, "Calibrating the IR Surface Brightness Fluctuation Distance Scale Using HST WFC3," *BAAS*, 220, 332.02
- Jensen, J. B.**, Manning, J. G., Gibbs, M. G., & Daou, D. eds. 2012, *Connecting People to Science: A National Conference on Science Education and Public Outreach*, ASP Conference Series Vol. 457 (San Francisco: Astronomical Society of the Pacific)
- Jensen, J. B.**, Manning, J. G., & Gibbs, M. G., eds. 2011, *Earth and Space Science: Making Connections in Education and Public Outreach*, ASP Conference Series Vol. 443 (San Francisco: Astronomical Society of the Pacific)
- Jensen, J. B.**, Moody, J. W., & Barnes, J. 2010, "Open Access and the Future of the ASP Conference Series," *ASP Conference Series Vol. 433, Library and Information Services in Astronomy VI: 21st Century Astronomy Librarianship, From New Ideas to Action*, E. Isaksson, J. Lagerstrom, A. Holl, & N. Bawdekar, eds. (San Francisco, Astronomical Society of the Pacific), p. 174
- Jensen, J. B.**, Moody, J. W., Barnes, J., & Szkody, P. 2010, "The Future of the ASP Conference Series," *Future Professional Communication in Astronomy II*, A. Accomazzi, ed. (Springer), p. 65
- Jensen, J. B.**, Kleinman, S. J., Simons, D. A., Lazo, M., Rigaut, F., White, J. K. 2008, "Current and Future Facility Instruments at the Gemini Observatory," *Proc. SPIE*, 7014, 4
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- Davidge, Tim; Jensen, J. B.; Olsen, K. 2006, "The Central Regions of M31 in the 3-5 micron Wavelength Region," *BAAS*, 208, 14.16
- Simons, D. A., **Jensen, J. B.**, d'Orgeville, C. Gray, P. M., Lazo, M., Rogers, R., Sheehan, M. P., & White, J. K. 2006, "Past, present, and future instrumentation at Gemini Observatory," *Proc. SPIE*, 6269, 4
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Jensen, J. B., Fletcher, M., Gardhouse, W. R., Milton, N. M., Pazder, J., Stoesz, J.,

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- Jensen, J. B.** 2003, "The IR SBF Hubble Diagram," *Carnegie Observatories Astrophysics Series, Vol. 2: Measuring and Modeling the Universe*, ed. W. L. Freedman (Pasadena: Carnegie Observatories, <http://www.ociw.edu/ociw/symposia/series/symposium2/proceedings.html>)
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- Jensen, J. B.**, Tonry, J. L., Barris, B. J., & Liu M. C. 2001, "The Ages of Early-type Galaxies from Infrared Surface Brightness Fluctuations," *ASP Conference Series Vol. 245: Astrophysical Ages and Timescales*, T. von Hippel, C. Simpson, and N. Manset, eds. (San Francisco: Astronomy Society of the Pacific)
- Jensen, J. B.**, Chun, M. C., & Tonry, J. L. 2001, "Infrared Surface Brightness Fluctuation Measurements Using the Hokupaa Adaptive Optics System on Gemini," *BAAS*, 197, 119.01
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Invited Talks and Presentations:

Brigham Young University Astronomy Colloquium, “Tension in the Cosmological Distance Scale,” Provo, UT, Oct. 2019

Utah Valley University Honors Colloquium, “Listening to the Songs of the Universe,” Sept. 2019 (with Karl Haisch)

Utah Valley University Physics Department Colloquium, “Tension in the Cosmological Distance Scale,” Sept. 2019

American Association of Physics Teachers conference, “Tension in the Cosmological Distance Scale,” Provo, UT, July 2019

Utah Valley University Physics Department Colloquium, “The Cosmic Distance Ladder: Systematic Error or New Physics?” Jan. 2019

Munich Institute for Astro- and Particle Physics, “The Surface Brightness Fluctuation Distance Ladder,” Garching, Germany, June 2018

Utah Valley University Physics Department Colloquium, “Precision Cosmology and the Extragalactic Distance Scale,” Orem, Utah, Sept. 2017

Stellar Populations and the Distance Scale, “The Infrared Surface Brightness Fluctuation Distance Scale,” Beijing, China, Sept. 2017

Cosmic Flows 2016, “The Future of Infrared Surface Brightness Fluctuation Distance Measurements,” Quy Nohn, Vietnam, July 2016

