Curriculum Vitae - Jason Kalirai

Personal Information:

Name: Jasonjot Singh Kalirai
Birth: April 01, 1978 (Quesnel BC, Canada)

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Education:

PhD, Astrophysics, University of British Columbia (2004)
MSc, Astrophysics, University of British Columbia (2001)
BSc, Honours Physics & Astronomy, University of British Columbia (2000)

Research Experience:

Assistant Astronomer (2008)
Space Telescope Science Institute

Hubble Fellow (2005-2008)
University of California Observatories/Lick Observatory, University of California at Santa Cruz

Postdoctoral Researcher (2004-2005)
University of California Observatories/Lick Observatory, University of California at Santa Cruz

Doctoral Student (2001-2004)
Department of Physics & Astronomy, University of British Columbia
Advisor: Dr. Harvey B. Richer
Dissertation: Astrophysics with White Dwarfs
- other research involved studying properties of open and globular star clusters.

Summer Student (2004 - for two weeks)
University of Montreal - *Host: Dr. Pierre Bergeron*
Purpose: Collaboration to fit model white dwarf spectra to observations.

Summer Student (2001)
Osservatorio Astronomico di Roma - *Host: Dr. Francesca D'Antona*
Purpose: Collaboration to fit theoretical models to the major sequences of four open star clusters.

Masters Student (2000-2001)
Department of Physics & Astronomy, University of British Columbia
Advisor: Dr. Harvey B. Richer
Dissertation: The CFHT Open Star Cluster Survey.

Summer Student (2000)
Canada France Hawaii Telescope Corporation - *Host: Dr. Gregory G. Fahlman*
Purpose: Photometry and data reduction of a large imaging survey of star clusters.

Summer Fellow (1999)
Department of Physics, University of Toronto - *Host: Dr. James Drummond*
Purpose: Investigate possibilities of a mission to perform remote sounding experiments of the atmosphere of Mars.

Awards and Scholarships:

- Henry Norris Russell Fellowship – Princeton University (2008, declined)
- Riccardo Giacconi Fellowship – STScI (2008, declined)
- Hubble Fellowship – STScI Grant HST-HF-01185.01-A ($184,000, 2005-2008)
- Natural Sciences and Engineering Research Council of Canada (NSERC) Postdoctoral Research Fellowship (2005, declined)
- Natural Sciences and Engineering Research Council of Canada (NSERC)
  Postgraduate scholarship (PGS-B) (2002 - 2004) - NSERC PGS-B Grant ($38,600, 2003-2004)
- Canadian Astronomical Society - Best graduate student oral presentation award (2003)
- Canadian Astronomical Society - Best graduate student poster presentation award (2002)
- Natural Sciences and Engineering Research Council of Canada (NSERC)
  Postgraduate scholarship (PGS-A) (2000 - 2002) – NSERC PGS-A Grant ($34,800, 2001-2002)
- Canadian Astronomical Society - Best graduate student poster presentation award (2000)
- University of BC Undergraduate Scholar Program Scholarship (1999 - 2000)
- Natural Sciences and Engineering Research Council of Canada (NSERC)
  Undergraduate Student Research Award (1999)
- University of BC Scholarship (1998 - 1999)

Publications:

Papers submitted for publication and 1st author papers to be submitted soon:

47.) **Kalirai et al. 2009, ApJ, to be submitted** – *The SPLASH Survey: The Metallicity Distribution Function of M31's Stellar Halo from R = 10 – 150 kpc.*
46.) **Kalirai et al. 2009, ApJ, submitted, arXiv:0911.1998** – *The SPLASH Survey: Internal Kinematics, Chemical Abundances, and Masses of M31's dSphs: And I, II, III, VII, X, XIV.*
45.) **Tanaka et al. 2009, ApJ, submitted, arXiv:0908.0245** – *Structure and Population of the Andromeda Stellar Halo From a Subaru/Suprime-Cam Survey.*

Refereed Contributions:

