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EDUCATION

- 1999 Ph.D., Astronomy, California Institute of Technology,
“Brown Dwarf Companions of Nearby Stars,” Advisor: S. R. Kulkarni
- 1994 B.A., Physics, Columbia College, Columbia University

AWARDS AND HONORS

- 2009 Blavatnik Award for Young Scientists, New York Academy of Sciences
- 2003 Carter Memorial Lecturer, Carter Observatory, Wellington, New Zealand
- 2002-2004 Kalbfleisch Research Fellowship, American Museum of Natural History
- 2002 National Academies of Science, Beckman Frontiers of Science, Invited Participant
- 1999-2002 Hubble Postdoctoral Research Fellowship
- 1994-1997 National Science Foundation Graduate Research Fellowship
- 1990-1994 I.I. Rabi Science Scholar, Columbia University
- 1990 Westinghouse Science Competition, Honorable Mention
- 1989 New York Academy of Sciences Science Writing Competition, First Place

EMPLOYMENT

- 2008-present Associate Curator, Department of Astrophysics, American Museum of Natural History
- 2008-present Adjunct Associate Professor, Department of Astronomy, Columbia University
- 2004-2008 Assistant Curator, Department of Astrophysics, American Museum of Natural History
- 2004-2008 Adjunct Assistant Professor, Department of Astronomy, Columbia University
- 2002-2004 Research Fellow, American Museum of Natural History
- 1999-2002 Hubble Research Fellow, University of California-Berkeley, AMNH
- 1994-1997 Graduate Research Fellow, California Institute of Technology, with Kulkarni
- 1993-1994 Instructor, Barnard College Physics Department, History of Physics
- 1993-1995 Instructor, Columbia University Summer Program for High School Students
- 1993 Summer Research Student, Nat’l Astronomy and Ionosphere Center, Arecibo, PR
- 1992 Summer Research Student, Nat’l Radio Astronomy Obs., Very Large Array
- 1991-1994 Research Assistant, Columbia Astrophysics Laboratory, Advisor: D. J. Helfand.
- 1988-1991 Research Assistant, NASA Goddard Institute for Space Studies (GISS)
- 1988 New York Academy of Sciences Summer Student: NASA GISS

MEMBERSHIPS

American Astronomical Society

SPIE International Society for Optical Engineering

APPOINTMENTS AND ELECTED POSITIONS

- Visiting Scientist, Institute of Astronomy, Cambridge University, 2004, 2006, 2010
- Secretary, Senate of the Scientific Staff, American Museum of Natural History, 2008-2010
- Vice Chair, Senate of the Scientific Staff, American Museum of Natural History, 2010-2012

REFEREED PUBLICATIONS

Refereed Journal Articles:

1. “A Data Cube Extraction Pipeline for a Coronagraphic Integral Field Spectrograph” by Zimmerman, N., D. Brenner, B. R. Oppenheimer, I. R. Parry, S. Hinkley, S. Hunt, & R. Roberts. 2011. *Publications of the Astronomical Society of the Pacific*, 123: 746. (June 2011).
2. “Apodized Pupil Lyot Coronagraphs for Arbitrary Apertures. III. Quasi-achromatic Solutions” by Soummer, R., A. Sivaramakrishnan, L. Pueyo, B. Macintosh, & B. R. Oppenheimer. 2011. *The Astrophysical Journal*, 729: 144 (March 2011). [3]
3. “Speckle Suppression with the Project 1640 Integral Field Spectrograph” by Crepp, J. R., L. Pueyo, D. Brenner, B. R. Oppenheimer, N. Zimmerman, S. Hinkley, I. Parry, D. King, G. Vasisht, C. Beichman, L. Hillenbrand, R. Dekany, M. Shao, R. Burruss, L. C. Roberts, A. Bouchez, J. Roberts, & R. Soummer. 2011. *The Astrophysical Journal*, 729: 132 (March 2011).
4. “A New High Contrast Imaging Program at Palomar Observatory” by Hinkley, S., B. R. Oppenheimer, N. Zimmerman, D. Brenner, I. R. Parry, J. R. Crepp, G. Vasisht, E. Ligon, D. King, R. Soummer, A. Sivaramakrishnan, C. Beichman, M. Shao, L. C. Roberts, A. Bouchez, R. Dekany, L. Pueyo, J. E. Roberts, T. Lockhart, C. Zhai, C. Shelton, & R. Burruss. 2011. *Publications of the Astronomical Society of the Pacific*, 123: 74-86 (January 2011).
5. “Establishing α Oph as a Prototype Rotator: Improved Astrometric Orbit” by Hinkley, S., J. D. Monnier, B. R. Oppenheimer, L. C. Roberts, M. Ireland, N. Zimmerman, D. Brenner, I. R. Parry, F. Martinache, O. Lai, R. Soummer, A. Sivaramakrishnan, C. Beichman, L. Hillenbrand, M. Zhao, J. P. Lloyd, D. Bernat, G. Vasisht, J. R. Crepp, L. Pueyo, M. Shao, M. D. Perrin, D. L. King, A. Bouchez, J. E. Roberts, R. Dekany, & R. Burruss. 2011. *The Astrophysical Journal*, 726: 104 (January 2011).
6. “The Lyot Project Direct Imaging Survey of Substellar Companions: Statistical Analysis and Information from Nondetections”, by Leconte, Jeremy; Soummer, Remi; Hinkley, Sasha; Oppenheimer, Ben R.; Sivaramakrishnan, Anand; Brenner, Douglas; Kuhn, Jeffrey; Lloyd, James P.; Perrin, Marshall D.; Makidon, Russell; Roberts, Lewis C.; Graham, James R.; Simon, Michal; Brown, Robert A.; Zimmerman, Neil; Chabrier, Gilles; Baraffe, Isabelle; *The Astrophysical Journal*, Vol. 716, pp. 1551-1565 (June 2010).
7. “Discovery and Characterization of a Faint Stellar Companion to the A3V Star ζ Virginis” by Hinkley, Sasha; Oppenheimer, Ben R.; Brenner, Douglas; Zimmerman, Neil; Roberts, Lewis C.; Parry, Ian R.; Soummer, Rémi; Sivaramakrishnan, Anand; Simon, Michal; Perrin, Marshall D.; King, David L.; Lloyd, James P.; Bouchez, Antonin; Roberts, Jennifer E.; Dekany, Richard; Beichman, Charles; Hillenbrand, Lynne; Burruss,