Lowell Observatory Colloquium, “Towards a 1% Measurement of the Hubble Constant Using IR Surface Brightness Fluctuations,” Flagstaff, Arizona, June 2016

Thirty Meter Telescope Science Forum, “The Future of Infrared Surface Brightness Fluctuation Distance Measurements,” Kyoto, Japan, May 2016

Utah Valley University Physics Department Colloquium, “Supermassive Black Holes in the Centers of Elliptical Galaxies,” Orem, Utah, March 2016

Utah Valley University Physics Department Colloquium, “Towards a 1% Measurement of the Hubble Constant Using IR Surface Brightness Fluctuations,” Orem, Utah, Jan. 2014

University of Utah High Energy Physics Seminar, “Towards a 1% Measurement of the Hubble Constant Using IR Surface Brightness Fluctuations,” Salt Lake City, Utah, Oct. 2013

- Utah Valley University Ute Indian Conference, "Native American Astronomy," Orem, Utah, Aug. 2013
- Scholarship of Teaching & Engagement Conference, "Engagement in Large Astronomy Classes," Utah Valley University, Orem, Utah, March 2013
- Utah Valley University Physics Department Colloquium, "How Old is that Galaxy? The Art of Astronomical Measurement," Orem, Utah, Nov. 2012
- Utah Valley University Physics Department Colloquium, "Revolutions in Astronomy Through Technology," Orem, Utah, Jan. 2012
- Utah Valley University Physics Department Colloquium, "Measuring Extragalactic Distances Using Infrared Surface Brightness Fluctuations," Orem, Utah, Jan. 2011
- Utah Valley University Physics Department Colloquium, "New Worlds, New Horizons in Astronomy and Astrophysics," Orem, Utah, Sept. 2010
- Future Professional Communication in Astronomy II, "The Future of the ASP Conference Series," Cambridge, Massachusetts, Apr. 2010
- Library and Information Services in Astronomy VI, "Is Open Access a Viable Option for Conference Proceedings?" Pune, India, Feb. 2010
- Utah Valley University Physics Department Colloquium, "Measuring Universal Acceleration," Orem, Utah, Jan. 2010
- Science with Adaptive Optics-fed Instruments on Large Telescopes conference, "Scientific Horizons at the Gemini Observatory: Adaptive Optics and the Aspen Instruments," Dunk Island, Australia, Apr. 2008
- Brigham Young University Physics and Astronomy Colloquium, "Measuring Universal Acceleration," Provo, Utah, Feb. 2008
- University of California Irvine conference on First Light Detection, "Searching for First Light with the Gemini Telescopes," Irvine, California, May 2005
- NOAO lunch talk, "Breaking the Age-Metallicity Degeneracy using Infrared Surface Brightness Fluctuations," Tucson, Arizona, Mar. 2004
- University of Hawaii Institute for Astronomy colloquium, "Recent Progress at Gemini and Preparations for 2004A," Honolulu, Hawaii, Sept. 2003
- Carnegie Centennial Symposium 2: Measuring and Modeling the Universe, "The Extragalactic Distance Scale," Pasadena, California, Nov. 2002

- Brigham Young University Physics and Astronomy Colloquium, "The Extragalactic Distance Scale," Provo, Utah, Nov. 2002
- Gemini/Joint Astronomy Center/Keck/Subaru Seminar, "The Extragalactic Distance Scale," Hilo, Hawaii, Nov. 2002
- University of Hawaii at Hilo public lecture series, "Measuring the Universe," Hilo, Hawaii, June 2001
- Onizuka Center for International Astronomy public lecture series, "Measuring the Universe," Onizuka Center for International Astronomy, Hawaii, June 2001
- American Astronomical Society, "Infrared Surface Brightness Fluctuation Measurements Using the Hokupa'a Adaptive Optics System," San Diego, California, Jan. 2001
- NOAO Adaptive Optics Data Reduction Workshop, "Infrared Surface Brightness Fluctuation Measurements Using the Hokupa'a Adaptive Optics System," Tucson, Arizona, Feb. 2001
- Brigham Young University Physics and Astronomy Colloquium, "IR Surface Brightness Fluctuations and the Extragalactic Distance Scale," Provo, Utah, Feb. 2001
- Joint Astronomy Center/Gemini Seminar, "Measuring Distances Using IR Surface Brightness Fluctuations," Hilo, Hawaii, 1998