44.) **Kalirai & Richer 2009, Philosophical Transactions of the Royal Society A, Invited Review, in press, arXiv:0911.0789** – *Star Clusters as Laboratories for Stellar Evolution.*
43.) **Kalirai et al. 2009, ApJ, 705, 1043** – *The SPLASH Survey: A Spectroscopic Analysis of the Metal-Poor Low-Luminosity M31 dSph Satellite Andromeda X.*
42.) **Kalirai et al. 2009, ApJ, 705, 408** – *The Masses of Population II White Dwarfs.*
41.) **Gilbert et al. 2009, ApJ, 705, 1275** – *The SPLASH Survey: A Spectroscopic Portrait of Andromeda's Giant Southern Stream.*
40.) **Davis et al. 2009, ApJ, 705, 398** – *The Spectral Types of White Dwarfs in M4.*
39.) **Fittingoff et al. 2009, MNRAS, 399, 728** – *A Survey of Ultraviolet-Bright Sources Behind the Halo of M31.*
38.) **Brown et al. 2009, ApJS, 184, 152** – *Deep Optical Photometry of Six Fields in the Andromeda Galaxy.*
37.) **Shields et al. 2009, ApJ, in press, arXiv:0907.3470** – *The Quasar SDSS J105041.35+345631.3: Black Hole Recoil or Extreme Double-Peaked Emitter?*
36.) **Hartman et al. 2009, ApJ, 695, 336** – *Deep MMT Transit Survey of the Open Cluster M37 IV: Limit on the Fraction of Stars with Planets as Small as 0.3 R_J.*
35.) **Hartman et al. 2009, ApJ, 691, 342** – *Deep MMT Transit Survey of the Open Cluster M37 III: Stellar Rotation at 550 Myr.*
34.) **Brown et al. 2008, ApJL, 685, 121** – *The Extended Star Formation History of the Andromeda Spheroid at 35 kpc on the Minor Axis.*

33.) **Kalirai et al. 2008, ApJL, 682, 37** – *A Glimpse into the Past: The Recent Evolution of Globular Clusters.*
32.) **Kalirai et al. 2008, ApJ, 676, 594** – *The Initial-Final Mass Relation: Direct Constraints at the Low Mass End.*
31.) **Davis et al. 2008, AJ, 135, 2155** – *Deep Advanced Camera for Surveys Imaging in the Globular Cluster NGC 6397: The Binary Fraction.*
30.) **Richer et al. 2008, AJ, 135, 2141** – *Deep Advanced Camera for Surveys Imaging in the Globular Cluster NGC 6397: The Cluster Color Magnitude Diagram and Luminosity Function.*
29.) **Hurley et al. 2008, AJ, 135, 2129** – *Deep Advanced Camera for Surveys Imaging in the Globular Cluster NGC 6397: Dynamical Models.*
28.) **Anderson et al. 2008, AJ, 135, 2114** – *Deep Advanced Camera for Surveys Imaging in the Globular Cluster NGC 6397: Reduction Methods.*
27.) **Cignoni et al. 2008, MNRAS, 386, 2235** – *Disentangling the Galaxy at Low Galactic Latitudes.*
26.) **Hartman et al. 2008, ApJ, 675, 1254** – *Deep MMT Transit Survey of the Open Cluster M37 II: Variable Stars.*
25.) **Hartman et al. 2008, ApJ, 675, 1233** – *Deep MMT Transit Survey of the Open Cluster M37 I: Observations and Cluster Parameters.*
24.) **Davis et al. 2008, MNRAS, 383, L20** – *On the Radial Distribution of White Dwarfs in the Globular Cluster NGC 6397.*
23.) **Kalirai et al. 2007, ApJ, 671, 748** – *Stellar Evolution in NGC 6791: Mass Loss on the Red Giant Branch and the Formation of Low Mass White Dwarfs.*
22.) **Hansen et al. 2007, ApJ, 671, 380** – *The White Dwarf Cooling Sequence of NGC 6397.*
21.) **Majewski et al. 2007, ApJL, 670, 9** – *Discovery of Andromeda XIV: A Dwarf Spheroidal Dynamical Rogue in the Local Group?*
20.) **Gilbert et al. 2007, ApJ, 668, 245** – *Stellar Kinematics in the Complicated Inner Spheroid of M31: Discovery of Substructure Along the Southeastern Minor Axis and its Relationship to the Giant Southern Stream.*
19.) **Brown et al. 2007, ApJL, 658, 95** – *The Extended Star Formation History of the Andromeda Spheroid at 21 kpc on the Minor Axis.*
18.) **Kalirai et al. 2007, ApJL, 657, 93** – *The Space Motion of the Globular Cluster NGC 6397.*
17.) **Gilbert et al. 2006, ApJ, 652, 1188** – *A New Method for Isolating M31 Red Giant Branch Stars: The Discovery of Stars Out to a Radial Distance of 165 kpc.*
16.) **Kalirai et al. 2006, ApJ, 648, 389** – *The Metal-Poor Halo of the Andromeda Spiral Galaxy (M31).*
15.) **Richer et al. 2006, Science, 313, 936** – *Probing the Faintest Stars in a Globular Star Cluster.*
14.) **Prochaska et al. 2006, ApJ, 642, 989** – *The Galaxy Hosts and Large Scale Environments of Short-Hard Gamma Ray Bursts.*
13.) **Kalirai et al. 2006, ApJ, 641, 268** – *Kinematics and Metallicity of M31 Red Giants: The Giant Southern Stream and Discovery of a Second Cold Component at R = 20 kpc.*
12.) **Kalirai et al. 2005, ApJ Letters, 618, 129** – *The Dearth of Massive, Helium-Rich White Dwarfs in Young Open Star Clusters.*
11.) **Kalirai et al. 2005, ApJ Letters, 618, 123** – *The Initial-Final Mass Relationship: Spectroscopy of White Dwarfs in NGC 2099 (M37).*
10.) **Kalirai & Tosi 2004, MNRAS, 351, 649** – *Interpreting the Color-Magnitude Diagrams of Open Star Clusters through Numerical Simulations.*
9.) **Richer et al. 2004, AJ, 127, 2904** – *Concerning the White Dwarf Cooling Age of M4: A Reply to De Marchi et al. on ``A Different Interpretation of Recent Deep HST Observations".*
8.) **Richer et al. 2004, AJ, 127, 2771** – *Hubble Space Telescope Observations of the Main Sequence of M4.*
7.) **Kalirai et al. 2004, ApJ, 601, 277** – *The Galactic Inner Halo: Searching for White Dwarfs and Measuring the Fundamental Galactic Constant, V_o/R_o.*
6.) **Ferdman et al. 2004, AJ, 127, 380** – *Searching for Variability in the Globular Cluster Messier 4.*
5.) **Kalirai et al. 2003, AJ, 126, 1402** – *The CFHT Open Star Cluster Survey. IV. Two Rich, Young Open Star Clusters: NGC 2168 (M35) and NGC 2323 (M50).*
4.) **Richer et al. 2002, ApJ, 574, L151** – *The Lower Main Sequence and Mass Function of the Globular Cluster Messier 4.*
3.) **Kalirai et al. 2001, AJ, 122, 3239** – *The CFHT Open Star Cluster Survey. III. The White Dwarf Cooling Age of the Rich Open Star Cluster NGC 2099 (M37).*
2.) **Kalirai et al. 2001, AJ, 122, 266** – *The CFHT Open Star Cluster Survey. II. Deep CCD Photometry of the Old Open Star Cluster NGC 6819.*
1.) **Kalirai et al. 2001, AJ, 122, 257** – *The CFHT Open Star Cluster Survey. I. Cluster Selection and Data Reduction.*

