

Curriculum Vita for Rajib Ganguly

Department of Computer Science, Engineering, & Physics
 The University of Michigan-Flint
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I. Education:

The Pennsylvania State University (1996-2002) Ph.D., Astronomy & Astrophysics
 Dissertation Title: “Origins and Properties of Quasar-Intrinsic Absorption Lines”
 Dissertation Advisors: Jane C. Charlton, Michael Eracleous
 The University of Arizona (1991-1996) B.S., Physics & Astronomy

II. Employment/Professional Experience:

Assistant Professor of Physics
 Department of Computer Science, Engineering, & Physics
 The University of Michigan-Flint (2009-)
 Instructor for Astronomy 1050 (survey class for non-majors)
 Department of Physics & Astronomy
 The University of Wyoming (2008)
 Postdoctoral Research Scientist
 Department of Physics & Astronomy,
 The University of Wyoming (2005-2009)
 Postdoctoral Research Scientist
 The Space Telescope Science Institute (2002-2005)
 Resident Astronomer
 Hobby-Eberly Telescope
 McDonald Observatory (2000)
 Research Assistant
 Department of Astronomy & Astrophysics,
 The Pennsylvania State University (1998-2002)
 Teaching Assistant
 Department of Astronomy & Astrophysics,
 The Pennsylvania State University (1996-1998)

III. Scholarly Activities:

A. Refereed Publications:

- Ganguly, R.**, Lynch, R. S., Charlton, J. C., Eracleous, M., Tripp, T. M., Palma, C., Sembach, K. R., Misawa, T., Masiero, J. R., Milutinovic, N., Lackey, B. D., Jones, T. M. 2012, ApJ, under internal review
 “A Census of Quasar-Intrinsic Absorption in the Hubble Space Telescope Archive I: Systems from High Resolution Spectra”
- Ganguly, R.**, Runnoe, J., Brotherton, M. S., Shang, Z. 2011, ApJ, submitted (external review received August 2011, currently under revision)
 “Rest-frame Optical Properties of High-redshift, Radio-selected, Broad Absorption Line Quasars”
- Berrington, R. C., Brotherton, M. S., Gallagher, S. C., **Ganguly, R.**, Shang, Z., Lacy, M., Gregg, M. D., Hall, P. B., Laurent-Muehleisen, S. A. 2011, ApJ, submitted (second external review received 2009, currently under revision)
 “The X-ray Spectrum and Spectral Energy Distribution of FIRST J155633.8+351758: A Beamed Radio-Quiet Quasar with a Polar Outflow”
- Cales, S., Brotherton, M. S., Shang, Z., Bennert, V. N., Canalizo, G., Stoll, R., **Ganguly, R.**, Vanden Berk, D., Paul, C., Diamond-Stanic, A. 2011, ApJ, 741, 106
 “Hubble Space Telescope Imaging of Post-Starburst Quasars”
- Shang, Z., Brotherton, M. S., Wills, B. J., Wills, D., Cales, S. L., Dale, D. A., Green, R. F., Runnoe, J. C., Nemmen, R. S., Gallagher, S. C., **Ganguly, R.**, Hines, D. C., Kelly, B. J., Kriss, G. A., Li, J., Tang, B., Xie, Y. 2011, ApJS, 196, 2
 “The Next Generation Atlas of Quasar Spectral Energy Distributions from Radio to X-Ray”
- Wu, J., Charlton, J. C., Misawa, T., Eracleous, M., **Ganguly, R.** 2010, ApJ, 722, 997
 “The Physical Conditions of the Intrinsic N V Narrow Absorption Line Systems of Three Quasars”
- Chartas, G., Charlton, J., Eracleous, M., Giustini, M., Rodriguez Hidalgo, P., **Ganguly, R.**, Hamann, F., Misawa, T., Tytler, D. 2009, New Astronomy Reviews, 53, 128
 “High velocity outflows in narrow absorption line quasars”
- Ganguly, R.**, Cen, R., Fang, T., Sembach, K. R. 2008, ApJL, 678, 89
 “Correlations Between O VI Absorbers and Galaxies at Low Redshift”
- Ganguly, R.**, Brotherton, M. S. 2008, ApJ, 672, 102
 “On the True Fraction of Quasars With Outflows”
- Ganguly, R.**, Brotherton, M. S., Cales, S., Scoggins, B., Shang, Z., Vestergaard, M. 2007, ApJ, 665, 990
 “Outflows and the Physical Properties of Quasars”

