

CURRICULUM VITAE — Glenn G. Kacprzak

PERSONAL INFORMATION:

Citizen: Canadian

Address: Swinburne University of Technology
 Centre for Astrophysics & Supercomputing
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EDUCATION:

- 2008 **Ph.D.** Astronomy, New Mexico State University, Las Cruces, NM, USA
 Advisor: Chris W. Churchill
“Morphological, Kinematic, and Halo Gas Properties of MgII Absorption Selected Galaxies at Intermediate Redshift”
- 2005 **M.Sc.** Astronomy, Saint Mary’s University, Halifax NS, Canada
 Advisor: Gary A. Welch
“The Cool Interstellar Medium of NGC 5866”
- 2001 **B.Sc.** Astrophysics with Honours, Queen’s University, Kingston ON, Canada
 Advisor: Lawrence M. Widrow
“Fuzzy Cold dark Matter; Modeling the Substructure of Galactic Halos”
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EMPLOYMENT:

- 2008– **Postdoctoral Research Fellow at the Centre for Astrophysics & Supercomputing,**
 Swinburne University of Technology, Australia – Working with Dr. Michael T. Murphy
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RESEARCH GRANTS & AWARDS:

- 2008 Australian Nuclear Science and Technology Organisation Award (\$3,400)
 2007 NMSU Zia Award – Recognizes Outstanding Research
 2007 NMSU Astronomy International Travel Grant, (\$2,000)
 2007 Canadian Astronomical Society Travel Grant, (\$250)
 2007–2008 Vice President for Research Graduate Student Enhancement Grant, (\$36,000)
 2005–2006 NASA Space Telescope Science Institute, co-I, (\$59,500)
 2005–2006 NMSU Graduate School Merit Enhancement Fellowship, (\$4,000)
 2004–2005 NMSU Scott Murrell Award – Recognizing Professional Development & Research
 2004–2005 Sigma-Xi Grants-in-Aid of Research, (\$1,100)
 2004 International Astronomical Union Grant, (\$580)
 2003–2004 Pegasus Award for Outstanding Teaching
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Awarded Time on: HST, Keck–II, VLT, Magellan, APO, JCMT & Gemini
 Observed on: Keck–II, Magellan–Clay 6.5m, APO 3.5m, & KPNO 4.0m
 Analyzed/Reduced Data from: (Galaxy Spectra) Keck–II/ESI, APO/DIS, JCMT, & IRAM
 (QSO Spectra) Keck–I/HIRES, VLT/UVES, HST/STIS, HST/FOS, & GMRT
 (Galaxy Imaging) HST/WFPC–2, JCMT/SCUBA, APO/SPIcam, IRAS, & SPITZER/MIPS

Software: GIM2D, GAIA, SExtractor, TinyTim, IRAF, SPECX, SURF, LVG models, IDL, Fortran, C, & Perl
 My Software: Sysanal – interactive/visual tool that searches QSO spectra for absorption/emission features and computes measurable quantities such as equivalent width, velocity moments, etc.
 K-correction – Computes the K-correction for any given set of filters for a set of galaxy SEDs.

SUCCESSFUL TELESCOPE PROPOSALS:

34. **Keck-I**, 2009A
Title: *Fundamental Physics In Quasar Absorption Systems*
Murphy M. T., Malec A. L., Kacprzak, G. G., & Prochaska J. X.
33. **Keck-I**, 2009A
Title: *Fundamental Physics In Quasar Absorption Systems*
Murphy M. T., Malec A. L., Webb J., Prochaska J. X., Flambaum F., & Kacprzak, G. G.
32. **Hubble Space Telescope**, 2008
Title: *Detailed Probing of a 3000 km/s Ly α + Metal Line Absorption Complex Near Two Galaxies at $z = 0.67$*
Churchill, C. W., Kacprzak, G. G., Steidel C. C., Evans, J. L., & Klypin, A.
31. **Magellan Telescopes, Clay 6.5m.**, 2008A, 2008B
Title: *What is the Covering Fraction of MgII Halos? A QSO Absorption Line Survey With Redshifted Galaxies*
Lopez, S., Churchill, C. W., Kacprzak, G. G., Marinello, G., & Tejos, N.
29. **Apache Point Observatory 3.5m.** Over the Period of 2005–Q2 to 2009–Q1.
Thirteen Proposals were accepted for a total of 60 half nights.
Title: *Photometric Redshifts of Metal-line Absorbing Galaxies in Quasar Fields*
Kacprzak, G. G., Churchill, C. W., Evans, J. L., & Connolly A.
16. **Apache Point Observatory 3.5m.** Over the Period of 2005–Q3 to 2008–Q3.
Eleven Proposals were accepted for a total of 38 half nights.
Title: *Kinematics of MgII Absorption Selected Galaxies*
Kacprzak, G. G., Churchill, C. W., Vogt N. P., & Steidel C. C.
5. **Keck-II**, 2006, NOAO PID #2006B-0437
Title: *The Galaxy–Halo Gas Kinematic Connections at Intermediate Redshift*
Churchill, C. W., Kacprzak, G. G., & Vogt, N. P
4. **The Very Large Telescope**, 2006.
Title: *H α Kinematics of MgII absorber galaxies at $z \sim 1$*
N. Bouche, C. Peroux, Murphy M. T., Churchill, C. W., & Kacprzak, G. G.
3. **Gemini-North**, 2005, NOAO Proposal ID #2005B-0336
Title: *The Galaxy-kinematic Gaseous-halo kinematic connection in Early Epoch Galaxies*
Churchill, C. W., & Kacprzak, G. G.
2. **Hubble Space Telescope**, Cycle 14, 2004
Title: *Morphologies and MgII/CIV Absorption in 85 Intermediate Redshift Galaxies*
Churchill, C. W., & Kacprzak, G. G.
1. **James Clerk Maxwell Telescope**, Proposal ID # 01B/05, 2001
Title: *Properties of the Dense Gas in NGC 5866*
Welch, G. A., & Kacprzak, G. G.

REFEREED JOURNAL PAPERS:

11. Kacprzak, G. G., Churchill, C. W., Ceverino, D., Steidel, C. C., Klypin, A., & Murphy, M. T. 2009, ApJ, submitted; *Halo Gas and Galaxy Disk Kinematics Derived from Observations and Λ CDM Simulations of MgII Absorption Selected Galaxies at Intermediate Redshift*
10. Churchill, C. W., Ceverino, D., Kacprzak, G. G., & Klypin, A. 2009 ApJ, submitted; *Toward Observational Constraints on Feedback and the Formation of Extended Multiphase Gaseous Halos*
9. Churchill, C. W., Kacprzak, G. G., Steidel, C. C., & Murphy, M. T. 2007 AJ, submitted; *The Properties of Galaxies Selected by Weak MgII Absorption in Quasar Spectra*

8. Kacprzak, G. G., Churchill, C. W., Steidel, C. C., & Murphy, M. T. 2008, AJ, 135, 922; *Halo Gas Cross Sections and Covering Fractions of MgII Absorption Selected Galaxies*
7. Kacprzak, G. G., Churchill, C. W., Steidel, C. C., & Murphy, M. T. 2007 ApJ, 662, 909; *A Correlation Between Galaxy Morphology and MgII Halo Absorption Strength*
6. Churchill, C. W., Kacprzak, G. G., Steidel, C. C., & Evans, J. L. 2007 ApJ, 661, 714; *On the Heterogeneity of Metal-Line and Ly-Alpha Absorption in Galaxy "Halos" at $z \sim 0.7$*
5. Masiero, J. R., Charlton, J. C., Ding, J., Churchill, C. W., & Kacprzak, G. G. 2005, ApJ, 623, 57; *Five Absorption Line Systems Along the Line of Sight to PG 0117+213*

CONFERENCE PROCEEDINGS:

4. Kacprzak, G. G., Churchill, C. W., Steidel, C. C., Ceverino, D., Klypin, A. A., & Murphy, M. T. 2008, astro-ph/0710.4962, *Connecting Galaxy Disk and Extended Halo Gas Kinematics*, in "Formation & Evolution of Galaxy Disks", Rome, Italy, Oct. 1-5, 2007, eds. J. G. Funes, S.J. & E. M. Corsini (ASP Conference Proceedings)
3. Kacprzak, G. G., Churchill, C. W., & Steidel, C. C. 2005, *Galaxy Morphology - Halo Gas Connections*, in "Probing Galaxies through Quasar Absorption Lines", Shanghai, China, March 14-19, 2005, eds. P. Williams, C. Shu, & B. Ménard, (IAU 199)
2. Churchill, C. W., Kacprzak, G. G., & Steidel, C. C. 2005, *MgII Absorption through Intermediate Redshift Galaxies*, in "Probing Galaxies through Quasar Absorption Lines", Shanghai, China, March 14-19, 2005, eds. P. Williams, C. Shu, & B. Ménard, (IAU 199)
1. Churchill, C. W., Steidel, C. C., & Kacprzak, G. G. 2004, *MgII Absorbing Galaxies: Morphologies and Kinematics*, in "Extraplanar Gas", ed. R. Braun, (PASP Conference Proceedings)

TEACHING EXPERIENCE:

Campus Observatory Operator/Instructor (2006–2007)

New Mexico State University Astronomy Department

- Responsibilities include running the NMSU Campus Observatory (consisting of two 12" telescopes) for two hours a week. We educated roughly 300 undergraduate students who are required to participate in observatory observations once a month.

Head Teaching Assistant (2004–2005)

New Mexico State University Astronomy Department

- Responsibilities included holding weekly meetings with all student lab instructors and reviewing next weeks labs and discussing any problems with the previous weeks labs. Training sessions were also held in order to show new students how to teach the labs and prepare and instruct the proper introductory material to their class.

Lab Instructor (2003–2006)

New Mexico State University Astronomy Department

- Instructor for ~ 30 students for a two hour a week lab. Responsible for creating/presenting background material necessary to perform the labs, running the labs, answering student questions, and grading all the lab work.

Guest Lecturer (2001–2003)

Saint Mary's University Astronomy & Physics Department

- Created and Instructed five physics lectures for an undergraduate forensic sciences course.

Lab Assistant (2001–2003)

Saint Mary's University Astronomy & Physics Department

- Instructing and grading first year physics labs. Leading tutorial sessions for non-physics majors.

COLLOQUIA AND CONFERENCE PRESENTATIONS:

Date	Location	Conference Title/ University Name	Type	Title
Mar. 2009	<i>Melbourne, Australia</i>	Swinburne University of Tech. - Astronomy Colloquium	Talk	The Kinematics of Extended Gaseous Halos of Galaxies: Beyond 25 kpc
Jan. 2009	Long Beach, CA	American Astronomical Society Annual Meeting	Poster	Resolution Effects on Quasar Absorption Line Studies of LCDM Simulations
Dec. 2008	Boston, MA	Harvard-SAO - HEAD Lunch Talk Series	Talk	Dynamics of Extended Gaseous Halos of Galaxies: From Both Observations and LCDM Simulations
Jul. 2008	Las Cruces, NM	New Mexico State University Astronomy Colloquium	Talk	Morphological, Kinematic, & Halo Gas Properties of Mg II Absorption Selected Galaxies at Intermediate Redshift
May. 2008	Socorro, NM	Cosmic Web: Galaxies & The Large-Scale Structure	Talk	Extended Halo Gas and Galaxy & Kinematics at Intermediate Redshift
Apr. 2008	Irvine, CA	4th UC Irvine Center for Cosmology Workshop	Talk	Extended Halo Gas and Galaxy Kinematics in The Λ CDM Paradigm
Apr. 2008	Las Vegas, NV	University of Nevada, Las Vegas Astronomy Colloquium	Talk	Extended Halo Gas and Galaxy Kinematics in The Λ CDM Paradigm
Jan. 2008	Austin, TX	American Astronomical Society Annual Meeting	Talk	The Morphological and Kinematic Gas- Galaxy Relations in Early-Epoch Galaxies
Nov. 2007	Santa Cruz, CA	FLASH – Lunch Talk Series UC Santa Cruz	Talk	Unraveling Galaxy Formation From Extended Halo Gas and Galaxy Disk Kinematics
Nov. 2007	Pasadena, CA	Lunch Talk Series Carnegie Observatories	Talk	Unraveling Galaxy Formation From Extended Halo Gas and Galaxy Disk Kinematics
Nov. 2007	Tucson, AZ	Lunch Talk Series NOAO	Talk	Unraveling Galaxy Formation From Extended Halo Gas and Galaxy Disk Kinematics
Oct. 2007	Socorro, NM	NRAO – 23rd Annual New Mexico Symposium	Poster	Connecting Galaxy Disk & Extended Halo Gas Kinematics
Oct. 2007	<i>Rome, Italy</i>	Formation & Evolution of Galaxy Disks	Poster	Connecting Galaxy Disk & Extended Halo Gas Kinematics
Sept. 2007	<i>Garching, Germany</i>	Gas Accretion & Star Formation in Galaxies	Poster	A Comparative Analysis Between Galaxy Disk & Extended Halo Gas Kinematics
Jun. 2007	Kingston, Canada	Canadian Astronomical Society Annual Meeting	Poster	The Galaxy & Halo Gas Kinematic Connect- ion Intermediate Redshift Galaxies
Apr. 2007	Las Cruces, NM	New Mexico State University: Lunch Talk Series	Talk	A Comparative Analysis Between Galaxy Disk & Extended Halo Gas Kinematics
Jan. 2007	Seattle, WA	American Astronomical Society Annual Meeting	Poster	Spatial Probing of Mg II Absorption in "Halo" Gas through Adaptive Mesh Refinement Simulations of Galaxies
Sept. 2006	Las Cruces, NM	New Mexico State University Astronomy Colloquium	Talk	Probing the Galaxy–Halo Gas Connection
Apr. 2006	Las Cruces, NM	Graduate Research Symposium	Poster	Galaxy-Halo Gas Kinematic Connection
Apr. 2005	Las Cruces, NM	Graduate Research Symposium	Poster	Galaxy-Halo Gas Kinematic Connection $0.3 < z < 1$
Mar. 2005	<i>Shanghai, China</i>	IAU Colloquium 199: Probing Galaxies Through QSO Abs Lines	Talk	Galaxy-Halo Gas Kinematic Connection $0.3 < z < 1$
Jan. 2005	San Diego, CA	American Astronomical Society Annual Meeting	Poster	Galaxy-Halo Gas Kinematic Connection $0.3 < z < 1$
Oct. 2004	Las Cruces, NM	New Mexico State University: Lunch Talk Series	Talk	Quantifying the Morphologies of Mg II Absorption Selected Galaxies

