

Chris Impey — Curriculum Vita

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1 Personal

Born: 25 January 1956, Edinburgh, Scotland
British Citizen; U.S. Permanent Resident

2 Education

B.Sc., Physics, 1977, University of London (1st Class Honors)

Ph.D., Astronomy, 1981, University of Edinburgh, Scotland

Thesis Title: Polarization Studies of BL Lac Objects

Thesis Directors: R.D. Wolstencroft and P.W.J.L. Brand

Foreign Languages: Spanish (strong) and French (fair)

3 Appointments

- **Research Assistant**, Centre European pour la Recherche Nuclear (CERN), Geneva, Switzerland, (May 1977 - October 1977)
- **Research Assistant**, University of Edinburgh and Royal Observatory, Scotland, (October 1977 - March 1981)
- **Science Research Council/NATO Fellow**, Research Associate, Institute for Astronomy, University of Hawaii, (March 1981 - June 1983)
- **Weingart Prize Fellowship**, California Institute of Technology, (June 1983 - August 1986)
- **Assistant Professor**, Steward Observatory, University of Arizona, (August 1986 - August 1991)
- **Associate Professor**, Steward Observatory, University of Arizona, (August 1991 - August 1996)
- **Associate Director**, NASA Space Grant, University of Arizona, (August 1991 - August 1995)
- **Visiting Professor**, Department of Astronomy, University of Washington, (August 1995 - August 1996)
- **Professor**, Steward Observatory, University of Arizona, (August 1996 - August 2000)
- **Deputy Department Head**, Department of Astronomy, University of Arizona, (August 1999 -)
- **University Distinguished Professor**, Steward Observatory, University of Arizona, (August 2000 -)
- **Honors Professor**, University of Arizona (March 2010 -)
- **Stanley Kelley Visiting Professor for Distinguished Teaching** (Princeton University, September 2011- July 2012)

4 Professional Honors and Awards

NATO/SERC Fellowship (University of Hawaii, 1981-83)
Weingart Prize Fellowship (California Institute of Technology, 1983-85)
Dudley Observatory Award (Dudley Observatory, 1990)
Slipher Award (National Academy of Sciences, 1998)
Distinguished Teaching Scholar (National Science Foundation, 2002)
Arizona Professor of the Year (Carnegie Foundation for the Advancement of Teaching, 2002)
Vice President, American Astronomical Society (2003-06)
Phi Beta Kappa Visiting Scholar (2006-07)
Richard H. Emmons Award for Excellence in College Astronomy Teaching (Astronomical Society of the Pacific, 2007)
Fellow of the American Association for the Advancement of Science (2009)
Stanley Kelley Visiting Professor for Distinguished Teaching (Princeton University, 2011-12)
Astronomical Society of the Pacific, Board of Directors (2011-14)
Anglo-Australian Observatory, Distinguished Visitor (2014)
Howard Hughes Medical Institute Professor (2014-19)

5 Professional Societies

American Astronomical Society, Former Vice President
Astronomical Society of the Pacific, Board of Directors
Royal Astronomical Society, Fellow
International Astronomical Union, Member
American Association for the Advancement of Science, Fellow
Russian Astronomical Society, Member
Royal College of Science, London, Associate
EDUCAUSE, Subscribing Representative
Phi Beta Kappa, Honorary Member
Science in Society, International Advisory Board
The Helix Center, New York, Advisory Board
Golden Key International Society, Honorary Member

6 Departmental Service

Colloquium Chairman (1986-89)
Graduate Admissions Committee (1987-99)
Steward Observatory TAC (1989-92)
Promotion and Tenure Committee (1991-97)
Vice-Weymann Search Committee (1988)
ASSIST Program Coordinator (1989-92)

Vice-White Search Committee (1991)
Academic Program Committee (1987-)
Vice-Swihart Search Committee (1993)
Peer Teaching Evaluation Committee (1997-98)
Vice-Hoffman Search Committee (1998)
Honors Advisor (1994-99)
Graduate Advisor (1996-99)
Chair, Academic Program Review Committee (2000-02)
Chair, SMT and 12m Telescope Director Search (2002)
Business Manager Search Committee (2003)
Department Head Five-Year Review Committee (2003)
Promotion and Tenure Committee (2007-2010)
Academic Program Review Committee (2008)
Strategic Review Committee (2008)
Director Search Committee (2011)
Director of Development Search Committee (2012)
Chair, Theory Postdoc Selection Committee (2013)
Steward Observatory Council (1994-2013)
Faculty Search Committee (1999-)
Deputy Head of Department (1999-)
Chair, Academic Program Committee (1999-)

Ph.D. Thesis Committees — S. Pompea, B. Jannuzi, H. Rix, D. Zaritsky, P. Smith (Univ. of New Mexico), P. Francis (University of Cambridge), K. McLeod, D. Sprayberry, B. McLeod, N. Dinshaw, T. Pickering, J. Scott, D. Norman (Univ. of Washington), C. Peng, R. Finn, D. McIntosh, K. Flint (UC Santa Cruz), J. Lee, A. Marble, M. Wold (Univ. of Copenhagen), B. Lei, K. Eriksen, M. O'Dowd (Univ. of Melbourne), M. Prescott, J. Trump, J. Gabor, Y. Shi, B. Oppenheimer, A. Baleisis, J. Trump, W. Schlingman, C. Oliver (Univ. of New South Wales), J. Donley, I. Momcheva, S. Buxner, K. Follette, E. Schneider, T. Sonam (College of Education), E. Cory (Dept. of Psychology)

Prelim Committees — D. Foss, S. Pompea, B. Rice, H. Rix, D. Zaritzsky, K. McLeod, C. Liu, D. Sprayberry, E. Hooper, N. Dinshaw, L. Close, T. Pickering, C. Daubigny, C. Peng, R. Finn, A. Marble, J. Lee, K. Eriksen, B. Lei, M. Prescott, I. Momcheva, J. Trump, J. Gabor, S. Cortes, K. Wong, E. Schneider

M.Sc. Thesis Committees — K. Visnovsky, C. Clemens, K. Dow, C. Petry, V. Burkholder, L. Wells

7 University Service

Associate Director, NASA Space Grant Consortium (1990-95)
Faculty Senate, 5 terms (1991-93, 1993-95, 1998-00, 2000-02, 2002-04)
Instruction and Curriculum Policy Committee (1989-92)
Science Education Promotion and Tenure Committee (1991-94)
University Task Force on Academic Process (1992)

Faculty of Science Advisory Council (1992-95)
Faculty of Science Ad Hoc Budget Advisory Committee (1992)
University Calendar Committee (1991-97)
Instructional Computing Advisory Committee (1987-91, Chair 90-91)
Graduate College Representative (1991-99)
University Teaching Center Advisory Committee (1991-94)
Vice Provost for Academic Affairs Search Committee (1993)
Space Sciences Department Head Search Committee (1994)
Student Affairs Policy Committee (1994-95)
Faculty Representative - United Way (1988-90)
APEX Summer Workshop Lecturer (1990, 1991)
Academic Center for Excellence Advisor (1990-93)
Lecturer, Graduate Teaching Assistant Orientation (1994)
Faculty of Science Core Curriculum Committee (1994-95)
College of Science Student Awards and Scholarship Committee (1997)
Teaching Evaluator for the Humanities Program (1998-99)
NCA Accreditation Working Team - Mission Statement (1998-99)
University Teaching Awards Selection Committee (1999)
SAMEC Science Teachers Colloquium Series (1999)
Facilitator - Carnegie Campus Conversations (1999)
College of Science Associate Dean Search Committee (1999)
Strategic Planning and Budget Advisory Committee (1999-02, 2002-04)
University of Arizona "Pride Night," Phoenix (2000)
College of Science Dean Search Committee (2000)
Proposition 301 Optics Steering Committee (2000)
College of Nursing Faculty Development Workshop Panelist (2000)
Information Technology Council (1999-03)
Vice President for Undergraduate Education Search Committee (2001)
Center for Creative Photography Steering Committee (2001)
Integrated Learning Center Coordinating Team (2001)
Learning Technology Showcase Keynote Address (2001)
College of Humanities Promotion and Tenure Committee (2001)
SO/DA Astronomy Board Meeting, Presentation (2001)
GAT Orientation Facilitator (2002)
Emeritus Club Homecoming Lunch, Featured Speaker (2002)
Distinguished Professor Award Selection Committee, Chair (2002)
College of Science Galileo Circle Scholarship Committee (2003-05)
Faculty Fellows Speakers Series (2003)
MCB Academic Program Review, College Representative (2003)
College of Science Promotion and Tenure Committee (2003-06)
CATTS Career Panelist (2003)
Steward Observatory Director Five-Year Review Committee (2003)
EDUCAUSE Subscribing Representative (2003-04)
UA Arizona Science Center Architect Selection Committee (2004)

Organizer “Astrobiology and the Sacred” Public Lecture Series (2004-08)
College of Science “Evolution” Lecture Series Organizing Committee (2005)
School of Architecture Program Review (2005)
Advisory Committee, Western Humanities Alliance Conference (2005)
College of Science MRI Proposal Review Committee (2006)
UA Alumni Association Eclipse Cruise, Scientific Leader (2006)
SO/DA Astronomy Board Meeting, Presentation (2006)
College of Science Global Change Series Organizing Committee (2006)
Regents and Distinguished Professors Council (2006-)
GAT Orientation Workshop Leader (2007)
Arizona Astronomy Board, Presenter (2007)
College of Science “Edges of Life” Lecture Series Organizing Committee (2007)
B2 Institute Educational Retreat, Biosphere (2007)
Faculty Review Committee, Bureau of Applied Anthropology (2007)
UA Alumni Association Chile Astronomy Tour, Scientific Leader (2008)
GAT Orientation Workshop Leader (2008)
Office of Student Computing TV Show (2008)
Group for Early Modern Studies Lecture/Panel (2008)
UA Transformation White Paper, lead author (2008)
College of Science “Next” Lecture Series Organizing Committee (2008)
Congresswoman Giffords “Science and Technology Luncheon,” co-host (2008)
Group for Early Modern Studies, Member (2008-)
UA Intellectual Policy Committee (2008-10)
Arizona Astronomy Board, Presenter (2009)
SO/DA Astronomy Board Meeting, Presentation (2009)
College of Science Center for Astrobiology Steering Committee (2009-)
Creator, “Teach Astronomy” General Education web site (2010-)
Arizona Astronomy Board, Presenter (2010)
Mount Lemmon Science Center Advisory Committee (2010-12)
Department of Chemistry and Biochemistry Academic Program Review (2010)
College of Science “Cosmic Origins” Lecture Series Organizing Committee (2010)
Anthem Veterans Memorial, Scientific Consultant (2011)
Steward Observatory Director Search Committee (2011)
Arizona Astronomy Board, Presenter (2011)
Tucson Downtown Science Center, Advisor (2011)
College of Science “Living Beyond 100” Lecture Series Organizing Committee (2011)
STEM Learning Center Steering Committee (2011-13)
Arizona 100 Celebration, Centennial Hall Presenter (2012)
College of Science “Galileo Circle” Italy Tour Leader (2012)
UA Academic Leadership Institute (2012-13)
College of Science Ad Hoc E-Learning Committee (2012-13)
University of Arizona Provost Search Committee (2012-13)
Biosphere 2 “Artist in Residence” Advisory Board (2012-)
Henry Koffler Prize Selection Committee (2013)