- Misawa, T., Charlton, J. C., Eracleous, M., **Ganguly, R.**, Tytler, D., Kirkman, D., Suzuki, N., Lubin, D. 2007, ApJS, 171, 1
 “A Census of Intrinsic Narrow Absorption Lines in the Spectra of Quasars at $z = 2 - 4$ ”
- Ganguly, R.**, et al. 2007, AJ, 133, 479
 “Hubble Space Telescope Ultraviolet Spectroscopy of 14 Low-Redshift Quasars”
- Narayanan, A., Misawa, T., Charlton, J. C., **Ganguly, R.** 2006, AJ, 132, 2009
 “The Advantage of Increased Resolution in the Study of Quasar Absorption Systems”
- Ganguly, R.**, Sembach, K. R., Tripp, T. M., Savage, B. D., Wakker, B. P. 2006 ApJ, 645, 868
 “High-Resolution Absorption Spectroscopy of Multiphase, High-Metallicity Gas Associated with the Luminous Quasar HE 0226–4110”
- Ganguly, R.**, Sembach, K. R., Tripp, T. M., Savage, B. D. 2005, ApJS, 157, 251
 “Highly Ionized Gas in the Galactic Halo and the High-Velocity Clouds toward PG 1116+215”
- Tripp, T. M., Jenkins, E. B., Bowen, D. V., Prochaska, J. X., Aracil, B., **Ganguly, R.** 2005, ApJ, 619, 714
 “Discovery of a Primitive Damped Ly-alpha Absorber near an X-Ray-bright Galaxy Group in the Virgo Cluster”
- Wise, J. H., Eracleous, M., Charlton, J. C., **Ganguly, R.** 2004, ApJ, 613, 129
 “Variability of Narrow Associated Absorption Lines in Nearby Quasars”
- Ganguly, R.**, Masiero, J., Charlton, J. C., Sembach, K. R. 2003, ApJ, 598, 922
 “An Intrinsic Absorption Complex Toward RX J1230.8+0115”
- Rosenburg, J. L., **Ganguly, R.**, Giroux, M. L., Stocke, J. T. 2003, ApJ, 591, 677
 “Probing the Size of Low-Redshift Lyman-alpha Absorbers”
- Ganguly, R.**, Charlton, J. C., Eracleous, M. 2001, ApJL, 556, 7
 “Variable UV Absorption in the Spectrum of MRC 2251–178”
- Ganguly, R.**, Charlton, J. C., Bond, N. A. 2001, ApJL, 553, 101
 “The Absorbers Toward CSO 118: Superclustering at $z \sim 3$, or an Intrinsic Absorption Complex”
- Ganguly, R.**, Bond, N. A., Charlton, J. C., Eracleous, M., Brandt, W. N., Churchill, C. W. 2001, ApJ, 549, 133
 “On the Origin of Narrow Absorption Line Gas Intrinsic to Low Redshift QSOs”
- Ganguly, R.**, Eracleous, M., Charlton, J. C., Churchill, C. W. 1999, AJ, 117, 2594
 “Intrinsic Narrow Absorption Lines in KECK/HIRES Spectra of a Sample of Six Quasars”
- Ganguly, R.**, Churchill, C. W., Charlton, J. C. 1998, ApJ, 498, L103
 “An Aluminum-Enriched Cloud at $z = 1.94$ ”