Date	Location	Conference Title/ University Name	Type	Title
Aug. 2004	<i>Crete, Greece</i>	The Environments of Galaxies: from Kiloparsecs to Megaparsecs	Talk	Galaxy-Halo Gas Kinematic Connection $0.3 < z < 1$
Apr. 2004	Las Cruces, NM	Graduate Research Symposium	Poster	The Cool Interstellar Medium of NGC 5866
Jan. 2004	Atlanta, GA	American Astronomical Society Annual Meeting	Poster	The Cool Interstellar Medium of NGC 5866
Jun. 2003	Waterloo, Canada	Canadian Astronomical Society Annual Meeting	Poster	The Cool Interstellar Medium of NGC 5866

MEDIA COVERAGE OF RESEARCH

- Las Cruces Bulletin News Release: *NMSU Astronomers at Forefront of Quasar-based Research.*
- Featured in the NMSU Research & Resources, Tomorrow's Researchers: *Probing the Grandeur of Galaxies.*

GENERAL/SOCIETIES/COMMITTEES

- Scientific referee for the Monthly Notices of the Royal Astronomical Society
- Swinburne Galaxy Evolution Meetings (GEM) co-organizer (with Dr. Darren Croton) (2008–present)
- Session chair at the 213th AAS Meeting in Long Beach, CA 2009 (Session 343: IGM, QSO Absorption Line Systems I)
- American Astronomical Society (AAS) member.
- Canadian Astronomical Society (CASCA) member.
- NMSU Astronomy Department Curriculum Committee, graduate student member (2006–2008).

REFERENCES:

<u>Dr. Michael Murphy</u> Swinburne Hawthorn, VIC 3122 +61-3 9214 5818 mmurphy@swin.edu.au	<u>Dr. Christopher Churchill</u> NMSU Las Cruces, NM 88003 (575)646-1913 cwc@nmsu.edu	<u>Dr. Charles Steidel</u> Caltech Pasadena, CA 91125 (626)395-4168 ccs@astro.caltech.edu	<u>Dr. Nicole Vogt</u> NMSU Las Cruces, NM 88003 (575)646-6522 nicole@nmsu.edu
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