Responsibility Centered Management (RCM2) Subcommittee (2013)
Arizona Space Grant, “Science Literacy” Lunch Presentation (2013)
AAU Undergraduate STEM Project Steering Committee (2013)
Co-Director, STEM Learning Center (2013-)
Alexandrian Circle/Libraries Fundraiser (2014)
Campaign Kickoff/College of Science Faculty Talk (2014)
STEM Conference for Early Childhood Educators Welcoming Address (2014)
Circle of Books Clubs, Pima County Libraries/Flandrau Planetarium, Presentation (2014)
STEMazing Early Childhood Conference, Welcoming Address (2014)
Osher Lifelong Learning Institute Astrobiology Class, Lecture and Demo (2014)

8 Astronomy Service

Kitt Peak Bright Time Allocation Committee (1994-96)
Space Telescope Cycle 5 Active Galactic Nuclei Panel (1994)
American Astronomical Society Shapley Lecturer (1993-03)
NASA Long Term Space Astrophysics Review Panel (1995)
Kitt Peak Extragalactic Time Allocation Committee (1996-97)
Space Telescope Cycle 8 Quasars Absorption Lines Panel, Chair (1998)
Space Telescope Cycle 8 Time Allocation Committee (1998)
Organizing Committee, IAU Colloquium 171, The Low Surface Brightness Universe (1998)
Organizing Committee, ASP Conference 189, Teaching Introductory Astronomy (1998)
Organizer, Vatican Observatory Science and Education Conference (1998)
NOAO Long Term Proposal Time Allocation Committee (1999-00)
Columbia University Biosphere-2 Advisory Board (1999-01)
Space Telescope Users Committee (1999-02)
NSF Extragalactic Astronomy Review Panel (2000)
NASA Chandra Observatory Cycle 2 Time Allocation Committee, Chair (2000)
NASA Chandra Observatory Cycle 2 Budget Review Panel (2000)
Astronomy Education Review Editorial Board (2001-05)
NASA Spitzer Observatory Cycle 1 Time Allocation Committee (2003)
NSF Distinguished Teaching Scholars Review Panel (2003)
Vice President, American Astronomical Society (2003-06)
American Astronomical Society Executive Committee (2003-06)
American Astronomical Society Membership Committee (2003-04)
Lead Scientific Organizer, 206th and 207th Meetings of the AAS (2005-06)
NASA Spitzer Observatory Cycle 2 Time Allocation Committee (2003)
Judge, Livio Gratton Prize for best Italian Astronomy Ph.D. (2003)
NASA Hubble Fellowship Selection Panel (2004)
University of Washington Astrobiology Program Review (2005)
University of Toronto Astronomy Program External Evaluator (2006)
Scientific Steering Committee, COSMOS Collaboration (2005-12)
International Executive Committee, INSAP 5 Conference, Chicago (2005)

American Astronomical Society, Chambliss Writing Award Committee, Chair (2006)
NASA Chandra Observatory Cycle 8 Time Allocation Committee, Chair (2006)
NASA Chandra Observatory Cycle 8 Budget Review Panel (2006)
Editorial Board, Encyclopedia of the Cosmos (2006-09)
KPNO Director Search Committee (2006)
Nominator, Nobel Prize in Physics (2007)
Nominator, Kyoto Prize in Basic Sciences (2007)
Organizing Committee, IAU Symposium 244, Dark Galaxies and Lost Baryons (2007)
LSST Mirror Casting “High Fire Event” Tour Guide (2008)
Organizing Committee, Astrobiology Workshop: Expanding Views of Society and Self (2008)
NASA Keck Observatory Time Allocation Committee, Origins Panel (2008-10)
International Executive Committee, INSAP 6 Conference, Venice (2009)
International Year of Astronomy “365 Days of Astronomy” Podcast (2009)
Organizing Committee, Vatican Observatory SuperVOSS III Conference (2009)
Organizing Committee, Pontifical Academy “Study Week in Astrobiology” (2009)
Science for Monks Program, India, Cosmology Organizer and Lecturer (2008-13)
Metanexus Global Network Initiative, Advisory Council (2008-10)
Decadal Survey 2010, Education and Public Outreach Study Group, co-Chair (2009)
APS/AAPT “Using Astronomy to Teach Physics” Project Advisor (2010-)
Dark Matter Awareness Week, Speaker (2010)
International Executive Committee, INSAP 7 Conference, Bath (2010)
International Year of Astronomy “365 Days of Astronomy” Podcast (2011)
Board of Directors, Astronomical Society of the Pacific (2011-13)
Cosmology and Consciousness Conference, Co-organizer, Dharamsala, India (2011)
Gordon Research Conference, Physics Research and Education, Advisory Panel (2011)
National Science Foundation, Astronomy “Portfolio Review” Committee (2011-12)
Science and Entertainment Exchange, Consultant (2011-)
International Year of Astronomy “365 Days of Astronomy” Podcast (2012)
The Art and Craft of Science Writing, Princeton University, Organizer (2012)
Communicating Science, ASP Annual Meeting, Local Organizing Committee (2012)
Astronomical Society of the Pacific, Publications Committee (2012)
Astronomical Society of the Pacific, Awards Committee (2012-)
Inigo Films “Four Wise Men,” Consultant (2012-13)
College of Science, “Science and Screen,” Local Organizing Committee (2012)
Exoplanets, Biomarkers, and Instruments, Tucson, Organizing Committee (2013)
Astronomical Society of the Pacific “Cosmos 2013” Program Committee (2013)
NOVA “Exoplanets and Astrobiology” Program, Consultant (2013)
NPR “Science Friday” Life in the Universe, Story Consultant (2013)
Vatican Observatory Advisory Committee (2013)
Astrobiology and Society Focus Group, SETI Institute (2013-)
Associate Editor, International Journal of Science and Society (2013)
Anglo-Australian Observatory, Distinguished Visitor Program (2014)
Vatican Observatory Research Report, co-author, presented to Pope Francis (2014)
Scientific Organizing Committee, Search for Life Beyond the Solar System (2014)

Press Liaison, Search for Life Beyond the Solar System (2014)
NASA Hubble Fellowship Selection Panel (2014)
Howard Hughes Medical Institute Professor, Finalist and Presenter (2014)

Book Reviewer for Mercury Magazine, Physics Today; and American Scientist Magazine
Proposal Reviewer for Cambridge University Press and Princeton University Press
Associate Editor, International Journal of Science and Society
International Editorial Board, Euresis Journal
Reviewer for Leonardo Magazine, Astronomy Education Review, MacArthur Foundation,
Science and Society International Journal
Referee for Astrophysical Journal, Astrophysical Journal Letters, Astronomical Journal, Monthly
Notices of the Royal Astronomical Society, Nature, Publications of the Astronomical
Society of the Pacific, Astronomy and Astrophysics, Astrophysics and Space Science.
Research Proposal Reviewer for NASA, NSF, the Templeton Foundation, Research Corporation,
British PPARC, Italian CNR, Czech Science Foundation, NATO, Canada Natural Sciences
and Engineering Research Council, the Netherlands Organization for Scientific Research,
the Austrian Science Fund, the European Research Council, the Chilean Research Council.
Six popular books on astronomy have between them been translated into nine languages: Dutch,
Greek, Italian, Japanese, Korean, Portuguese, Spanish, Turkish, and Arabic.

9 University Teaching Awards and Grants

1988 Faculty of Science **Distinguished Teaching Award** (\$ 1000)
1989 Provost's **Teaching Improvement Award** (\$ 1830)
1991 **Burlington Resources Foundation Achievement Award** (\$ 2500)
1992 **General Education Teaching Award** (\$ 8000)
1992 Provost's **Teaching Improvement Award** (\$ 2000)
1996 **Faculty Development Grant** (\$ 6000)
1997 **New Instructional Technologies Grant** (\$ 3500)
1997 El Paso Energy Foundation **Faculty Achievement Award** (\$ 3000)
1998 **New Learning Environments and Instructional Technologies Grant** (\$ 14,890)
2000 **New Learning Environments and Instructional Technologies Grant** (\$ 22,288)
2000 **University Distinguished Professorship** (\$ 5000)
2001 **New Learning Environments and Instructional Technologies Grant** (\$ 24,563)
2003 **Internet Technology, Commerce and Design Institute Grant** (\$ 15,000)
2004 **Henry and Phyllis Koffler Prize for Teaching** (\$ 10,000)
2004 **Galileo Circle Fellow** (\$5000)