B. Papers in Preparation:

- Ganguly, R.**, Townsend, S., Strom, A., Brotherton, M. S., Shang, Z., Cales, S.
 “The Ultraviolet Though Near Infrared Properties of Post-Starburst Quasars”
 Bhattacharjee, A., **Ganguly, R.**, Brotherton, M. S.
 “Quasar Outflows as a Function of Radio Property”
 Brotherton, M. S., Stoll, R., Paul, C., Diamond-Stanic, A., Shang, Z., Cales, S.,
Ganguly, R., Canalizo, G., Vanden Berk, D.
 “A Catalog of Post-Starburst Quasars”
 Brotherton, M. S., Stoll, R., Paul, C., Diamond-Stanic, A., Shang, Z., Cales, S.,
Ganguly, R., Canalizo, G., Vanden Berk, D.
 “The Environments of Post-Starburst Quasars”
 Feldmeier, J., Rivera, F., **Ganguly, R.**, Barlow, R.
 “A Catalog of [O III] 5007 Photometric Standards In The Virgo Cluster Region”
 Hawthorn, M. J., Grier, C., **Ganguly, R.**, Charlton, J. C., Eracleous, M.,
 Sembach, K. R.
 “A Census of Quasar-Intrinsic Absorption from the HST Archive II:
 Time Variable Systems”
 Yuan, Q., Brotherton, M. S., Green, R. F., **Ganguly, R.**, Shang, Z., Kriss, G. A.
 “Outflowing Winds from Narrow-Line Seyfert 1 Galaxies: The Case of Mrk 478”

C. Conference Proceedings:

- Brotherton, M. S., Cales, S., **Ganguly, R.**, Shang, Z., Canalizo, G., Stoll, R., Paul, C.,
 & Diamond-Stanic, A. M. 2010, “Post-Starburst Quasars”
 in IAU Symposium, 267, 105
 Shang, Z., Brotherton, M., **Ganguly, R.**, Cales, S., & Strom, A. 2009,
 “HST and Spitzer View of Post-Starburst Quasars”
 in *The Starburst-AGN Connection*, 408, 185, ed. W. Wang, Z. Yang, Z. Luo, and
 Z. Chen
 Yuan, Q., Brotherton, M. S., Green, R. F., **Ganguly, R.**, Shang, Z., Kriss, G. A. 2007
 “A Decelerating Wind Observed in Mrk 478”
 in *The Central Engine of Active Galactic Nuclei*, ed. L. C. Ho and J.-M. Wang
 Misawa, T., Eracleous, M., Charlton, J. C., **Ganguly, R.**, Tytler, D., Kirkman, D.,
 Suzuki, N., Lubin, D. 2007
 “Probing Quasar Outflows with Intrinsic Narrow Absorption Lines”
 in *The Central Engine of Active Galactic Nuclei*, ed. L. C. Ho and J.-M. Wang
Ganguly, R., Misawa, T., Lynch, R., Charlton, J. C., Eracleous, M., Hawthorn, M. J.,
 Grier, C. 2007
 “Quasar-Intrinsic Absorption in the HST Archive”
 in *The Central Engine of Active Galactic Nuclei*, ed. L. C. Ho and J.-M. Wang

- Ganguly, R.**, Sembach, K. R., Savage, B. D., Tripp, T. M. 2006
 “Kinematics, Ionization, and Abundances of the High Velocity Clouds Toward PG 1116+215”
 in *Astrophysics in the Far Ultraviolet: Five Years of Discovery with FUSE*,
 ed. Sonneborn, G., Moos, H. W., Andersson, B.-G.,
- Ganguly, R.**, Sembach, K. R., Charlton, J. C., Eracleous, M., Palma, C., Tripp, T. M.
 2004 “Intrinsic Narrow Absorption Lines in the HST/STIS Echelle Archive”
 in *AGN Physics with the Sloan Digital Sky Survey*, ed. Richard, G. T., Hall, P. B.
- Ganguly, R.**, Sembach, K. R., Charlton, J. C. 2003
 “A Comparison Of Virgo Cluster Absorption Along Two Sight Lines”
 in *The IGM/Galaxy Connection: The Distribution of Baryons at $z = 0$* ,
 ed. Rosenberg, J. L., Putman, M. E.
- Ganguly, R.**, Masiero, J., Charlton, J. C., Sembach, K. R. 2003
 “The Exquisite Spectrum of RX J1230.8+0115”
 in *Hubble’s Science Legacy: Future Optical/Ultraviolet Astronomy from Space*
 ed. Sembach, K. R., Blades, J. C., Illingworth, J. D., Kennicutt, Jr., R. C.
- Ganguly, R.** 2002
 “Properties of QSO-Intrinsic Narrow Ultraviolet Absorption”
 in *Mass Outflow in Active Galactic Nuclei: New Perspectives*,
 ed. Crenshaw, D. M., Kraemer, S. B., George, I. M.
- Ganguly, R.**, Bond, N. A., Charlton, J. C., Eracleous, M., Brandt, W. N.,
 Churchill, C. W. 2001
 “On the Origins of QSO-intrinsic Narrow Absorption Lines”
 in *Guillermo Haro Advanced Lectures on the Starburst-AGN Connection*,
 ed. Mujica, R., Aretxaga, I., Kunth, D.
 (URL: <http://www.inaoep.mx/~agn00/posters.html>)
- Ganguly, R.**, Bond, N. A., Charlton, J. C., Eracleous, M., Brandt, W. N.,
 Churchill, C. W. 2000
 “On the Origins of QSO-intrinsic Narrow Absorption Lines”
 in *A Decade of HST Science*, ed. Livio, M., Noll, K., Stiavelli, M.