- Rick; Shao, Michael; Vasisht, Gautam; *The Astrophysical Journal*, Vol. 712, pp. 421-428 (March 2010).
8. “Imaging Young Giant Planets From Ground and Space” by Beichman, Charles A.; Krist, John; Trauger, John T.; Greene, Tom; Oppenheimer, Ben; Sivaramakrishnan, Anand; Doyon, René; Boccaletti, Anthony; Barman, Travis S.; Rieke, Marcia; *The Publications of the Astronomical Society of the Pacific*, Vol. 122, pp. 162-200 (February 2010).
 9. “Parallactic Motion for Companion Discovery: An M-Dwarf Orbiting Alcor” by Zimmerman, Neil; Oppenheimer, Ben R.; Hinkley, Sasha; Brenner, Douglas; Parry, Ian R.; Sivaramakrishnan, Anand; Hillenbrand, Lynne; Beichman, Charles; Crepp, Justin R.; Vasisht, Gautam; Roberts, Lewis C.; Burruss, Rick; King, David L.; Soummer, Rémi; Dekany, Richard; Shao, Michael; Bouchez, Antonin; Roberts, Jennifer E.; Hunt, Stephanie; *The Astrophysical Journal*, Vol. 709, pp. 733-740 (February 2010).
 10. “High-Contrast Observations in Optical and Infrared Astronomy” by Oppenheimer, Ben R.; Hinkley, Sasha; *Annual Review of Astronomy & Astrophysics*, Vol. 47, pp.253-289 (September 2009).
 11. “Speckle Suppression Through Dual Imaging Polarimetry, and a Ground-based Image of the HR 4796A Circumstellar Disk” by Hinkley, Sasha; Oppenheimer, Ben R.; Soummer, Rémi; Brenner, Douglas; Graham, James R.; Perrin, Marshall D.; Sivaramakrishnan, Anand; Lloyd, James P.; Roberts, Lewis C.; Kuhn, Jeffrey; *The Astrophysical Journal*, Vol. 701, pp. 804-810 (August 2009).
 12. “A Search for J-Band Variability in Late-L and T Brown Dwarfs” by Clarke, F. J.; Hodgkin, S. T.; Oppenheimer, B. R.; Robertson, J; Haubois, X.; *Monthly Notices of the Royal Astronomical Society*, Vol. 386, pp. 2009-2014 (June 2008).
 13. “The Solar-System-Scale Disk around AB Aurigae” by Oppenheimer, B. R.; Brenner, D., Hinkley, S.; Zimmerman, N.; Sivaramakrishnan, A.; Soummer, R.; Kuhn, J.; Graham, J. R.; Perrin, M.; Lloyd, J. P.; Roberts, L. C. Jr.; Harrington, D. M.; *The Astrophysical Journal*, Vol. 679, pp. 1574-1587 (June 2008).
 14. “The Gemini Deep Planet Survey” by Lafrenière, D.; Doyon, R.; Marois, C.; Nadeau, D.; Oppenheimer, B. R.; Roche, P. F.; Rigaut, F.; Graham, J. R.; Jayawardhana, R.; Johnstone, D.; Kalas, P. G.; Macintosh, B.; Racine, R.; *The Astrophysical Journal*, Vol. 670, pp. 1367-1390 (December 2007).
 15. “Trigonometric parallaxes of high velocity halo white dwarf candidates” by Ducourant, C.; Teixeira, R.; Hambly, N. C.; Oppenheimer, B. R.; Hawkins, M. R. S.; Rapaport, M.; Modolo, J.; Lecampion, J. F.; *Astronomy and Astrophysics*, Vol. 470, pp. 387-394 (July 2007).
 16. “The Lyot Project: status and results” by Sivaramakrishnan, Anand; Oppenheimer, Ben R.; Hinkley, Sasha; Brenner, Douglas; Soummer, Rémi; Mey, Jacob L.; Lloyd, James P.; Perrin, Marshall D.; Graham, James R.; Makidon, Russell B.; Roberts, Lewis C., Jr.; Kuhn, Jeffrey R.; *Comptes Rendus Physique*, Vol. 8, pp. 355-364 (April 2007).
 17. “Adaptive optics for direct detection of extrasolar planets: the Gemini Planet Imager” by Macintosh, Bruce; Graham, James; Palmer, David; Doyon, Rene; Gavel, Don; Larkin, James; Oppenheimer, Ben; Saddlemyer, Leslie; Wallace, J. Kent; Bauman, Brian;