10 Teaching Experience

Astronomy 100, **Essentials of Astronomy** (Spring 1987), 168 students

Astronomy 100, **Essentials of Astronomy** (Fall 1987), 182 students
Astronomy 100, **Essentials of Astronomy** (Fall 1987), 175 students
Astronomy 100, **Essentials of Astronomy** (Fall 1988), 170 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1989), 14 students
Astronomy 396H, **Honors Seminar** (Fall 1989), 15 students
Astronomy 100, **Essentials of Astronomy** (Fall 1990), 154 students
Astronomy 100, **Essentials of Astronomy** (Fall 1990), 152 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1991), 15 students
Astronomy 396H, **Honors Seminar** (Fall 1991), 8 students
Astronomy 100, **Essentials of Astronomy** (Spring 1992), 152 students
Astronomy 396H, **The Personalized Universe** (Spring 1992), 10 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1993), 16 students
Astronomy 396H, **Honors Seminar** (Spring 1993), 12 students
Astronomy 100, **Essentials of Astronomy** (Fall 1993), 153 students
Astronomy 100, **Essentials of Astronomy** (Fall 1993), 155 students
Astronomy 100, **Essentials of Astronomy** (Fall 1994), 165 students
Astronomy 396H, **Honors Seminar** (Fall 1994), 13 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1995), 9 students
Arts & Sciences 195A, **Life in the Universe** (Spring 1995), 9 students
Astronomy 101 (University of Washington), **Astronomy** (Fall 1995), 250 students
Astronomy 100, **Essentials of Astronomy** (Fall 1996), 165 students
Astronomy 100, **Essentials of Astronomy** (Fall 1996), 65 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1997), 8 students
Astronomy 100, **Essentials of Astronomy** (Fall 1997), 163 students
Natural Sciences 102, **The Physical Universe** (Fall 1998), 151 students
Natural Sciences 102, **The Physical Universe** (Fall 1998), 166 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1999), 12 students
Natural Sciences 102, **The Physical Universe** (Fall 1999), 162 students
Natural Sciences 102, **The Physical Universe** (Fall 2000), 166 students
Natural Sciences 102, **The Physical Universe** (Fall 2000), 156 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 2001), 13 students
Natural Sciences 102, **The Physical Universe** (Fall 2001), 189 students
Astronomy 202, **Life in the Universe** (Spring 2002), 106 students
Astronomy 202, **Life in the Universe** (Spring 2003), 122 students
Natural Sciences 102, **The Physical Universe** (Fall 2004), 154 students
Astronomy 202, **Life in the Universe** (Spring 2006), 105 students
Astronomy 202, **Life in the Universe** (Spring 2007), 104 students
Astronomy 202, **Life in the Universe** (Spring 2008), 103 students
Astronomy 202, **Life in the Universe** (Spring 2009), 115 students
Astronomy 202, **Life in the Universe** (Spring 2010), 111 students
Natural Sciences 102, **The Physical Universe** (Spring 2011), 153 students
Honors Seminar 195i, **Living in the Universe** (Spring 2011), 12 students
Astronomy 105 (Princeton University), **The Living Cosmos** (Fall 2011), 70 students
Astronomy 542 (Princeton University), **Cosmology Seminar** (Spring 2012), 26 students

Astronomy: State of the Art (Spring 2013), **Massive Online Open Course**, 14,076 students
Astronomy 170B1, **The Physical Universe** (Spring 2014), hybrid class, 62 students

11 Student Advising

Graduate Thesis Advisor :

K. Visnovsky (M.Sc. 1990)
D. Sprayberry (Ph.D. 1994)
N. Dinshaw (Ph.D. 1996)
E. Hooper (Ph.D. 1997)
C. Petry (M.Sc. 1998)
T. Pickering (Ph.D. 1998)
V. Burkholder (M.Sc. 1999)
L. Wells (M.Sc. 1999)
D. Norman (Univ. Washington, Ph.D. 1999)
K. Flint (with M. Bolte, UC Santa Cruz, Ph.D. 2001)
R. Finn (with D. McCarthy, Ph.D. 2003)
C. Peng (Ph.D. 2004)
J. Lee (with R. Kennicutt, Ph.D. in 2006)
A. Marble (Ph.D. in 2007)
B. Lei (with G. Reike, Ph.D. in 2007)
K. Eriksen (with D. Arnett, Ph.D. in 2009)
M. Prescott (with R. Kennicutt, Ph.D. in 2009)
J. Trump (Ph.D. in 2010)
J. Gabor (with R. Dave, Ph.D. in 2010)
E. Schneider (3rd year, with B. Robertson)

Research Assistants (L. Sauter, C. Petry, K. Flint, C. Liu, K. Louie, D. Zaha, D. Huber, L. Robb, J. Watson, C. King, E. Johnson, J. Antonellis, E. Brogt, S. Buxner, P. Griffis, H. Sugarman, J. Antonellis, K. Hardegree-Ullman, K. Tijerino, J. Romine, M. Nieberding, R. Eckley, W. Chavez)

Senior Honors Thesis Advisor (K. Flint, C. Hutcheson, I. Carlstrom, C. Casey)

Ph.D. Committee, Department of Psychology (E. Faun Cory)

NASA Space Grant Undergraduate Research Interns (R. Gordy, L. Kaehler, A. McCarthy, A. Braglia, M. Brown, M. Pesce-Rollins, A. Marchand, J. Peake, J. Lull)

Independent Studies 399/499/599 (M. Elowitz, J. Ash, A. Moustakis, K. Flint (Honors), J. Parker, D. Norman, L. Mendoza, S. Lyons, K. Louie, R. Diaz (Honors), S. Floto, J. Jensen, M. Kochis, J. Lohmiller, L. Truong, P. Farrell, J. Goldin, E. Martinez, M. Preis, K. Less, S. Selby, P. Tautz, J. Romero)

Web Project Student Employees (D. Washburn, G. MacArthur, A. Schultz, D. Irvin, L. Knudson, J. Weiner, J. McConnell, J. Dannemiller, F. Lin, R. Martinez, R. Upallapati, C. Copeland, J. Cain, D. Rudd, B. Engineer, S. Sarnikar, U. Engineer, A. Malik, A. Gupta, K. Peterson, A. Achrekar, S. Choraria, B. Shean, S. Shahapurkar, U. McDuffee, A. Permar, B. Schmidt, A. Camp, J. Hoy, B. Genesan, E. Courche, P. Gupta, A. Kumar, M. Kaufmann, A. Permar,

B. Ganesan, A. Gnanamani, C. Cubach, J. Russell, P. Yang, E. Hardegee, K. Hardegee, T. Anchondo, N. Shastry, J. Naranajan, N. Chandrasekharan, R. Sheshu, J. Hall, S. Shastri, A. Patikkal, A. Aronoff, M. Swatzell, B. Guvenen, A. Srinathan, J. Parchment, N. Gopaul, C. Austin, N. Ganesan, M. Paul, K. Dunn, R. Eckley, S. Ravishankar)

Teach Astronomy Web Project employment for Curricular Practical Training (R. Sheshu, V. Datla, A. Kaya, A. Patikkal, S. Ravishankar)

Gen. Ed. Preceptors (E. Adnan, A. Ainsa, K. Beatty, C. Copeland, J. Coskey, D. Elerath, P. Farrell, S. Floto, C. Jacks, J. Jensen, S. Monroe, G. Morgenstern, J. Simoneaux, A. Viggiano, J. Williamson, M. Zilm, B. Zura, C. Lindblom, N. Orr, W. Cheama, J. Goldin, E. Martinez, D. Roberts, S. Anderson, C. Tharp, B. White, M. Magzen, R. Barrios, C. Heyman, T. Lazarus, J. Ryan, J. Mitchell, J. Carli, N. Brennan, M. Bassin, A. Westle, J. Weiss, J. Hardy, E. Higley, T. Palomares, J. Villagomez, R. Mondrus, G. Macias, M. Girrdina, J. Danziger, A. Phillips, L. Echevarria, M. D'Souza, H. Girn, N. Bajema, J. Sprigg, B. Filippi, D. Huber, E. Rodriguez, A. Estorga, A. Cruz, G. Gephart, M. Davis, Z. Durst, A. Kristof, B. Turpen, A. Vega, E. Olivar, M. Rodgers, A. Thomas, A. Medina, C. Owen, D. Green, N. Romero, S. Kenter, R. Eckley, C. Meyers, F. Sifuentes, A. Scheck, K. Terry, L. MacTaggart, J. Ritter)

Staff Employees (Cathy Petry – Senior Research Associate 1990-2003, Katherine Larson – Program Coordinator 2005-2007, Adrienne Gauthier – Senior Instructional Technology Specialist 2003-2011, Anand Patikkal, Senior Web Developer, 2009-2012, Kevin Hardegree-Ullman, Instructional Technology Specialist 2011-2012, Mathew Wenger, Instructional Technologist, 2012-)

Co-advisor to 32 M.Sc. teacher-students in NSF ASSIST Program (1990-93)

Overall responsibility for 235 NASA Space Grant Research Interns (1991-95)

TUSD Professional Intern Program (P. Slatkin)

Advisor, Senior Exit Project, Cienega High School (K. Pavlica)

Faculty Mentor, Flinn Fellow (K. Flint, A. Dvorak)

Academic Center for Excellence Faculty Advisor (1990-93)

GIDP Graduate Student Advisor (Michelle Lanan, Jaime Parchment, Nellie Gopaul)

Student Organization Faculty Advisor (Gamers Club, Pi Rho)

Astronomy Honors Advisor (1994-99)

Graduate Advisor for 45 Ph.D. students (1996-99)

Responsibility as Academic Head for 45 Ph.D. students and 100 astronomy majors (1999-)

Faculty Fellow, Forbes College, University of Princeton (2011-12)

Honors Professor, University of Arizona (2010-)

12 Observing Experience

Optical Telescopes: Keck I, Keck II, Subaru 8m, Gemini-N, Magellan I, Magellan II, SAO 6m, Palomar 5m, MMT, KPNO 4m, CTIO 4m, AAT, CFHT, IRTF, Las Campanas 2.5m, KPNO 2.3m, Steward 2.2m, Hawaii 2.2m, SAAO 2m, WIYN, UKST, plus many under 2m

Radio Telescopes: Arecibo, VLA, Green Bank 45m

X-Ray and Far Infrared: IRAS, HEAO-2, ROSAT, ISO Key Project, XMM-Newton, Chandra

Hubble Space Telescope: PI or co-PI on 26 projects totaling over 2000 orbits; user of WFPC2,