D. Abstracts and Circulars:

- Townsend, S. L., **Ganguly, R.**, Strom, A., Cales, S., Brotherton, M. S. 2011
 “Recent Star-formation in Post-Starburst Quasars”, *Bull. AAS*, 43, #142.05
- Ganguly, R.**, Bourjaily, M., Munsell, J., Brotherton, M. S., Bhattacharjee, A.,
 Runnoe, J., Charlton, J. C., & Eracleous, M. 2011,
 “Toward a Prescription for Feedback from Quasar Outflows”, *Bull. AAS*, 43,
 #142.04

- Stark, M. A., **Ganguly, R.**, Gallagher, S. C., Gibson, R., & Brotherton, M. S. 2011,
 “Testing the Radiative-Driving Hypothesis of Quasar Outflows”, *Bull. AAS*, 43,
 #142.03
- Eracleous, M., Misawa, T., Charlton, J., Chartas, G., **Ganguly, R.**,
 Rodriguez Hidalgo, P., & Hamann, F. 2010,
 “Probing the Origin of Intrinsic Absorption Lines (NALs and mini-BALs) in the
 Spectra of Luminous Quasars”, *Bull. AAS*, 42, #359.01
- Ganguly, R.**, Strom, A., Brotherton, M. S., Cales, S. L. 2009
 “Post-starburst Quasars: Still Star-forming or Blowhards?”, *Bull. AAS*, 213
- Lyons, D. J., **Ganguly, R.**, Reiser, M. A., Slater, T. F., Slater, S. J.
 “Backwards Faded Scaffolding as a Teaching Innovation in the Astro 101 Lab”,
Bull. AAS, 213
- Rivera, F., **Ganguly, R.**, Feldmeier, J. J., Barlow, R. 2009
 “A Catalog of [O III] 5007 Photometric Standards In The Virgo Cluster Region”,
Bull. AAS, 213
- Strom, A., **Ganguly, R.**, Brotherton, M. S., Cales, S. L., Stoll, R. 2009
 “The Young Stellar Content of Post-Starburst Quasars”, *Bull. AAS*, 213
- Brotherton, M. S., Cales, S., **Ganguly, R.**, Shang, Z., & Canalizo, G 2008
 “Hubble Space Telescope Images of Post-Starburst Quasars”, *Bull. AAS*, 212, 2004
- Ganguly, R.**, Brotherton, M. S. 2008
 “What Fraction Of AGN Actually Show Outflows?”, *Bull. AAS*, 211, 7503
- Berrington, R. C., Brotherton, M. S., Gallagher, S. C., **Ganguly, R.**, Shang, Z.,
 Lacy, M., Gregg, M. D., Hall, P. B., Laurent-Muehleisen, S. A. 2008
 “The X-ray Spectrum and Spectral Energy Distribution of
 FIRST J155633.8+351758: A Beamed Radio-Quiet Quasar with a Polar Outflow”,
Bull. AAS, 211, 6405
- Einsig, D., Misawa, T., Narayanan, A., Charlton, J. C., **Ganguly, R.** 2008
 “A Survey of Intrinsic Narrow Absorption Lines in 75 VLT/UVES Quasars”,
Bull. AAS, 211, 4505
- Runnoe, J., Brotherton, M. S., **Ganguly, R.**, Shang, Z. 2008
 “Rest-Frame Optical Properties of High-Redshift, Radio-Selected, Broad
 Absorption Lines Quasars”, *Bull. AAS*, 211, 4506
- Brotherton, M. S., Stoll, R., Paul, C., Diamond-Stanic, A., Shang, Z., Cales, S.,
Ganguly, R., Canalizo, G., Vanden Berk, D. 2007
 “A Catalog of Post-Starburst Quasars”, *Bull. AAS*, 210, 217
- Ganguly, R.**, Lynch, R. S., Charlton, J. C., Eracleous, M., Tripp, T. M., Palma, C.
 Sembach, K. R., Misawa, T., Masiero, J. R., Milutinovic, N., Jones, T. M. 2006
 “Intrinsic Absorption in the HST Archive II: Partial Covering and Associated
 O VI Systems”, *Bull. AAS*, 38, 987