Non-refereed Author Contributions:

17.) **Kalirai 2009, IAU Symposium 266, ---** – *A New Method to Measure Stellar Mass Loss Rates*
16.) **Kalirai 2009, IAU Symposium, 258, 299** – *White Dwarfs as Astrophysical Probes.*
15.) **Richer et al. 2009, IAU Symposium, 258, 315,** – *Towards a Precise White Dwarf Cooling Age of a Globular Cluster.*
14.) **Ivezic et al. 2008, arXiv:0805.2366** – *LSST: From Science Drivers to Reference Design and Anticipated Data Products.*
13.) **Kalirai et al. 2008, ASP Conference Series, 399, 465** – *A Spectroscopic Study of M31 dSph Galaxies.*
12.) **Kalirai 2008, Memorie della Societa, Astronomica Italiana, 79, 2** – *Measuring Stellar Mass Loss in Different Environments.*
11.) **Kalirai et al. 2008, Springer Proceedings on Galaxies in the Local Volume Conference in Sydney, Australia, --, --** – *A Spectroscopic Survey of M31 Dwarf Spheroidal Galaxies.*
10.) **Kalirai 2007, ASP Conference Series, 372, 91** – *Mass Loss on the Red Giant Branch of NGC 6791: The Case for Helium Core White Dwarfs.*
9.) **Kalirai 2006, ASP Conference Series, 352, 249** – *White Dwarfs and Stellar Evolution.*
8.) **Kalirai 2006, Bulletin of the Astronomical Society of India, 34, 141** – *Probing Stellar Evolution with Open Star Clusters.*
7.) **Guhathakurta et al. 2005, astro-ph/0502366** – *Discovery of an Extended Halo of Stars in the Andromeda Spiral Galaxy.*
6.) **Kalirai et al. 2005, ASP Conference Proceedings on Resolved Stellar Populations Conference in Cancun, Mexico, eds D. Valls-Gabaud and M. Chavez** – *Kinematics and Metallicity of the Andromeda Giant Southern Stream.*
5.) **Kalirai & Richer 2005, Gemini Newsletter, 25, 23** – *Gemini Tackles a Key Problem in Stellar Evolution.*
4.) **Kalirai et al. 2005, ASP Conference Series, 334, 9** – *Spectroscopy of Faint White Dwarfs: The DA/DB Ratio and the Initial-Final Mass Relation.*
3.) **Kalirai 2002, ASP Conference Proceedings, 274, 362** – *Using White Dwarfs as Chronometers in Star Clusters.*
2.) **Kalirai et al. 2001A, CFHT Bulletin Series, 43, 5** – *White Dwarfs in NGC 6819.*
1.) **Kalirai et al. 2000B, CFHT Bulletin Series, 42, 8** – *CFHT Reductions using PSFex.*