FOS, GHRS, STIS, ACS, and NICMOS

13 Invited Educational Presentations

- 1987 Flandrau Planetarium **Eyes on the Universe** Lecturer
- 1989 Flandrau Planetarium **Eyes on the Universe** Lecturer
- 1991 **Smithsonian Visiting Associates** Lecturer
- 1991 Flandrau Planetarium **Eyes on the Universe** Lecturer
- 1991 **H.M.S. Southward** Eclipse Cruise Enrichment Lecturer
- 1992 **Smithsonian Visiting Associates** Lecturer
- 1992 University of Arizona **Summer Session Distinguished Lecturer**
- 1992 Astronomical Society of the Pacific **Universe '92** Invited Speaker
- 1993 **Smithsonian Visiting Associates** Lecturer
- 1993 Steward Observatory Public Evening Lecturer
- 1993 American Astronomical Society **Shapley Visiting Lecturer** (Ft. Lewis College, Colorado)
- 1994 **Smithsonian Visiting Associates** Lecturer
- 1994 Steward Observatory Public Evening Lecturer
- 1994 Astronomical Society of the Pacific **Universe '94** Invited Speaker
- 1994 American Astronomical Society **Shapley Visiting Lecturer** (Hartnell College, California)
- 1995 American Astronomical Society "Seminar for Science Writers" at 185th Meeting, Tucson
- 1995 American Astronomical Society "Astronomer for a Day" at 185th Meeting, Tucson
- 1995 **Research Corporation** "Partners in Science" Conference Plenary Speaker
- 1995 Steward Observatory Public Evening Lecturer
- 1995 **Vatican Observatory** 5th Summer School in Astronomy and Astrophysics, Lecturer
- 1995 **Dinosaur Day Exhibition** Lecturer, Hartnell College, Salinas
- 1996 Astronomical Society of the Pacific **Universe '96** Invited Speaker
- 1996 **Smithsonian Visiting Associates** Lecturer
- 1996 **Phi Beta Kappa** Banquet Speaker
- 1996 Steward Observatory Public Evening Lecturer
- 1997 Steward Observatory Public Evening Lecturer
- 1998 **Technology Enabled Learning Conference** Showcase Presenter
- 1998 Hayden Planetarium **Frontiers in Astrophysics** Lecturer
- 1998 **Smithsonian Visiting Associates** Lecturer
- 1998 Astronomical Society of the Pacific's "Symposium on Teaching Astronomy" Panelist, Albuquerque
- 1998 Wake Forest University **Computer-Enhanced Teaching** Vignette
- 1998 Steward Observatory Public Evening Lecturer
- 1998 **NASA Space Grant Consortium Symposium** Plenary Speaker
- 1998 **Joint Center for the Study of Time in Physics and Cosmology** Seminar Series
- 1999 Conference on "Inspiration of Astronomical Phenomena II" in Malta Keynote Speaker
- 1999 University of Arizona Community Speaker Series
- 1999 **Merged Realities: A Synthesis of Art and Science** Symposium

- 1999 University of Arizona Extended University, SAGE Retreat speaker
- 1999 American Astronomical Society **Harlow Shapley Visiting Lecturer** (College of the Rockies, Kelowna, Canada)
- 1999 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Okanagan College, Cranbrook, Canada)
- 1999 American Association of Physics Teachers, Arizona Spring Meeting
- 1999 University of Arizona Community Speaker Series
- 1999 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Orange Community College, Costa Mesa, California)
- 1999 University of Arizona Science Teachers Colloquium Series
- 1999 **Smithsonian Visiting Associates** Lecturer
- 2000 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Western Washington College, Walla Walla, Washington)
- 2000 11th International Conference on College Teaching and Learning, Jacksonville, Florida
- 2000 Astronomical Society of the Pacific **Universe 2000** Invited Speaker
- 2000 Columbia Biosphere 2 "Summer of Stars" Lecturer
- 2000 Astronomical Society of the Pacific's "Higher Education Symposium" Invited presenter, Pasadena, California
- 2000 Texas Astronomy League, Invited speaker
- 2000 Santa Fe Planetarium **Current Research Series**
- 2000 LodeStar Planetarium, Albuquerque, Public Lecture
- 2000 **Smithsonian Visiting Associates** Lecturer
- 2001 Conference on "Inspiration of Astronomical Phenomena III" in Sicily, Keynote Speaker
- 2001 Columbia Biosphere 2 Public Lecture Series
- 2001 W.M. Keck Observatory Public Evening Lecture
- 2001 Stockholm Observatory Public lecture
- 2001 University of North West, South Africa, Public Lecture Series
- 2002 Steward Observatory Public Evening Lecturer
- 2002 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Loyola College, Baltimore, Maryland)
- 2002 **ASP Public Symposium** "From Stars to Life" Invited Speaker
- 2002 University of Arizona Alumni Homecoming Lunch Speaker
- 2002 UA School of Architecture "Intuition - Hapticity" Invited Speaker
- 2002 Harvard University Alumni Club Speaker
- 2002 Arizona Board of Regents meeting, Featured Faculty Speaker
- 2003 **201st AAS Meeting** "Teaching with Electrons" Invited Speaker
- 2003 National Science Foundation **MPS Distinguished Lecture**
- 2003 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Southern Utah University, Cedar City)
- 2003 University of Arizona Faculty Fellows Speakers Series
- 2003 Hartnell College, Salinas, California, Planetarium Re-Opening, Guest Speaker
- 2003 **Smithsonian Visiting Associates** Lecturer
- 2003 American Astronomical Society **Harlow Shapley Visiting Lecturer** (UNAM/INAOE, Mexico City, Mexico)

- 2003 NSF Teacher-Leaders in Research Based Science Education Invited Speaker
2003 **Society for College Science Teachers** Mini-Conference Speaker
2003 Princeton University "Council on Science and Technology" Invited Speaker
2003 Hayden Planetarium "Frontiers in Astrophysics" Lecturer
2003 **Observatorio Nacional, Rio de Janeiro** VIII Winter School Lecturer
2003 National Science Foundation Office of Legislative and Public Affairs "The Universe from the Ground Up" Symposium Summary Speaker
2003 American Astronomical Society **Harlow Shapley Visiting Lecturer** (California State University, Northridge)
2003 Arizona Conference on "Exemplary Science Courses" Speaker, Pima Community College
2004 University of Arizona Faculty Community Lecture
2004 American Physical Society "Four Corners Meeting" Invited Speaker
2005 Hayden Planetarium "Frontiers in Astrophysics" Lecturer
2005 **Western Humanities Alliance** Conference on "Borders," Plenary Speaker
2005 Flandrau Science Center "Hubble Space Telescope Anniversary" Invited Speaker
2005 **Astronomical Society of the Pacific** Annual Awards Dinner, Banquet Speaker
2005 **Vatican Observatory** 9th Summer School in Astronomy and Astrophysics, Lecturer
2005 ASP Annual Meeting "Building Community: The Emerging EPO Profession, Award Dinner Banquet Speaker
2006 **Vatican Observatory Foundation** Fund-Raiser, Banquet Speaker
2006 Summer School on "New Techniques and New Progress in Observational Astrophysics," Lecturer, Beijing National Observatory, Beijing, China
2006 **The Reinvention Center**, "Transforming the Culture: Undergraduate Education and the Multiple Functions of a Research University," Workshop Leader, Washington, D.C.
2006 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Lawrence University, Northridge)
2006 **Phi Beta Kappa Visiting Scholar**, Ohio University, Athens, Ohio
2006 **Phi Beta Kappa Visiting Scholar**, Ohio Wesleyan University, Delaware, Ohio
2006 **Phi Beta Kappa Visiting Scholar**, Wells College, Aurora, New York
2006 **Phi Beta Kappa Visiting Scholar**, Alfred University, Alfred, New York
2006 Spirit of the Senses Salon, "Life in the Universe," Phoenix, Speaker
2006 College of Science Evolution Lecture Series, Speaker
2006 **St. Albert's Forum on Theology and Science**, Tucson, Lecturer
2006 Tucson Amateur Astronomers Association, Lecturer
2006 Arizona Senior Academy, Invited Speaker
2006 Pale Blue Dot III, Adler Planetarium, Chicago, Illinois
2006 **Penny W. Stamps Distinguished Visitor Series**, Speaker, University of Michigan, School of Art and Design
2007 Phoenix Science Center, Evolution Lecture Series, Speaker
2007 **Phi Beta Kappa Visiting Scholar**, Allegheny College, Meadville, Pennsylvania
2007 **Phi Beta Kappa Visiting Scholar**, Bucknell University, Lewisburg, Pennsylvania
2007 **Phi Beta Kappa Visiting Scholar**, Southwestern University, Georgetown, Texas
2007 **Phi Beta Kappa Visiting Scholar**, University of Oregon, Eugene, Oregon
2007 Spirit of the Senses Salon, "The Big Bang," Phoenix, Speaker

2007 Phi Beta Kappa Tucson Chapter, Speaker
2007 UA Science Center “Got Science?” Café, Inaugural Speaker
2000 UA “First Level” Honors Award Ceremony Speaker
2007 UA CATTS/BioME Fellows, Guest Speaker
2007 UA Phi Beta Kappa Initiation Ceremony, Speaker
2007 Plenary Speaker, ASP “Cosmos in the Classroom” Pomona, California
2007 Spirit of the Senses Salon, “Science in Second Life,” Phoenix, Speaker
2007 **Adler Planetarium** “Far Out Friday” Lecturer, Chicago
2007 **Hayden Planetarium** Author Lecture Series, New York City
2008 NASA Arizona Space Grant, Lunch Speaker
2008 The Learning Curve, Tucson, Guest Speaker
2008 **American Scientist Magazine** “Scientist’s Bookshelf”
2008 LSST Mirror Casting “High Fire Event,” Tour Guide
2008 Astrobiology Science Conference (AbSciCon), Santa Clara, California
2008 Pima Community College “Lecture under the Stars”
2008 Catalina Rotary International Club, Invited Speaker
2008 Arizona Senior Academy, Invited Speaker
2008 **Science for Monks Program**, Dharamsala, India, Lecturer
2008 Biosphere 2 Public Lecture Series
2008 Aspen Center for Physics Wednesday Night BBQ, Speaker
2008 Steward Observatory Public Evening Lecturer
2008 Women’s International League for Peace and Freedom, Speaker
2008 **Smithsonian Visiting Associates** Lecturer
2008 University of Arizona Kachina Galley, Hubble Exhibit, Opening Reception Speaker
2008 Tucson Club Congress “Astronomy Cocktail Hour,” co-Host
2008 Spirit of the Senses Salon, “The End,” Phoenix, Speaker
2008 University of Arizona H+ Club, Transhumanist Society, Speaker
2008 **The Learning Curve**, “Dharma and the Universe,” Series of 8 Public Lectures
2008 BBC World Service “Heart and Soul” on Radio 4, Interview
2008 **O’Reilly Web 2.0 Summit**, Internet Leaders Conference, San Francisco
2009 SETI Institute, Workshop to Develop an Astrobiology Roadmap of Societal Issues
2009 International Year of Astronomy, “365 Days of Astronomy” Podcast
2009 **Science for Monks Program**, Solan, India, Lecturer
2009 KUAZ “Arizona Illustrated” interview on Astrobiology
2009 Arizona Blue Chip Program “Fireside Chat” Speaker
2009 **Tucson Festival of Books**, Author/Speaker
2009 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Okanagan College, Vernon Campus, Canada)
2009 Vatican Observatory Summer School Conference, Rome, Italy, Lecturer/Organizer
2009 University of Texas Planetarium, Public Lecture, Arlington, Texas
2009 Categorically Not Salon, “Doing Darwin Differently,” Santa Monica, California
2009 **Metanexus Institute**, “Cosmos, Nature, Culture,” Tempe, Arizona, Keynote Speaker
2009 Campus Technology ’09, Boston, Massachusetts
2009 College Endowment Association, Milwaukee, Wisconsin