- Grier, C., Hawthorn, M., **Ganguly, R.**, Charlton, J. C., Eracleous, M., Sembach, K. R. 2007
 “Intrinsic Absorption in the HST Archive I: Search for Time Variable Systems”, *Bull. AAS*, 38, 986
- Norris, J., Kutyrev, A., **Ganguly, R.**, Canterna, R., Pierce, M. 2006
 “GRB 060211b: WIRO NIR observations”, GRB Coordinates Network, Circular Service, 4766, 1
- Norris, J., Kutyrev, A., **Ganguly, R.**, Canterna, R., Pierce, M. 2006
 “GRB 060211a: WIRO NIR observations”, GRB Coordinates Network, Circular Service, 4760, 1
- Ganguly, R.**, Cen, R., Fang, T., Sembach, K. R. 2005
 “The Relationship Between O VI WHIM Absorption and Galaxies from Hydrodynamic Simulations”, *Bull. AAS*, 37, 1361
- Hornschemeier, A. E., Lochner, J. C., **Ganguly, R.**, Feaga, L. M., Ford, K. E. S. 2005
 “Big Explosions, Strong Gravity: Making Girl Scouts ACEs of Space through Chandra Outreach”, *Bull. AAS*, 37, 1263
- Misawa, T., Charlton, J. C., Eracleous, M., **Ganguly, R.**, Tytler, D., Kirkman, D., Suzuki, N., Lubin, D. 2005
 “A Census of Intrinsic Narrow Absorption Lines at $z \sim 3.0$ ”, *Bull. AAS*, 37, 1185
- Ganguly, R.**, Sembach, K. R., Tripp, T. M., Savage, B. D., Wakker, B. P. 2004
 “Extreme Ultraviolet Spectroscopy of O III, O IV, O V, and O VI Absorption Associated with the Quasar HE 0226–4110”, *Bull. AAS*, 36, 1586
- Hornschemeier, A. E., Lochner, J. C., Feaga, L. M., **Ganguly, R.**, Ford, K. E. S. 2004
 “Big Explosions and Strong Gravity: Packaged Activities for Girl Scouts”, *Bull. AAS*, 36, 1347
- Misawa, T., Eracleous, M., Charlton, J., **Ganguly, R.**, Tytler, D., Kirkman, D., O’Meara, J., Suzuki, N., Lubin, D. 2003
 “A Census of Intrinsic Narrow Absorption Lines at $z \sim 3.0$ ”, *Bull. AAS*, 35, 1329
- Ganguly, R.**, Sembach, K. R., Tripp, T. M., Savage, B. D. 2003
 “Highly Ionized Gas in the Galactic Halo and the High Velocity Clouds Toward PG 1116+215”, *Bull. AAS*, 35, 1270
- Ganguly, R.**, Masiero, J., Charlton, J. C., Sembach, K. R. 2002
 “An Intrinsic Absorption Complex Toward RX J1230.8+0115: Geometry and Photoionization Conditions”, *Bull. AAS*, 34, 1286
- Wise, J., Eracleous, M., Charlton, J. C., **Ganguly, R.** 2001
 “A Search for Variability in Quasar Narrow, Associated Absorption Lines”, *Bull. AAS*, 33, 1456
- Bond, N. A., **Ganguly, R.**, Charlton, J. C. 2001
 “Constraining the Location and Physical Conditions of Intrinsic NAL Gas in QSOs”, *Bull. AAS*, 33, 1456

Ganguly, R. 2001

“Origins and Properties of QSO-intrinsic Absorption Lines and their Host QSO”, *Bull. AAS*, 33, 1421

Ganguly, R., Charlton, J. C. 2000

“The Absorbers Toward CSO 118: Hierarchical Clustering at $z \sim 3$, or an Intrinsic Absorption Complex?”, *Bull. AAS*, 32, 1511