White Papers and Others:

6.) **Kalirai et al. 2009, The Astronomy and Astrophysics Decadal Survey, Science White Paper, 147** – *White Dwarfs as Astrophysical Probes.*
5.) **Kalirai et al. 2009, The Astronomy and Astrophysics Decadal Survey, Science White Paper, 146** – *Resolved Stellar Populations in the Milky Way.*
4.) **Kirby et al. 2009, The Astronomy and Astrophysics Decadal Survey, Science White Paper, 156** – *The Role of Dwarf Galaxies in Building Large Stellar Halos.*
3.) **Covey et al. 2009, The Astronomy and Astrophysics Decadal Survey, Science White Paper, 57** – *Measuring Stellar Ages and the History of the Milky Way.*
2.) **Ferguson et al. 2009, The Astronomy and Astrophysics Decadal Survey, R.F.I.** – *The Scientific Opportunities of a General Astrophysics Program Associated with a Dark Energy Mission.*
1.) **Stern et al. 2009, The Astronomy and Astrophysics Decadal Survey, R.F.I.** – *The Near Infrared Sky Surveyor.*

Grants:

- Space Telescope Science Institute Director's Discretionary Grant ($34,163, 2009)
- Space Telescope Science Institute Research Grant HST-GO-11677.14 ($527,000, 2009-2012)
- National Aeronautics and Space Administration XMM-Newton Grant A0-7-55351 ($102,000, 2008)
- National Science Foundation Research Grant NSF 05-608 ($763,000, 2006-2008)
- Hubble Fellowship – STScI Grant HST-HF-01185.01-A ($79,000, 2005-2008)
- Space Telescope Science Institute Research Grant HST-GO-10850.10-A ($109,000, 2007)
- Space Telescope Science Institute Research Grant HST-GO-10816.08-A ($590,000, 2006)
- National Aeronautics and Space Administration GALEX Grant ($80,000, 2006)
- Space Telescope Science Institute Research Grant HST-GO-10424.12-A ($364,000, 2005)

Conference Presentations and Colloquia:

DATE	LOCATION	CONFERENCE TITLE / UNIVERSITY NAME	TYPE	TALK
Oct. 2009	Charlottesville, VA	University of Virginia	Oral	Stellar Evolution, Mass Loss, and Dead Stars
Oct. 2009	Cambridge, MA	CfA, Harvard University	Oral	Stellar Evolution, Mass Loss, and Dead Stars
Oct. 2009	Cambridge, MA	CfA, Harvard University	Oral	The SPLASH Project
Aug. 2009	Santa Barbara, CA	"Stellar Death and Supernova" Workship	Oral	New Puzzles: Isolated Helium Core White Dwarfs
Aug. 2009	Rio de Janeiro, Brazil	IAU XXVII General Assembly	Oral	A New Method to Measure Stellar Mass Loss
May 2009	Toronto, Canada	Canadian Astronomical Society Annual Conference	Oral	A New Method to Measure Stellar Mass Loss
Apr. 2009	New York, NY	American Museum of Natural History	Oral	The End Stages of Stellar Evolution
Mar. 2009	Pasadena, CA	Caltech	Oral	The End Stages of Stellar Evolution
Feb. 2009	Halifax, Canada	Saint Mary's University	Oral	Probing Stellar Mass Loss with White Dwarfs
Feb. 2009	Strasbourg, France	Intermediate Mass Stars Workshop	Oral	Stellar Evolution at Intermediate Masses
Jan. 2009	Washington, DC	Carnegie Institute of Washington – DTM	Oral	Stellar Remnants as Astrophysical Probes
Jan. 2009	Baltimore, MD	CAS Seminar at Johns Hopkins University	Oral	Stellar Remnants as Astrophysical Probes
Oct. 2008	Baltimore, MD	"Ages of Stars" IAU Symposium 258	Oral	White Dwarfs in the Galactic Disk and Halo
Oct. 2008	Princeton, NJ	Princeton University	Oral	The Stellar Populations of the Andromeda Spiral Galaxy
Apr. 2008	San Francisco, CA	San Francisco State University	Oral	Stellar Remnants as Cosmological Probes
Apr. 2008	Pasadena, CA	OCIW	Oral	Stellar Remnants as Cosmological Probes
Mar. 2008	Edmonton, Canada	University of Alberta	Oral	Stellar Remnants as Cosmological Probes
Mar. 2008	Baltimore, MD	Johns Hopkins Univesity	Oral	The Stellar Populations of the Andromeda Spiral Galaxy
Mar. 2008	Baltimore, MD	2008 Hubble Fellows Symposium	Oral	White Dwarfs as Astrophysical Probes
Feb. 2008	Madison, WI	University of Wisconsin – Madison	Oral	The Nearest and Most Distant Globular Clusters
Feb. 2008	Madison, WI	Unviersity of Wisconsin – Madison	Oral	The Stellar Populations of the Andromeda Spiral Galaxy
Feb. 2008	Livermore, CA	Lawrence Livermore National Labs	Oral	The Stellar Populations of the Andromeda Spiral Galaxy
Feb. 2008	Baltimore, MD	Space Telescope Science Inst.	Oral	Stellar Remnants as Cosmological Probes
Jan. 2008	Columbus, OH	Ohio State University	Oral	Stellar Remnants as Cosmological Probes
Jan. 2008	La Serena, Chile	Gemini South Observatory	Oral	Stellar Remnants as Cosmological Probes
Jan. 2008	Austin, TX	American Astronomical Society Annual Meeting	Oral	A Spectroscopic Survey of M31 dSphs – Kinematics, Chemical Abundances, and Radial Distributions
Dec. 2007	Hayama, Japan	Panoramic Views of Galaxy Formation and Evolution	Poster	A Spectroscopic Survey of M31 dSphs
Dec. 2007	Santa Barbara, CA	UC Santa Barbara	Oral	Stellar Remnants as Cosmological Probes
Nov. 2007	Madison, WI	University of Wisconsin – Madison	Oral	Stellar Remnants as Cosmological Probes