2009 Students for the Exploration and Development of Space, National Meeting, Speaker
2009 **Darwin Anniversary Symposium**, St. Olaf College, Wisconsin, Invited Speaker
2009 Arizona Science Center, Phoenix, Year of Astronomy Invited Speaker
2009 The Learning Curve, Science Fridays Speaker
2010 **NASA/APPEL** “Essentials of Astronomy,” Kennedy Space Center, Florida
2010 Vatican Observatory Seminar, Speaker
2010 Santa Rosa Junior College, Public Lecture, Santa Rosa, California
2010 **NASA/APPEL** “Essentials of Astronomy 2,” Marshall Space Flight Center, Alabama
2010 **Tucson Festival of Books**, Author/Speaker
2010 **Tucson Festival of Books**, Science Pavilion Speaker
2010 **NASA/APPEL** “Essentials of Astronomy 3,” Goddard Space Flight Center, Maryland
2010 Mitchell Public Lecture, Texas A&M University, Texas
2010 **Science for Monks Program**, Bir, India, Lecturer
2010 Spirit of the Senses Salon, “If Galileo Could See Us Now,” Phoenix, Speaker
2010 **NASA/APPEL** “Essentials of Astronomy 4,” Johnson Space Center, Texas
2010 Second Life Public Lecture, “How It Ends,” Second Life
2010 **NASA/APPEL** “Essentials of Astronomy 5,” Kennedy Space Center, Florida
2010 Hayden Planetarium, Public Evening Lecturer
2010 University of Arizona Honors Convocation, Speaker
2010 **EDUCAUSE Conference**, Workshop Presenter, Anaheim, California
2010 Royal Astronomical Society, London, England, Lecturer
2010 Royal Greenwich Observatory, Greenwich, England, Lecturer
2010 Dana Science Center, Science Museum, London, England, Lecturer
2010 **BBC Radio 5 World Forum**, Speaker
2010 **Robinson Lecture**, Armagh Observatory, Armagh, Northern Ireland
2010 Robinson Schools Lecture, Armagh, Northern Ireland
2010 Dark Matter Awareness Week, Speaker
2010 Tucson Rotary Club, Invited Speaker
2010 **NASA/APPEL** “Essentials of Astronomy 6,” Johnson Space Center, Texas
2011 **College of Science Public Lecture Series**, “Big Bang,” Speaker
2011 La Posada Community, Green Valley, Invited Speaker
2011 Arizona Senior Academy, Invited Speaker
2011 **NASA/APPEL** “Essentials of Astronomy 7,” Jet Propulsion Laboratory, California
2011 **College of Science Public Lecture Series**, “Astrobiology,” Speaker
2011 Space Fest III, Starr Pass Resort, Speaker
2011 Using Astronomy to Teach Physics, Boston AAS Meeting
2011 **NASA/APPEL** “Essentials of Astronomy 8,” Kennedy Space Center, Florida
2011 **NASA/APPEL** “Essentials of Astronomy 9,” Goddard Space Flight Center, Maryland
2011 National Academy of Sciences, “Art Science Evening Rendezvous,” Speaker/Panelist
2011 Cosmology and Consciousness Conference, Dharamsala, India, Keynote Speaker
2012 **NASA/APPEL** “Essentials of Astronomy 10,” Langley Research Center, Virginia
2012 Council on Science and Technology, Princeton University, Invited Lecture
2012 McGill University Astrobiology Lecture Series, Montreal, Canada
2012 “Cave” Invited Lecture, Kingston University, Ontario, Canada

- 2012 **The Art and Craft of Science Writing**, Princeton University, Organizer/Presenter
- 2012 “The Alpha and the Omega” panelist, the Helix Center, New York, New York
- 2012 **NASA/APPEL** “Essentials of Astronomy 11,” Goddard Space Flight Center, Maryland
- 2012 **College of Science “Galileo Circle”** Tour Lecturer and Organizer, Italy
- 2012 Steward Observatory Public Evening Lecturer
- 2012 NASA “Night Sky Network,” Invited Speaker
- 2012 Hubble Roadshow Panelist, Tucson, Arizona
- 2012 **NASA/APPEL** “Essentials of Astronomy 12,” Marshall Space Flight Center, Maryland
- 2012 Western Regional Noyce Conference, Keynote Speaker
- 2012 Ventana Canyon Resort, Tucson, “Cosmic Evolution,” Invited Speaker
- 2012 The Learning Curve, Food for Thought, “The God Particle,” Tucson, Arizona
- 2013 **Science for Monks Program**, Ganden Monastery, India, Lecturer
- 2013 Sonoran Speakers Club, Phoenix, Arizona
- 2013 Benjamin Dean Lecture, California Academy of Sciences, San Francisco, California
- 2013 **NASA/APPEL** “Essentials of Astronomy 13,” NASA Headquarters, Washington, DC
- 2013 Vatican Observatory Foundation Seminar, Panelist, San Francisco, California
- 2013 Tucson Amateur Astronomy Association, Speaker
- 2013 **Tucson Festival of Books**, “Heavens Above,” Lecturer
- 2013 **Tucson Festival of Books**, Author’s Table Participant
- 2013 **Tucson Festival of Books**, Science City, Science Café Presenter
- 2013 **Tucson Festival of Books**, Science and Science Fiction Panelist
- 2013 **TEDx Tucson**, “Science for Monks” Presentation
- 2013 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Okanagan College, Vernon Campus, Canada)
- 2013 “First Sunday” Unitarian Gathering, Science and Buddhism, Tucson, Arizona
- 2013 Astronomical Society of the Pacific, “Cosmos in the Classroom,” Presenter
- 2013 **NASA/APPEL** “Essentials of Astronomy 14,” Kennedy Space Center, Florida
- 2013 **Scientific American** “Bright Horizons” Norwegian Cruise Lecturer
- 2013 **NASA/APPEL** “Essentials of Astronomy 15,” Marshall Space Flight Center, Maryland
- 2013 University of Arizona Biosphere 2 Lecturer
- 2013 Confluentcenter “Show and Tell at Playground” Series Presenter
- 2013 Spirit of the Senses Salon, “Monk Gravity,” Phoenix, Speaker
- 2013 Tucson Area Physics Teachers, Speaker
- 2013 “My Arizona” Lecture, College of Social and Behavioral Sciences
- 2014 FreeThought Arizona, Speaker, Tucson, Arizona
- 2014 Graduate Club, Guest Speaker, Mountain Oyster Club, Tucson, Arizona
- 2014 Webinar on “Science Literacy,” Center of the Integration of Research, Teaching, and Learning
- 2014 **Hayden Planetarium**, Frontiers Lecture Series, New York City
- 2014 **Tucson Festival of Books**, STEM Literacy Professional Development Presenter
- 2014 **Tucson Festival of Books**, Interview with Ben Bova
- 2014 **Tucson Festival of Books**, Science City, Astrobiology Presenter
- 2014 **Tucson Festival of Books**, Science and Science Fiction Panelist
- 2014 Sonoran Astronomical Society, Speaker, Green Valley, Arizona
- 2014 University of Arizona Museum of Art, Ethics of Space Exploration Panelist

- 2014 University of Arizona “Campaign Kickoff” Faculty Speaker
- 2014 “Starstruck” Pima County Libraries Fundraiser, Presentation
- 2104 Museum of the Southwest, Astrobiology Talk, Midland, Texas
- 2014 **Skeptics Lecture Series**, Speaker, California Institute of Technology, Pasadena
- 2014 Howard Hughes Medical Institute, Professors Competition Presenter, Chevy Chase
- 2014 Arizona Senior Academy, Invited Speaker, Tucson
- 2014 **Cosmos and Creation** Invited and Keynote Lecturer, Loyola University, Baltimore
- 2014 Sydney Observatory, Public Lecture, Sydney, Australia
- 2014 Astronomical Society of the Pacific, Annual Meeting, Science Literacy Panel, San Francisco
- 2014 **NASA/APPEL** “Essentials of Astronomy 16,” Marshall Space Flight Center, Maryland
- 2014 Saguaro Astronomy Club, Phoenix, Invited Speaker
- 2014 **Science for Monks Program**, Geshe Workshop, Dharamsala, India, Lecturer
- 2014 American Astronomical Society **Harlow Shapley Visiting Lecturer** (South Florida College, Sebring, Florida)
- 2014 University of South Florida Humanities Institute “Science and Society,” Invited Keynote Speaker, Tampa, Florida
- 2014 American College of Surgeons, Arizona Chapter, Banquet Speaker, Tucson

Plus numerous talks at local area elementary, middle and high schools; and at Amateur Astronomy clubs in Arizona, California, New Mexico, Texas, Florida, Alabama, Washington, and Canada.