Ganguly, R., Bond, N. A., Charlton, J. C., Eracleous, M., Brandt, W. N., Churchill, C. W. 1999

“On the Origin of Intrinsic UV Narrow Absorption Lines in Low-Redshift QSOs II: A Multi-wavelength Analysis”, *Bull. AAS*, 31, 1400

Bond, N. A., **Ganguly, R.**, Charlton, J. C., Churchill, C. W., Eracleous, M., Brandt, W. N. 1999

“On the Origin of Intrinsic UV Narrow Absorption Lines in Low-Redshift QSOs I: A Survey”, *Bull. AAS*, 31, 1399

Ganguly, R., Eracleous, M., Charlton, J. C., Churchill, C. W. 1998

“Intrinsic Narrow Quasar Absorption Line Properties at $z \sim 2$ ”, *Bull. AAS*, 30, 1413

Ganguly, R., Churchill, C. W., Charlton, J. C. 1997

“An Aluminum Enriched Cloud at $z \sim 2$ ”, *Bull. AAS*, 29, 1349

Ganguly, R., Hill, J. M., Oegerle, W. R. 1996

“Dynamics of the Rich Cluster of Galaxies Abell 2255”, *Bull. AAS*, 28, 831

E. Awards, Scholarships, and Grants

HST Cycle 20 archival grant, “The Geometry of Quasar Outflows

(PI: Rajib Ganguly, 2012-; pending review)

HST Cycle 20 guest observer grant, “COS Quasar SNAP Survey of the Diagnostic-Rich 500-1050 Å region” (PI: Rajib Ganguly, 2012-; pending review)

NASA ADP grant, “A Multivariate, Panchromatic Investigation of Outflows as a Function of Quasar Property” (PI: Rajib Ganguly, 2009-2012)

Chandra Cycle 10 observing grant, “X-ray Shielding in Quasar Outflows” (PI: Rajib Ganguly, 2008-2012)

Chandra Cycle 10 observing grant, “Chandra Survey of Polar Broad Absorption-line Quasars” (PI: Kajal Ghosh, 2008-2010)

NSF grant, “Understanding Quasar Central Engines Using Narrow Intrinsic Absorption Lines” (PI: Michael Eracleous, Penn State, 2008-)

GALEX Cycle 4 archival grant, “The Young Stellar Content of Post-Starburst Quasars” (PI: Rajib Ganguly, 2008-2010)

HST Cycle 13 archival grant, “Searching for Quasar-Intrinsic Absorption Through Time Variability” (PI: Rajib Ganguly, 2003-2007)

FUSE Cycle 3 grant, “Monitoring the Intrinsic Absorption Complex Toward RX J1230.8+0115” (PI: Rajib Ganguly, 2002-2004)
 HST Cycle 9, “A Snapshot Survey of Variability of Narrow and Broad Associated Absorption Lines in Quasars” (PI: Jane Charlton, Penn State, 2000-2002)
 HST Cycle 9, “The Cause of Narrow Absorption Lines Intrinsic to Quasi-Stellar Objects” (PI: Jane Charlton, Penn State, 2000-2002)
 The Pennsylvania State University, Zaccheus Daniel Scholarship (1999-2000)
 The Pennsylvania State University, Oscar J. Roberts Fellowship (1996-1997)

F. Colloquia/Other Invited Talks:

“The Universe Through Superman’s Eyes”
 Longway Planetarium, Flint, MI, 2011
 “Growing the Biggest Black Holes in the Universe”
 Research Spotlight, University of Michigan-Flint, 2011
 “How Many Ways Can a Black Hole Kill You?”
 Longway Planetarium, Flint, MI, 2011
 “Spewing Black Holes: Connecting Outflows from Active Galaxies to Galactic Evolution,”
 Michigan State University, March 2010
 “Spewing Black Holes: Outflows from Active Galaxies,” New Mexico State University,
 December 2008
 “Quasar Absorption Lines: Studying Gas That You Can’t See Using Light That Isn’t There,” Launchpad Workshop, University of Wyoming, August 2008
 “Spewing Black Holes: Outflows from Active Galaxies,”
 Hofstra University, February 2008
 “Toward a Complete Picture of AGN Outflows,”
 Conference on “The Impact of AGN Feedback on Galaxy Formation,” May 2007,
 Schloss Ringberg, Germany
 “Spewing Black Holes: Outflows from Active Galaxies,”
 University of Wyoming, March 2007
 “Probing the Size of Low-Redshift Lyman- α Absorbers,”
 STScI, December 2002