Oct. 2007	Tucson, AZ	University of Arizona / NOAO	Oral	Stellar Remnants as Cosmological Probes
Sep. 2007	Santa Cruz, CA	M31 SPLASH Team Meeting	Oral	Primary Meeting Overview Talk + Several M31-Related Talks
Sep. 2007	Pasadena, CA	2007 Keck Science Meeting – Caltech	Oral	Stellar Evolution in Metal-Rich Environments
Aug. 2007	Cefalu, Italy	"XXI Century Challenges for Stellar Evolution" Workshop	Oral	The Initial-Final Mass Relation: First Constraints at the Low Mass End
Aug. 2007	Vancouver, Canada	University of British Columbia	Oral	Mass Loss in Metal-Rich Environments
Jul. 2007	Sydney, Australia	"Galaxies in the Local Volume" Conference	Oral	A Spectroscopic Survey of M31 Dwarf Spheroidal Galaxies
Jun. 2007	Santa Cruz, CA	FLASH – Lunch Talk Series, UC Santa Cruz	Oral	Mass Loss in Metal-Rich Environments
Jun. 2007	Kingston, Canada	Canadian Astronomical Society Annual Conference	Oral	Stellar Evolution in NGC 6791: Evolving from Red Giants to White Dwarfs
Jun. 2007	Princeton, NJ	Princeton University	Oral	The Stellar Populations of the Andromeda Spiral Galaxy
May 2007	Cambridge, MA	CfA, Harvard University	Oral	The Stellar Populations of the Andromeda Spiral Galaxy
April 2007	Baltimore, MD	2007 Hubble Fellows Symposium	Oral	Globular Clusters: From the Nearest to the Furthest
Mar. 2007	Rotorua, New Zealand	"A New Zeal for Old Galaxies" Conference	Poster	The Metallicity Gradient in the Andromeda Spiral Galaxy
Mar. 2007	Swinburne, Australia	Swinburne University	Oral	The Stellar Halo of the Andromeda Spiral Galaxy
Mar. 2007	Vancouver, Canada	University of British Columbia	Oral	A Kinematic Study of M31
Mar. 2007	Victoria, Canada	HIA/NRC	Oral	A Kinematic Study of M31
Feb. 2007	Santa Cruz, CA	FLASH – Lunch Talk Series, UC Santa Cruz	Oral	The Stellar Populations of M31
Jan. 2007	Seattle, WA	American Astronomical Society Annual Meeting	Poster	A Spectroscopic Study of M31 dSphs – Kinematics and Chemical Abundaces in Andromeda I, II, III
Jan. 2007	Seattle, WA	American Astronomical Society Annual Meeting	Oral	Globular Clusters in a Globular Cluster
Jan. 2007	Seattle, WA	Press Conf. – American Astronomical Society Meeting	Oral	The Discovery of the Metal-Poor Stellar Halo of the Andromeda Spiral Galaxy
Dec. 2006	Gainesville, FL	University of Florida	Oral	The Metal-Poor Halo of M31
Nov. 2006	Austin, TX	University of Texas	Oral	The Stellar Populations of Andromeda
Nov. 2006	Hamilton, Canada	McMaster University	Oral	The Metal-Poor Halo of M31
Nov. 2006	Kingston, Canada	Queens University	Oral	The Metal-Poor Halo of M31
Oct. 2006	Pasadena, CA	OCIW	Oral	The Stellar Populations of M31
Oct. 2006	Irvine, CA	UC Irvine	Oral	The Stellar Populations of M31
Aug. 2006	Leicester, UK	"15th Annual White Dwarf Workshop"	Oral	Masses of White Dwarfs in Old Clusters
Jun. 2006	Calgary, CA	Canadian Astronomical Society Annual Conference	Oral	Kinematics and Chemical Composition of Stars in M31's Bulge and Halo
Apr. 2006	Baltimore, MD	Hubble Fellows Symposium	Oral	The Metal-Poor Halo of M31
Feb. 2006	Aspen, CO	"Local Group Cosmology" Conference	Oral	The Andromeda Spiral Galaxy
Jan. 2006	Washington, DC	American Astronomical Society Annual Meeting	Oral	The Metal-Poor Halo of M31
Oct. 2005	Austin, TX	University of Texas	Oral	The Metal-Poor Halo of M31
Oct. 2005	Austin, TX	"Bash Symposium 2005: New Horizons" Meeting	Poster	Probing Stellar Evolution with White Dwarfs
Oct. 2005	Santa Barbara, CA	UC Santa Barbara	Oral	Stellar Evolution and Star Clusters
Oct. 2005	Santa Cruz, CA	Presentation for Santa Cruz	Oral	White Dwarf Stars in the Milky Way