14 Invited Research Presentations

- 1986 Continuum Emission in Active Galactic Nuclei, Kitt Peak National Observatory
- 1987 Superluminal Radio Sources, California Institute of Technology
- 1987 New Directions in Active Galactic Nuclei, ITP, Santa Barbara
- 1989 BL Lac Objects: 10 Years After, Como, Italy
- 1990 Summer Workshop on Stellar Dynamics and Galaxy Formation, Aspen Center for Physics
- 1992 Variability of Blazars, Turku, Finland
- 1993 Sky Surveys: Protostars to Protogalaxies, Caltech, Pasadena
- 1994 The Nature of Compact Objects in Active Galactic Nuclei, 35th Herstmonceux Conference, Cambridge, England
- 1994 Frontiers of Space and Ground-based Astronomy, Noordwijk, Holland
- 1994 European and National Astronomy Meeting, Edinburgh, Scotland
- 1994 The Inspiration of Astronomical Phenomena, Specola Vaticana, Italy
- 1994 Summer Workshop on Clusters of Galaxies, Aspen Center for Physics
- 1994 ESO Workshop on Quasar Absorption Lines, Munich, Germany
- 1995 Astronomical Luminosity Functions, California Institute of Technology
- 1995 Royal Society/Royal Astronomical Society Conference on Low Luminosity Galaxies, Cardiff, Wales
- 1995 IAU Symposium 175 on Extragalactic Radio Sources, Bologna, Italy
- 1996 The Morphology, Dust Content, and Gas-Dust Ratios in Galaxies Meeting, Witwatersrand, South Africa

- 1996 HST and the High Redshift Universe, 37th Herstmonceux Conference, Cambridge, England
1997 Conference on "Inspiration of Astronomical Phenomena" Invited Speaker
1997 Structure and Evolution of the Intergalactic Medium from QSO Absorption Line Systems, Paris, France
1997 The Young Universe, Monte Porzio, Italy
1997 Winter Workshop on Observational Tests of Cosmological Models, Aspen Center for Physics
1998 IAU Colloquium 171 on The Low Surface Brightness Universe, Cardiff, Wales, U.K.
1999 The Inspiration of Astronomical Phenomena II, Malta
2000 Disk Galaxies and Galaxy Disks, Rome, Italy
2001 Quasar Host Galaxies and Environments, Granada, Spain
2001 Intergalactic Gas at Low Redshift, Carnegie Observatories, Pasadena
2001 The Inspiration of Astronomical Phenomena III, Sicily, Italy
2002 Gravitational Lensing, Ringberg Castle, Germany
2002 The Intergalactic Medium at Low Redshift, Boulder, Colorado
2002 Measuring the Universe, Carnegie Centennial Symposium, Pasadena
2003 Guillermo Haro Workshop on AGN Surveys, INAOE, Puebla, Mexico
2003 The Inspiration of Astronomical Phenomena IV, Oxford, England
2004 Conference on "Inspiration of Astronomical Phenomena IV" in Oxford Invited Speaker
2004 HST Legacy Project, COSMOS Team Meeting, New York
2005 QSO Host Galaxies: Environments and Evolution, Groningen University, Netherlands
2005 Observing Dark Energy, ASP Conference, Tucson, Arizona
2005 HST Legacy Project, COSMOS Team Meeting, Kyoto, Japan
2005 Western Humanities Conference, Plenary Speaker, Tucson
2005 Conference on "Inspiration of Astronomical Phenomena V," Chicago, Invited Speaker
2006 Sources and Detection of Dark Matter and Dark Energy in the Universe, UCLA, California
2006 IAU Symposium 238 on Black Holes From Stars to Galaxies, Prague, Czechoslovakia
2006 International Meeting on Gravitation and Cosmology, Santa Clara, Cuba
2006 IAU General Assembly XXXVI, Prague, Czechoslovakia
2006 Star Formation Near and Far, Edinburgh, Scotland
2006 The Inspiration of Astronomical Phenomena V, Chicago, Illinois
2007 Physics and Astrophysics of Supermassive Black Holes, Santa Fe, New Mexico
2007 IAU Symposium 244 on Dark Baryons and Dim Galaxies, Cardiff, Wales
2008 The Interplay Between SMBH, Star Formation & Galaxy Evolution, Aspen Center for Physics
2008 KICP Workshop "Viewing the Universe via the World Wide Web," Chicago, Illinois
2008 Cosmology Across Cultures, Granada, Spain
2009 Astronomy and its Instruments Before and After Galileo, Venice, Italy
2009 Harvesting the Desert: The Universe Between Redshifts 1 and 3, Marseille, France
2009 American Association for the Advancement of Science, "Weird Life," San Francisco
2009 The Inspiration of Astronomical Phenomena VI, Venice, Italy
2009 400th Anniversary of Galileo Celebration, Papal Audience, Rome, Italy
2009 Pontifical Academy Study Week on Astrobiology, Rome, Italy
2010 Formation and Evolution of Black Holes, Aspen Center for Physics
2010 Astrobiology Science Conference (AbSciCon2010), League City, Texas
2010 Aspen Center for Physics, Aspen, Colorado

2010 SETI at 50 Workshop, NRAO, Charlottesville, Virginia
2010 Tracing the Ancestry of Galaxies, IAU Symposium 277, Burkina Faso, Africa
2010 Conference on "Inspiration of Astronomical Phenomena VII," Bath, Invited Speaker
2011 Aspen Center for Physics, Aspen, Colorado
2011 International Conference on Science in Society, Keynote Speaker, Washington, DC
2011 History and Philosophy of Astrobiology, Ven, Sweden
2013 Cosmos and Consciousness I, Invited Speaker, Dharamsala, India
2012 Astrobiology Science Conference (AbSciCon2012), Atlanta, Georgia
2012 NASA Virtual Workshop on the Study of Intelligence in Astrobiology, Tempe, Arizona
2012 Origins of the Expanding Universe, Vesto Slipher Centennial, Flagstaff, Arizona
2012 The Science and Religion Dialog: Past, Present, and Future, Heidelberg, Germany
2012 NASA Astrobiology and Society Focus Group, Participant and Speaker
2012 International Science in Society Conference, Berkeley, California
2013 Conference on "Inspiration of Astronomical Phenomena VIII," New York, Invited Speaker
2013 Celebrity Infinity "Scientific American" Cruise, Invited Speaker
2013 Astrobio 2013 Workshop, Santiago, Chile, Plenary Speaker
2013 Physics Department Colloquium, University of Arizona
2013 Cosmos and Consciousness II, Invited Speaker, Dehradun, India
2013 International Science in Society Conference, Warsaw, Poland
2014 HHMI Professors Competition, Finalist and Presenter, Chevy Chase
2014 Cosmos and Creation, Keynote Speaker, Loyola University, Baltimore, Maryland
2014 Anglo-Australian Observatory Distinguished Visitor, Invited Lecture, Epping, Australia
2014 San Marino Symposium on "The Roots of Motivation for Science and Knowledge," Invited Speaker, San Marino, Italy
2014 Rimini Meeting, "To the Ends of the Earth and Existence," Public Presentation, Rimini, Italy
2014 International Science in Society Conference, Vancouver, Canada

Plus more than 140 research colloquia at astronomy/physics departments and observatories in the United States (California Institute of Technology, Space Telescope Science Institute, Kitt Peak National Observatory, Cerro Tololo Interamerican Observatory, Carnegie Observatories, Dominion Astrophysical Observatory, Smithsonian Astrophysical Observatory, Los Alamos National Lab, Lawrence Livermore National Lab, The UK Joint Astronomy Center, Keck Observatory, AMNH, and the Universities of Virginia, Ohio State, Washington, Columbia, NYU, New Mexico, New Mexico State, Princeton, UCLA, UCSB, UCSD, UC Berkeley, UC Santa Cruz, UC Irvine, Colorado, Texas-Austin, and Texas-Arlington), Canada (Okanagan University, University of British Columbia, Kingston University, McGill University), the United Kingdom (the Royal Observatory Edinburgh, Royal Greenwich Observatory, the Armagh Observatory, and the Universities of Durham, Sussex, Edinburgh, Cambridge, and Cardiff), Australia (Anglo-Australian Observatory and Mount Stromlo Observatory), and North West University, South Africa.

15 Books Authored

- Hartmann, W.H., and Impey, C.D. 1994. **Astronomy: The Cosmic Journey**, 5th Edition (Wadsworth Publishing, ISBN 0-534-21192-5), 728 pages
- Impey, C.D., and Hartmann, W.H. 2000. **The Universe Revealed**, 1st Edition (Brooks Cole Publishing, ISBN 0-534-24894-2), 636 pages
- Impey, C.D. 2007. **The Living Cosmos: Our Search for Life in the Universe**, 1st Edition (Random House, ISBN 978-1-4000-6506-6), 432 pages
- Impey, C.D. 2010. **How It Ends: From You to the Universe**, 1st Edition (Norton, ISBN 978-0-393-06985-3), 352 pages
- Impey, C.D. 2011. **The Living Cosmos: Our Search for Life in the Universe**, Paperback Edition (Cambridge University Press, ISBN 978-0-521-17384-1), 393 pages
- Impey, C.D. 2012. **How It Began: A Time Travelers Guide to the Universe**, 1st Edition (Norton, ISBN 978-0-393-08002-5), 448 pages
- Impey, C.D., and Henry, H. 2013. **Dreams of Other Worlds: The Amazing Story of Unmanned Space Exploration**, 1st Edition (Princeton University Press, ISBN 978-0-691-14753-6), 450 pages
- Impey, C.D. 2014. **Humble Before the Void**, 1st Edition (Templeton Press, ISBN 978-1-59947-392-5), 246 pages
- Impey, C.D. 2015. **Beyond: Our Future in Space**, 1st Edition (Norton, in press)

16 Books Edited

- Davies, J.I, Impey, C.D., and Phillipps, S. 1999. **The Low Surface Brightness Universe: IAU Colloquium 171**, (Astronomical Society of the Pacific, ISBN 1-886733-92-9), 400 pages
- Impey, C.D. 1999. **International Symposium on Astrophysics Research and Science Education**, (University of Notre Dame Press, ISBN 0-268-03155-X), 324 pages
- Impey, C.D., and Petry, C.E. 2003. **Science and Theology: Ruminations on the Cosmos**, (University of Notre Dame Press, ISBN 88-209-6888-6), 165 pages
- Impey, C.D., and Petry, C.E. 2003, **International Symposium on Astrophysics Research and on the Dialogue Between Science and Religion**, (University of Notre Dame Press, ISBN 88-209-6890-8), 322 pages

- Impey, C.D. 2010. **Talking About Life: Conversations on Astrobiology**, (University of Cambridge Press, ISBN 978-0-521-51492-7), 408 pages
- Impey, C.D., Lunine, J., and Funes, J., S.J. 2012. **Frontiers of Astrobiology**, (University of Cambridge Press, ISBN 978-1-107-00641-6), 250 pages
- Impey, C.D., Stoeger, W., and Spitz, A. 2013. **Encountering Life in the Universe: Ethical Foundations and Social Implications of Astrobiology**, (University of Arizona Press, ISBN 978-0-8165-2870-7), 265 pages
- Impey, C.D. 2015. **The Art and Craft of Science Writing**, (Princeton University Press, in preparation)