IV. Teaching Activities:

A. Courses Taught:

Instructor for Physics 343 (Modern Physics) at
 The University of Michigan-Flint (Winter 2012)
 Lab Instructor for Astronomy 135 (Beyond the Solar System) at
 The University of Michigan-Flint (Winter 2011)

Instructor for Astronomy 135 (Beyond the Solar System) at
The University of Michigan-Flint (Winter 2011)

Lab Instructor for Astronomy 131 (Astronomy of the Solar System) at
The University of Michigan-Flint (Fall 2010, Fall 2011)

Instructor for Astronomy 131 (Astronomy of the Solar System) at
The University of Michigan-Flint (Fall 2010)

Lab Instructor for Physics 143 (College Physics I) at
The University of Michigan-Flint (Winter 2010)

Lab Instructor for Physics 243 (Principles of Physics I) at
The University of Michigan-Flint (Fall 2009)

Instructor for Physics 243 (Principles of Physics I) at
The University of Michigan-Flint (Fall 2009, Winter 2010, Fall 2010,
Winter 2011, Fall 2011)

Instructor for Physics 354 (Optics) at The University of Michigan-Flint
(Fall 2009)

Instructor for Astronomy 1050 (Survey of Astronomy) at
The University of Wyoming (Fall 2008)

Teaching Assistant for Astro 120 at Penn State (1997)

Astronomy Lab Instructor at Penn State (1996-1997)

B. Pedagogical Workshops and Development:

Participant in AAPT New Faculty Workshop 2011

Teaching Circles, Thompson Center for Teaching & Learning
2011–2012: “Once Upon A Time” (Facilitator: Amy Yorke)
2010–2011: “Social Intelligence” (Facilitator: Amy Yorke)
2009–2010: “Integration of Scholarly Activity with Teaching and Learning:
Boyers Model at Work” (Facilitator: Jennifer Blackwood)

Mentee in 2009-2010 Faculty Mentoring Program (Mentor: Cindy Pfalzer)

Attended Blackboard training workshops in 2009 and 2010 offered by the
Office of Extended Learning

Participant in 2009 Pre-Commencement Workshop on “Balancing Community and
Advancing Scholarship in Teaching and Learning”

Attended Faculty Institute for NASA Earth and Space Science Education (FINESSE)
workshop (January 2009)

Attended the *Teaching Excellence Workshop (Tier 1)* conducted by Professors Ed
Prather and Gina Brissenden of the NASA Center for Astronomy Education
(2008)

C. Supervision of Student Research:

- David Christenson (2012-) – supervising undergraduate research regarding the kinetic luminosity of AGN outflows
- Jeff Derseweh (2011-) – supervising undergraduate research regarding the kinetic luminosity of AGN outflows
- Joe Richmond (2011-) – supervising undergraduate research regarding the kinetic luminosity of AGN outflows
- Michael Wiesenauer (2011-) – supervising undergraduate research modelling quasar outflows
- Justin Robbins (2010-) – supervising undergraduate research regarding the kinetic luminosity of AGN outflows
- Jeremy Munsell (2010) – supervising undergraduate research regarding the kinetic luminosity of AGN outflows
- Matthew Bourjaily (2010) – supervising undergraduate research regarding the kinetic luminosity of AGN outflows
- Shonda Jones (2010-) – supervising undergraduate research regarding the ultraviolet, optical, and infrared light observed in post-starburst quasars
- Frances Rivera (2008-2009) – supervising undergraduate research regarding the search for intracuster planetary nebulae in the Virgo Cluster, the definition of a photometric system using narrow-band filters, and the search of quasars behind the Virgo cluster. Frances is currently a graduate student at the University of Washington.
- Mike DiPompeo (2008-) – supervising work regarding the polarimetric properties of broad absorption-line quasars. Mike is currently a graduate student at the University of Wyoming.
- Benjamin Kelly (2008) – supervised undergraduate work regarding the surface brightness profiles and host galaxy fractions of post-starburst quasars. Ben is currently a graduate student at San Diego State University
- Allison Strom (2008-2009) – supervised work regarding the ultraviolet properties of post-starburst quasars as part of a project under the Summer Undergraduate Research Assistantship Program (SURAP) of the University of Wyoming, Department of Physics & Astronomy. Allison is currently an graduate student at Harvard University.
- Anirban Bhattacharjee (2007-) – supervising thesis work regarding models of what drives the terminal velocity of mass outflows in active galaxies. Anirban is currently a graduate student in astronomy at the University of Wyoming.