		Lifelong Learners		
Sep. 2005	Pasadena, CA	2005 Keck Science Meeting – Caltech	Oral	The Metal-Poor Halo of M31
Aug. 2005	Santa Cruz, CA	"Nearly Normal Galaxies" Conference	Poster	A Spectroscopic Survey of M31 Red Giants with Keck/DEIMOS: The Giant Stream
Aug. 2005	CFHT, Hawaii	CFHT Seminar Series	Oral	The CFHT Open Star Cluster Survey: Constraining Stellar Evolution
May 2005	Montreal, Canada	Canadian Astronomical Society Annual Conference	Poster	The Discovery of a Second Stream in M31's Halo
Apr. 2005	Cozumel, Mexico	"Resolved Stellar Populations" Conference	Oral	Open Clusters as a Probe of Stellar Evolution
Apr. 2005	Santa Cruz, CA	FLASH – Lunch Talk Series, Santa Cruz, CA	Oral	Studies of White Dwarfs: in the Field and in Open and Globular Star Clusters
Feb. 2005	Nainital, India	"International Meeting on Star Clusters"	Oral	The CFHT Open Star Cluster Survey – Recent Progress
Feb. 2005	Seattle, WA	University of Washington	Oral	The Initial-Final Mass Relation
Feb. 2005	La Serena, Chile	CTIO/AURA Inc.	Oral	Astrophysics with White Dwarfs
Jan. 2005	Berkeley, CA	LBNL	Oral	The Progenitors of Type Ia Supernovae
Jan. 2005	San Diego, CA	American Astronomical Society Annual Meeting	Oral	Dissertation: Astrophysics with White Dwarfs
Sep. 2004	Los Angeles, CA	2004 Keck Science Meeting – UCLA	Oral	The Chemical Properties of White Dwarfs and the DA/DB Ratio.
Jul. 2004	Kiel, Germany	"14th Annual White Dwarf Workshop"	Oral	The Initial-Final Mass Relationship
Jun. 2004	Winnipeg, Canada	Canadian Astronomical Society Annual Conference	Oral	Spectroscopy of White Dwarfs in Open Star Clusters
Jun. 2004	Montreal, Canada	University of Montreal	Oral	Studies of White Dwarfs: in the Field and in Open and Globular Star Clusters
May 2004	Vancouver, Canada	"Gemini Science 2004" Conference	Oral	The White Dwarf Initial Final Mass Relationship: Spectroscopy of White Dwarfs in M37
May 2004	Vancouver, Canada	Graduate Student Seminar Series	Oral	The History of the Discovery of White Dwarfs
Jan. 2004	Atlanta, GA	American Astronomical Society Annual Meeting	Oral	White Dwarfs in the Disk and Halo of our Galaxy
Jun. 2003	Waterloo, Ontario	Canadian Astronomical Society Annual Conference	Oral	Searching for White Dwarfs in the Galactic Inner Halo and Measuring Ωo = Vo/Ro
May 2003	Baltimore, MD	"The Local Group as an Astrophysical Laboratory" Symposium	Poster	White Dwarfs in the Galactic Inner Halo
Jan. 2003	Seattle, WA	American Astronomical Society Annual Meeting	Poster	Stars in the Galactic Inner Halo
Jun. 2002	Penticton, Canada	Canadian Astronomical Society Annual Conference	Poster	Dynamics in Young Open Star Clusters
Jan. 2002	Washington DC	American Astronomical Society Annual Meeting	Oral	The White Dwarf Cooling Age of NGC 2099
Jul. 2001	Coimbra, Portugal	"Observed HR Diagrams and Stellar Evolution" Conference	Oral	The CFHT Open Star Cluster Survey: First Results
May 2000	Vancouver, Canada	Canadian Astronomical Society Annual Conference	Poster	The CFHT Open Star Cluster Survey
Aug. 1999	Toronto, Canada	University of Toronto – Undergraduate Seminar	Oral	An Atmospheric Study of Mars