17 Educational Publications

- [1] Impey, C.D. 1994. **Great Ideas for Teaching Astronomy** (West Publishing), 29 sections included (three subsequent editions)
- [2] Cocke, W.J., Impey, C.D., and Dunlap, J.L. 1994. **A Content-Based Master's Program for Science Teachers**, *The Physics Teacher*, p. 502 (*refereed*)
- [3] Impey, C.D. 1995. **The Search for Life in the Universe: A Humanistic Perspective**, *Vistas in Astronomy*, Vol. 39, p. 553 (*refereed*)
- [4] Impey, C.D. 1996. **Ghost Galaxies in the Cosmos**, *Astronomy Magazine*, November, p. 40
- [5] Impey, C.D. 1998. **Life in the Universe**, *The University Book: An Anthology of Writings from the University of Arizona*, (Simon and Schuster Custom Publishing), p. 283
- [6] Impey, C.D. 1998. **The Unspeakable Act of Creation**, *Mercury Magazine*, Vol. 27, March/April, p. 9
- [7] Impey, C.D. 1999. **Our Quest to the Cosmos**, *The World and I Magazine*, September, p. 160
- [8] Impey, C.D. 2000. **Interactive Teaching Tools for Astronomy**, *Interactive Learning: Vignettes from America's Most Wired Campuses*, (Anker Publishing: Bolton, MA), p. 56
- [9] Impey, C.D. 2000. **The End of Astronomy?**, *Mercury Magazine*, Vol. 29, May/June, p. 34

- [10] Impey, C.D. 2001. **The Size and Shape of the Universe**, in *Proceedings of the Second Conference on the Inspiration of Astronomical Phenomena*, in press
- [11] Impey, C.D. 2001. **Reacting to the Size and Shape of the Universe**, *Mercury Magazine*, Vol. 30, January/February, p. 36
- [12] Impey, C.D. 2001. **Reacting to the Size and Shape of the Universe, Part 2**, *Mercury Magazine*, Vol. 30, March/April, p. 34
- [13] Impey, C.D. 2003, **Truth and Beauty in Cosmology**, in *International Symposium on Astrophysics Research and on the Dialogue Between Science and Religion*, (University of Notre Dame Press), p. 40
- [14] Impey, C.D. 2003. **Does the Universe Have an Aesthetic?**, *Memorie della Societa Astronomica Italiana*, Vol. 73, p. 266 (*refereed*)
- [15] Impey, C.D. 2003. **Truth and Beauty in Cosmology**, *Mercury Magazine*, Vol. 33, p. 20
- [16] Impey, C.D. 2006. **Borders in Astronomy**, *Western Humanities Review*, Volume 60, Issue 2, p. 175 (*refereed*)
- [17] Impey, C.D. 2008. **Exohumanities**, *Western Humanities Review*, Volume LXII, Number 3, p. 98 (*refereed*)
- [18] Impey, C.D. 2008. **How Life Could Thrive on Hostile Worlds**, *Astronomy Magazine*, Volume 36, Number 12, p. 54
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20 Educational Grants Awarded

- [1] National Science Foundation, **A Master of Science Program for Advancing the Science Skills of Middle and Secondary School Teachers**, Co-PI, \$458,475 awarded, (1 October 1989 - 30 September 1992)
- [2] NASA, **The Arizona Space Grant College Consortium, Associate Director**, \$1,105,000 awarded, (1 September 1989 - 31 August 1994)
- [3] NASA Grant Supplement for Education, **Creation of a Science Mentor Program**, PI, \$4,534 awarded, (1 June 1992 - 30 May 1993)

- [4] NASA Training Grant to Eric J. Hooper, **The Radio Properties and Cluster Environments of Optically Selected Quasars**, Co-PI, \$66,000 awarded, (1 *August* 1993 - 31 *July* 1996)
- [5] National Science Foundation, **Research Experience for Undergraduates - A Supplement to Quasar Research**, PI, \$7,154 awarded, (1 *September* 1994 - 31 *August* 1995)
- [6] NASA, **The Arizona Space Grant College Consortium**, Associate Director, \$1,900,000 awarded, (1 *February* 1995 - 31 *January* 2000)
- [7] NASA Education Division, **Development of a Science Mentoring Program**, PI, \$5,898 awarded, (1 *January* 1996 - 31 *December* 1996)
- [8] NASA Education Division, **IDEAS Program, Interactive Computer Tools for the Planetarium**, PI, \$9,900 awarded, (1 *February* 1998 - 31 *July* 1999)
- [9] National Science Foundation, **Astronomy and Science Literacy**, PI, \$59,000 awarded, (1 *October* 1998 - 30 *September* 1999)
- [10] National Science Foundation, **The Creation of Networked Interactive Teaching Tools for Astronomy and Physics**, PI, \$186,021 awarded, (1 *October* 1998 - 30 *September* 2002)
- [11] National Academy of Sciences V.M. Slipper Award, **Networked Interactive Materials for Teaching Astronomy**, PI, \$827 awarded, (1 *September* 1998 - 1 *September* 1999)
- [12] National Science Foundation, **Interactive Computer Tools for the Planetarium**, PI, \$48,921 awarded, (1 *January*, 1999 - 31 *December*, 1999)
- [13] NASA Education Division, IDEAS Program, **An Expert System for Astronomy**, PI, \$25,308 awarded, (1 *September* 2001 - 31 *August*, 2002)
- [14] NASA Hubble Fellowship to Romeel Dave, **Understanding the Evolution of the Intergalactic Medium**, PI, \$229,829 awarded, (1 *November*, 2000 - 31 *October*, 2003)
- [15] NASA Hubble Space Telescope Education/Public Outreach Program, **Data-Driven Web Tools for Teaching Astronomy**, PI, \$39,885 awarded, (1 *August*, 2001 - 31 *July*, 2003)
- [16] National Science Foundation, **Using Technology to Transform Teaching and Learning: Data-Driven Enquiry & Collaborative Learning in Introductory Astronomy Courses**, co-I, \$85,372 awarded, (1 *May*, 2002 - 30 *April*, 2004)
- [17] NASA Long Term Space Astrophysics Education/Public Outreach Program, **Quasars**

- as **Probes**, PI, \$43,132 awarded, (1 *April, 2001 - 31 March, 2005*)
- [18] National Science Foundation, **Distinguished Teaching Scholar: New Technologies for Teaching Introductory Astronomy**, PI, \$304,963 awarded, (1 *June, 2002 - 31 May, 2006*)
 - [19] National Science Foundation, **The CONCAM Undergraduate Education Project**, co-PI, \$18,749 awarded, (1 *August, 2003 - 31 July, 2004*)
 - [20] Internet Technology, Commerce and Design Institute Grant, PI, **The Future Wireless Student**, \$15,000 awarded, (1 *January 2003 - 31 December 2003*)
 - [21] National Science Foundation, **New Collaborative Learning Environments for the Teaching of Astronomy**, PI, \$48,824 awarded, (1 *September, 2002 - 31 August, 2005*)
 - [22] National Science Foundation, Small Grants for Exploratory Research, **Lifelong Learning and the Wireless Internet**, PI, \$129,426 awarded, (1 *July 2005 - 30 June 2007*)
 - [23] National Science Foundation, **The CONCAM Undergraduate Education Project**, co-PI, \$18,749 awarded, (1 *August, 2003 - 31 July, 2006*)
 - [24] NASA, E/PO Program, **Tools for Teaching Astronomy**, PI, \$39,743 awarded, (1 *February 2004 - 31 January 2007*)
 - [25] NASA, Hubble Space Telescope Legacy Outreach Program, **The ACS Mosaic of M51 and the Intersection of Research and Education**, PI, \$45,000 awarded, (1 *December 2005 - 30 November 2007*) 52]
 - [26] The Templeton Foundation, Program for the Constructive Engagement of Science and Religion, Outreach Supplement, **Astrobiology and the Sacred**, PI, \$60,000 awarded, (1 *May, 2004 - 30 April, 2008*)
 - [27] The Templeton Foundation, **Astrobiology and the Sacred: Confronting the Fermi Question**, PI, \$52,800 awarded, (1 *June 2007 – 31 May 2008*)
 - [28] National Science Foundation, Education Center Grant, **Community of Astronomy Teaching Scholars (CATS)**, PI, \$1,999,997 awarded, (1 *September 2007 – 31 August, 2010*)
 - [29] NASA, History of the Scientific Exploration of Earth and Space Program, **Dreams of Other Worlds: NASA and the Vision of Space**, PI, \$246,236 awarded, (21 *June, 2007 – 20 June, 2010*)

- [30] National Science Foundation, **The California-Arizona Minority Partnership for Astronomy Research and Education (CAMPARE)**, co-I, \$395,352 awarded, (14 July, 2009 – 15 July, 2014)
- [31] John Templeton Foundation, **Humble Before the Void: Teaching Cosmology to Buddhist Monks**, PI, \$44,453 awarded, (1 November, 2011 – 31 October, 2012)
- [32] National Science Foundation, **The California-Arizona Minority Partnership for Astronomy Research and Education (CAMPARE)**, co-I, \$45,288 awarded, (15 September, 2013 – 31 August, 2014)
- [33] National Science Foundation, **Investigating the Landscape of Undergraduate Science Literacy**, PI, \$190,369 awarded, (15 September, 2013 – 31 August, 2015)
- [34] Howard Hughes Medical Institute, **Towards a Next Generation Online Science Class**, PI, \$1,000,000 awarded, (1 September, 2014 – 31 August, 2019)

21 Research Grants Awarded

- [1] NASA HEAO-2 Guest Investigator Program, **Blazars and Quasars in a Complete Radio Sample**, CO-IPI, \$7,627 awarded, (1 August 1985 - 31 July 1986)
- [2] NASA IRAS Guest Investigator Program (1985), **Reprocessed IRAS Data for Radio Strong Quasars**, Co-PI, \$24,000 awarded, (1 August 1985 - 31 July 1986)
- [3] NASA IRAS Guest Investigator Program (1986), **IRAS Data for Extragalactic Radio Sources**, Co-PI, \$18,569 awarded, (1 June 1986 - 30 May 1987)
- [4] NSF US-Chinese Cooperative Science Program, **Low Surface Brightness Galaxies and Quasars**, Co-PI, \$46,859 awarded, (1 August 1986 - 31 July 1989)
- [5] NASA SADAP Program, **The Continuum Properties of Strong Radio Sources**, PI, \$20,598 awarded, (1 July 1987 - 31 June 1988)
- [6] National Science Foundation, **QSO Research**, Co-PI, \$97,473 awarded, (1 October 1987 - 30 September, 1989)
- [7] NATO Collaborative Program, **A Study of Radio Galaxy Cores**, PI, \$11,256 awarded, (1 April, 1988 - 31 March, 1990)
- [8] NASA ADP Program, **Continuum Properties of Active Galactic Nuclei**, PI, \$9,000

awarded, (1 July 1988 - 30 June 1989)