- Jessie Runnoe (2007) – supervised work regarding rest-frame optical properties, and physical properties of high-redshift radio-selected broad absorption-line quasars, as part of a project under the Summer Undergraduate Research Assistantship Program (SURAP) of the University of Wyoming, Department of Physics & Astronomy. Jessie is currently a graduate student at the University of Wyoming.
- Sabrina Cales (2005-) – supervising work on physical properties of quasars showing mass outflows, as well as thesis work on the environments of post-starburst quasars. Sabrina is currently a graduate student in astronomy at the University of Wyoming.
- Catherine Grier (2006) – supervised work regarding the search for time-variable absorption-line systems in the spectra of quasars, as part of a project under the SURAP program of the University of Wyoming, Department of Physics & Astronomy. Catherine is currently a graduate student in astronomy at Ohio State University.
- Melanie Hawthorn (2004-2005) – supervised work regarding the search for time-variable absorption-line systems in the spectra of quasars, as part of a project under the Summer Student program at the Space Telescope Science Institute. Melanie is currently a graduate student in astronomy at Cambridge University.
- Joseph Masiero (2002) – supervised work regarding the discovery, analysis and modeling of a complex of intrinsic absorption-lines systems in the spectra of the quasar RX J1230.8+0115. Joe is currently a postdoctoral fellow at the Jet Propulsion Laboratory.
- Nicholas Bond (2001) – supervised work regarding the search for quasar absorption-line systems appearing at redshifts comparable to the quasars, and understanding potential differences between quasars showing such systems and those that do not. Nick recently defended his Ph.D. dissertation at Princeton University, and is a postdoctoral fellow at Goddard Space Flight Center.

V. Service Activities:

A. Departmental/College/University:

- AstroNite Organizer (October 2011, April 2012)
- Super Science Friday
 - 2012 “Comets & Craters” Leader
 - 2011 “Cooking Up The Universe” Leader
- David G. Zick Scholarship Committee (2011)
- Physics Faculty Search Committee (2011)
- “CSI: Comet Science Investigation” activity at Academic Showcase 2010
- Panelist for New Faculty Orientation 2010
- LEO Review Committee, University of Michigan-Flint (2010-2014)

Freeman, Ralph M. and Emmalyn E. Computer Science, Engineering, and Physics
 Scholarship Committee (2010, 2011)
 Participant in New Faculty Orientation 2009

B. Community:

Longway Planetarium Space Lecture Series Organizer 2012
 Public Outreach Talk: “The Universe Through Superman’s Eyes?”
 Longway Planetarium, Flint, MI, 2012
 Public Outreach Talk: “How Many Ways Can a Black Hole Kill You?”
 Longway Planetarium, Flint, MI, 2011
 “CSI: Comet Science Investigation” activity at Youth Empowerment Expo, sponsored
 by “Church without Walls,” 2010
 Science Fair Judge, Genesee Academy (2010, 2011)

C. Professional: (*including memberships in professional societies*)

Participant at the Cycle 13 Chandra Proposal Review 2011
 Field Tester for *Investigating Astronomy* by Slater & Freedman (Fall 2010)
 Member of International Astronomical Union (2009-)
 Wyoming Infrared Observatory Observing Pool (2005-2009)
 Journal Club Organizer, Department of Physics & Astronomy,
 University of Wyoming (2005-2006)
 Organizer of Postdoc Tea, Space Telescope Science Institute (2002-2005)
 Hobby-Eberly Telescope JCAM Team (2000-2002)
 Member of American Astronomical Society (1996-)
 Member of Phi Beta Kappa (1996-)
 Referee for Astrophysical Journal, Astrophysical Journal Letters,
 Publications of the Astronomical Society of Australia, Monthly Notices of the
 Royal Astronomical Society