Teaching Experience:

Undergraduate Course Lecture (2002-2004)
Department of Physics & Astronomy, University of British Columbia
Instructor: Dr. Peter Newbury
- Presented 2-3 lectures each year to over 100 students in an undergraduate Astronomy course.

Teaching Assistant (1999-2004)
Department of Physics & Astronomy, University of British Columbia
Instructors: Drs. Douglas Scott, Jaymie Matthews, Peter Newbury, and Harvey Richer
- Assistant for various undergraduate courses. Duties included occasional lecturing, organizing weekly labs and tutorials, leading discussion groups, administering exams, and marking.

Supervision:

Pier-Emmanuel Tremblay (2009)
- University of Montreal Graduate Student (Supervisor Pierre Bergeron)
  Mentoring help for a Keck Telescope project related to cool He white dwarfs.

Abhi Rajan (2009)
- Space Telescope Science Institute Research and Instrument Analyst
  Mentoring related to the photometric calibration of the new HST instrument WFC3.

Mikito Tanaka (2008-2009)
- National Astronomical Observatory of Japan Graduate Student (Supervisor Masashi Chiba)
  Mentoring related to a large Subaru imaging survey of the Andromeda Spiral Galaxy.

Joe Wolf (2008-current)
- UC Irvine Graduate Student (Supervisor James Bullock)
  Mentoring related to a Keck/DEIMOS survey of M31's dSph population.

Karrie Gilbert, Kirsten Howley, Evan Kirby, Priya Kollipara, and Jedidah Isler (2005-current)
- UC Santa Cruz Graduate Students (Supervisor Puragra Guhathakurta)
  Co-supervisor/mentor for various graduate student projects and thesis.

Jennifer Consiglio (2007/2008)
- UC Santa Cruz Undergraduate Student
  2nd Year Research Project: Classifying Stellar Spectra Along M31's Sightline

Basilio Yniguez (2007/2008)
- UC Santa Cruz Undergraduate Student
  Thesis Completed: A Neural-Network Classification of Milky Way Dwarfs and M31 Red Giants

Carlos Sandoval (2007/2008)
- UC Santa Cruz Undergraduate Student (Supervision with Mike Bolte and Enrico Ramirez-Ruiz)
  3rd Year Research Project Started: Photometric Variables and Binaries in NGC 6752

Elizabeth Chudwick (2006/2007)
- UC Santa Cruz Undergraduate Student
  Thesis Completed: Wide Field Photometry and Astrometry of the Rich, Old Open Star Cluster NGC 6791

Johnathan Rice (2006/2007)
- UC Santa Cruz Undergraduate Student

Thesis Completed: A Photometric and Kinematic Study of Galactic Structure Along M31's Sightline

Andrew Fittinghoff (2006/2007)
- UC Santa Cruz Undergraduate Student
  4th Year Research Project: A GALEX Imaging Study of the Andromeda Spiral Galaxy

Carynn Luine (2005/2006)
- UC Santa Cruz Undergraduate Student
  Thesis Completed: Detailed Chemical Abundances of M31 Stars: Analysis of High Signal-to-Noise Coadded Spectra

Robert Eakin (2003/2004)
- University of British Columbia Undergraduate Student
  Thesis Completed: Photometric Study of the Open Star Cluster NGC 7789

Doris Nian-Shiah Leong (2003/2004)
- University of British Columbia Undergraduate Student
  Thesis Completed: A Deep Photometric Study of the Core of Old Open Cluster NGC 6791

General:

Research Journal, Telescope, and Fellowship Referee
- Scientific referee for Nature, Science, The Astrophysical Journal, Astrophysical Journal Letters, Astronomical Journal, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, Philosophical Transactions of the Royal Astronomical Society, and the Publications of the Astronomical Society of Japan.
- NOAO Telescopes Time Allocation Committee Member (2009-2011)
- Hubble Space Telescope Time Allocation Committee Member (Cycle 17).
- Giacconi Fellowship Committee Member (2009)
- Scientific referee for the Canada-France-Hawaii Telescope and Gemini Telescope.
- Scientific referee for the National Science Foundation.