- [9] National Science Foundation, **A Study of Galaxy Formation with Near Infrared Imaging**, Co-PI, \$120,500 awarded, (1 November 1988 - 31 October 1991)
- [10] NASA ADP Program, **Infrared Properties of Strong Radio Sources**, PI, \$70,000 awarded, (1 June 1989 - 31 May 1991)
- [11] National Science Foundation, **Quasar Research**, Co-PI, \$258,350 awarded, (1 July 1990 - 30 June 1993)
- [12] National Science Foundation, **The Properties of Low Surface Brightness Galaxies**, PI, \$65,785 awarded, (1 July 1990 - 30 June 1993)
- [13] Dudley Observatory, **The Study of Large Scale Structure at High Redshift**, PI, \$5,000 awarded, (1 October 1990 - 30 September 1991)
- [14] NASA ADP Program, **Emission Mechanisms in Strong Radio Sources**, PI, \$30,000 awarded, (1 June 1991 - 31 May 1992)
- [15] NASA Hubble Space Telescope General Observer Program, Cycle 1, **Optical Spectropolarimetry of Bright Quasars**, PI, \$78,441 awarded, (1 December 1991 - 30 November 1992)
- [16] NASA ROSAT Guest Observer Program, **High Redshift QSOs and the X-ray Background**, PI, \$25,000 awarded, (1 October 1991 - 30 September 1992)
- [17] NASA ADP Program, **ISO Key Project: Exploring the Full Range of Quasar and AGN Properties**, Co-I, \$623,976 awarded, (1 April 1992 - 31 March 1997)
- [18] NASA Hubble Space Telescope General Observer Program Cycle 2, **Optical Spectropolarimetry of Bright Quasars**, PI, \$55,678 awarded, (1 August 1992 - 31 July 1993)
- [19] NASA Hubble Space Telescope General Observer Program, Cycle 2, **Imaging of BL Lac Host Galaxies and Environments**, PI, \$85,000 awarded, (1 August 1992 - 31 July 1993)
- [20] NASA Hubble Space Telescope General Observer Program, Cycle 3, **A Study of the Arcsecond Gravitational Lens 1422+321**, PI, \$81,920 awarded, (1 August 1993 - 31 July 1994)
- [21] NATO Collaborative Program, **A Survey for Bright and High Redshift Quasars**, PI, \$4,620 awarded, (1 August, 1993 - 31 July, 1995)

- [22] NASA Hubble Space Telescope General Observer Program, Cycle 4, **Host Galaxies and Cluster Environments of Quasars as a Function of Quasar Optical and Radio Luminosity**, PI, \$94,512 awarded, (1 *August* 1993- 31 *July* 1994)
- [23] NASA Hubble Space Telescope General Observer Program, Cycle 4, **A New Size Constraint of Lyman-alpha Clouds**, Co-I, \$77,400 awarded, (1 *August* 1993 - 31 *July* 1994)
- [24] National Science Foundation, **Quasar Research**, Co-PI, \$368,557 awarded, (15 *May* 1994 - 30 *April* 1997)
- [25] NASA Hubble Space Telescope Archive Program, Cycle 5, **Ultraviolet to Far Infrared Spectral Energy Distributions of Quasars and Active Galaxies**, co-I, \$57,700 awarded, (1 *May* 1995 - 30 *April* 1996)
- [26] NASA Hubble Space Telescope General Observer Program, Cycle 5, **Host Galaxies and Environments of BL Lac Objects**, co-I, \$4,230 awarded, (1 *December* 1995 - 30 *November* 1996)
- [27] NASA Hubble Space Telescope General Observer Program, Cycle 5, **The Relationship between Galaxies and Lyman-Alpha Absorbers at Low Redshift**, PI, \$90,631 awarded, (1 *March* 1996 - 28 *February* 1997)
- [28] NASA Hubble Space Telescope General Observer Program, Cycle 5, **The Stellar Populations of Low Surface Brightness Galaxies**, PI, \$36,838 awarded, (1 *March* 1996 - 28 *February* 1997)
- [29] NASA Hubble Space Telescope General Observer Program, Cycle 5, **Measuring the Characteristic Size of Lyman-Alpha Clouds**, co-PI, \$59,588 awarded, (1 *March* 1996 - 28 *February* 1997)
- [30] NASA Hubble Space Telescope General Observer Program, Cycle 6, **Imaging of the Gravitational Lens System 1422+231**, PI, \$39,724 awarded, (1 *October* 1996 - 30 *September* 1997)
- [31] NASA Hubble Space Telescope General Observer Program, Cycle 6, **Measuring the Characteristic Size of Lyman-Alpha Clouds**, co-PI, \$56,782 awarded, (1 *October* 1996 - 30 *September* 1997)
- [32] NASA Hubble Space Telescope Archive Program, Hubble Deep Field, **Absorption Line Probes of the Hubble Deep Field**, PI, \$71,300 awarded, (1 *June* 1996 - 31 *May* 1997)
- [33] National Science Foundation, **Low Surface Brightness Galaxies**, PI, \$152,696 awarded, (1 *June* 1997 - 31 *May* 2000)

- [34] NASA Hubble Space Telescope General Observer Program, Cycle 7, **Survey of Gravitational Lenses as Cosmological Tools**, co-PI, \$84,160 awarded, (1 *November* 1997 - 31 *October* 1999)
- [35] NASA Hubble Space Telescope General Observer Program, Cycle 7, **Survey of Gravitational Lenses as Cosmological Tools II**, co-PI, \$21,900 awarded, (1 *April* 1998 - 31 *March* 2000)
- [36] National Science Foundation, **Quasar Research**, co-PI, \$205,500 awarded, (1 *July* 1998 - 31 *July* 2002)
- [37] NASA Hubble Space Telescope Archive Program, Cycle 7, **Lyman-alpha Absorbers and Large Scale Structure**, PI, \$113,098 awarded, (1 *May* 1998 - 30 *April* 2000)
- [38] NASA Hubble Space Telescope General Observer Program, Cycle 8, **Lensed Quasar Hosts at High Redshift**, PI, \$73,620 awarded, (1 *October* 1999 - 30 *September* 2001)
- [39] NASA Hubble Space Telescope General Observer Program, Cycle 8, **The Coherence Length of Lyman-alpha Absorbers at $z = 1$** , PI, \$100,326 awarded, (1 *July* 1999 - 30 *June* 2001)
- [40] NASA Grant Supplement, HST Cycle 5 GO Program, **The Distribution and Evolution of Lyman-alpha Forest Cloud Sizes**, co-PI, \$34,365 awarded, (1 *October* 1999 - 30 *September* 2001)
- [41] NASA Long Term Space Astrophysics Program, **Quasars as Probes**, PI, \$575,954 awarded, (1 *January* 2000 - 31 *December* 2005)
- [42] NASA Hubble Space Telescope General Observer Program, Cycle 9, **The Distribution and Evolution of Lyman-Alpha Forest Cloud Sizes**, co-PI, \$42,470 awarded, (1 *April* 2001 - 31 *March* 2002)
- [43] NASA Hubble Space Telescope General Observer Program, Cycle 10, **Quasar Absorbers and Large Scale Structure**, PI, \$154,408 awarded, (1 *October* 2001 - 30 *September* 2002)
- [44] NASA Hubble Space Telescope General Observer Program, Cycle 10, **Host Galaxies of Gravitationally Lensed Quasars**, PI, \$135,776 awarded, (1 *October* 2001 - 30 *September* 2002)

- [45] NASA Hubble Space Telescope General Observer Program, Cycle 10, **HST Imaging of Gravitationally Lenses**, co-I, \$29,059 awarded, (1 *October 2001 - 30 September 2002*)
- [46] The Templeton Foundation, **Astrophysics Research and the Dialog Between Science and Religion**, co-PI, \$42,000 awarded, (1 *August 2001 - 31 August 2002*)
- [47] NASA Hubble Space Telescope General Observer Program, Cycle 11, **The Evolution of Galaxy Structure from 10,000 Galaxies with $0.1 < z < 1.2$** , co-I, \$36,088 awarded, (1 *October 2002 - 30 September 2004*)
- [48] NASA Hubble Space Telescope Treasury Program, Cycle 12, **The COSMOS 2-Degree ACS Survey**, co-I, \$71,083 awarded, (1 *September 2003 - 31 August 2004*)
- [49] NASA HST GO Program, Cycle 12, **HST Imaging of Gravitational Lenses**, co-I, \$68,592 awarded, (1 *August 2003 - 31 July 2004*)
- [50] NASA Hubble Space Telescope General Observer Program, Cycle 13, **Coevolution of Galaxies and Black Holes**, co-I, \$78,195 awarded, (1 *July 2004 - 30 June 2005*)
- [51] NASA XMM-Newton General Observer Program, Cycle 3, **Lensing Cluster in the Gravitational Lens Candidate 1435+007**, PI, \$44,000 awarded, (1 *October 2004 - 30 September 2005*)
- [52] Templeton Foundation, Lecture Program for the Constructive Engagement of Science and Religion, **Astrobiology and the Sacred**, PI, \$480,000 awarded, (1 *May, 2004 - 30 April, 2008*)
- [53] NASA Hubble Space Telescope Legacy Survey Program, Cycle 13, **HST Spectroscopy of the Low Redshift Intergalactic Medium**, PI, \$121,771 awarded, (1 *November 2005 - 31 October 2007*)
- [54] NASA XMM-Newton General Observer Program, Cycle 4, **Evolution of AGN in the Cosmic Web: The XMM-Newton COSMOS Survey**, co-I, \$10,320 awarded, (1 *January 2006 - 31 December 2006*)
- [55] NASA Spitzer Space Telescope General Observer Program, Cycle 2, **The Spitzer Deep Survey of the HST COSMOS 2-Degree Field**, co-I, \$27,719 awarded, (1 *March 2006 - 30 June 2009*)
- [56] NASA Spitzer Space Telescope General Observer Program, Cycle 3, **S-COSMOS: The MIPS Deep Survey of the HST COSMOS 2-Degree Field**, co-I, \$30,876 awarded, (1 *August 2006 - 30 July 2009*)

- [57] NASA XMM-Newton General Observer Program, Cycle 4, **Completion of the XMM-Newton COSMOS Wide-Field Survey**, co-I, \$10,000 awarded, (1 July 2008 – 30 June 2009)
- [58] NASA, **Breaking Quasar Clustering Degeneracies with AGN and Galaxies from the Multi-Wavelength COSMOS Survey**, co-I, \$33,813 awarded, (1 January 2008 – 31 December 2009)
- [59] National Science Foundation, **Probing the Limits of Nuclear Activity in COSMOS**, PI, \$269,064 awarded, (1 July 2009 – 30 June 2013)