Current Scientific Activities at STScI
- Chair, STScI colloquium (Fall 2009 and Spring 2010).
- Chair, 2010 STScI May Symposium: "Stellar Populations in the Cosmological Context".
- Lead morning coffee with a summary of astro-ph papers from the previous day (daily, 2008-current).
- Created and organized STScI's Astro-Jamboree (2009).
- Organized the Friday Science Journals Club (2008-current).
- Created and organized STScI's Friday Seminar Series (2008-current).

Professional Meetings and/or Seminar Series Organized and/or Chaired
- Chair of the 2010 STScI May Symposium, "Stellar Populations in the Cosmological Context".
- Scientific and local organizer for the "Beyond JWST: Next Steps in UV-O-NIR Space Astronomy" Workshop (Mar. 2009, Baltimore, MD).
- Local organizer for the "Ages of Stars" IAU Symposium 258 (Oct. 2008, Baltimore MD).
- Chair, local, and scientific organizer for the 1st California Postdoc Symposium (Aug. 2008, UC Santa Cruz).
- Scientific and local organizer for the 2008 Keck Science Meeting (Sept. 2008, UC Santa Cruz).
- Session chair at the 2007 "A New Zeal for Old Galaxies" Meeting.
- Co-created and organized the UC Santa Cruz Summer Friday Talk Series (2007—2008).
- Organized the UC Santa Cruz Tuesday Astro Lunch Kaleidoscope Series (2007-2008).
- Co-created and organized Uthe C Santa Cruz Postdoctoral Journals Club Series (2006—2008).
- Session chair at the 2006 207th AAS Meeting in Washington DC (Session 205: White Dwarfs).
- Co-created and organized the UBC Physics & Astronomy Graduate Student Seminar Series (2004).
- Local organizer for the "Gemini Science 2004" Conference (2004).

Involvement in Future Projects

- Member of the Large Synoptic Survey Telescope (LSST) "Stellar Populations" and "Milky Way" Science Teams (2008-2009).
- Involved in The Michigan/Magellan Fiber System (M2FS) for the Magellan Clay Telescope (2009).
- Member of Thirty Meter Telescope Wide Field Optical Spectrograph (MOBIE) Team (2008-2009).
- Member of the Canada-France-Hawaii Telescope IMAKA Instrument Science Working Group (2008).
- Member of Thirty Meter Telescope Wide Field Optical Spectrograph Operational Concepts Definition Team (2006).

Outreach

- Active participant in several STScI OPO programs to visit and speak to local Baltimore elementary/middle schools kids.
  St. Timothy's School – October 26th, 2009.
  Veterans Elementary School – October 22nd, 2009 (two talks).
  Creative Kids Loch Raven Community Center – October 20th, 2009.
  Midtown Academy Charter School – February 3rd, 2009 (two talks).
  Veterans Elementary School – January 21st, 2009 (two talks).
- Invited speaker at the annual American Association of Physics Teachers Conference in Washington DC (2010).
- Invited guest speaker at the Youth for Astronomy and Engineering Program "Parent and Son Evening Under the Stars" (2009).
- Expert Reader for National Geographic School of Publishing – 3rd Grade Science Textbook (2009-2010).
- "Meet the Scientist" Website Feature for the 2009 Year of Science, Origins Education Forum Division (2009).
- Participant in the Youth for Astronomy and Engineering (YAE) Workshop at STScI (2009).
- 1 hour presentation to North American Museum Professionals as a part of the Hubble Science Briefings (2009).
- "Be What I Want To Be" Maryland School Magazine Profile for the Maryland Business Roundtable for Education Teen Web Project (2009).
- Scientific advisor for the 2009-USA Today Case Study on the Hubble Space Telescope.
- NASA TV Interview for Asian Heritage Month (2009).
- STScI Astronomer at the Timonium Elementary School Annual Science Fair (2009).
- Participant in STScI "Visions of the Universe, 400 Years of Discovery" American Library Association (ALA) Public Program
- Participant as a speaker to grade 5 students in Surrey BC Canada elementary school (2008).
- Participant as a speaker to alternative education school in Santa Cruz, CA (2007).

Miscellaneous

- Press release on discovery of M31's Stellar Halo (Jan. 2007).
- Press release on discovery of Most Distant System of Globular Clusters (Jan. 2007).
- Member of the American Astronomical Society (AAS) and the Canadian Astronomical Society (CASCA).
- Member of the Golden Key National Honors Society.
- Written successful proposals and acquired data from HST, XMM, GALEX, Keck, Lick, Gemini North, Gemini South, Subaru, MMT, CFHT, KPNO, and DAO.

References:

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