- Erikson, Darren; Poyneer, Lisa; Sivaramakrishnan, Anand; Soummer, Rémi; Veran, Jean-Pierre; *Comptes Rendus Physique*, Vol. 8, pp. 365-373 (April 2007).
18. “Temporal Evolution of Coronagraphic Dynamic Range and Constraints on Companions to Vega” by S. Hinkley, B. R. Oppenheimer, R. Soummer, A. Sivaramakrishnan, L. C. Roberts, Jr., J. Kuhn, R. B. Makidon, M. D. Perrin, J. P. Lloyd, K. Kratter, D. Brenner, *Astrophysical Journal*, Vol. 654, pp. 633-640 (January 2007).
 19. “The Challenges of Coronagraphic Astrometry” by A. P. Digby, S. Hinkley, B. R. Oppenheimer, A. Sivaramakrishnan, J. P. Lloyd, M. D. Perrin, L. C. Roberts, Jr., R. Soummer, D. Brenner, R. B. Makidon, M. Shara, J. Kuhn, J. Graham, P. Kalas, L. Newburgh, *Astrophysical Journal*, Vol. 650, pp. 484-496 (October 2006).
 20. “Astrometry and Photometry with Coronagraphs” by A. Sivaramakrishnan and B. R. Oppenheimer, *Astrophysical Journal*, Vol. 647, pp. 620-629 (August 2006).
 21. “Low-Order Aberrations in Band-Limited Lyot Coronagraphs” by A. Sivaramakrishnan, R. Soummer, A. V. Sivaramakrishnan, J. P. Lloyd, B. R. Oppenheimer, R. B. Makidon, *Astrophysical Journal*, Vol. 634, pp. 1416-1422 (December 2005).
 22. “Coronagraphic search for brown dwarfs and planets around nearby stars” by T. Nakajima, J.-I. Morino, T. Tsuji, H. Suto, M. Ishii, M. Tamura, M. Fukagawa, K. Murakawa, S. Miyama, H. Takami, N. Takato, S. Oya, S. Hayashi, T. Kudo, Y. Itoh, Y. Oasa and B. R. Oppenheimer, *Astronomische Nachrichten*, Vol. 326 (10), pp. 952-957 (December 2005).
 23. “Adaptive Optics Photometry and Astrometry of Binary Stars” by L. C. Roberts, Jr., N. H. Turner, L. W. Bradford, T. A. ten Brummelaar, B. R. Oppenheimer, J. R. Kuhn, K. Whitman, M. D. Perrin, J. R. Graham, *Astronomical Journal*, Vol. 130, pp. 2262-2271 (November 2005).
 24. “An Analysis of Fundamental Waffle Mode in Early AEOS Adaptive Optics Images” by R. B. Makidon, A. Sivaramakrishnan, M.D. Perrin, L.C. Roberts, Jr., R. Soummer, B.R. Oppenheimer, and J.R. Graham, *Publications of the Astronomical Society of the Pacific*, Vol. 117, pp. 831-846 (August 2005).
 25. “Polarization Effects in Reflecting Coronagraphs for White Light Applications in Astronomy” by J. B. Breckinridge and B. R. Oppenheimer, *The Astrophysical Journal*, Vol. 600, pp. 1091-1098 (January 2004).
 26. “Cool White Dwarfs Revisited: New Spectroscopy and Photometry” by S. Salim, R. M. Rich, B. M. Hansen, L. V. E. Koopmans, B. R. Oppenheimer, R. D. Blandford, *The Astrophysical Journal*, Vol. 601, pp. 1075-1087 (February 2004).
 27. “The Structure of High Strehl-Ratio Point Spread Functions” by M. D. Perrin, A. Sivaramakrishnan, R. B. Makidon, B. R. Oppenheimer, J. R. Graham, *The Astrophysical Journal*, Vol. 596, pp. 702-712 (October 2003).
 28. “A Mini-Survey for Variability in Early L Dwarfs” by F. J. Clarke, B. R. Oppenheimer and C. G. Tinney, *Monthly Notices of the Royal Astronomical Society*, Vol. 335, pp. 1158-1162 (October 2002).

29. "The Potential of Differential Astrometric Interferometry from the High Antarctic Plateau" by J. P. Lloyd, B. R. Oppenheimer, J. R. Graham, *Publications of the Astronomical Society of Australia*, Vol. 19, pp. 318-322 (2002).
30. "Behavior of Remnant Speckles in an Adaptively Corrected Imaging System" by E. E. Bloemhof, R. G. Dekany, M. Troy and B. R. Oppenheimer, *The Astrophysical Journal Letters*, Vol. 558, pp. L71-L74 (September 2001).
31. "White Dwarfs and Dark Matter - Response to Technical Comments" by B. R. Oppenheimer, N. C. Hambly, A. P. Digby, S. T. Hodgkin, D. Saumon, *Science*, Vol. 292, pp. U3-U6 (June 2001).
32. "Direct Detection of Galactic Halo Dark Matter" by B. R. Oppenheimer, N. C. Hambly, A. P. Digby, S. T. Hodgkin, and D. Saumon, *Science*, Vol. 292, pp. 698-702 (March 2001).
33. "Coronagraphic Survey for Companions of Stars within 8pc" by B. R. Oppenheimer, D. A. Golimowski, S. R. Kulkarni, K. Matthews, T. Nakajima, M. Creech-Eakman, and S. T. Durrance, *The Astronomical Journal*, Vol. 121, pp. 2189-2211 (April 2001).
34. "Observations of Ultracool White Dwarfs" by B. R. Oppenheimer, D. Saumon, S. T. Hodgkin, R. F. Jameson, N. C. Hambly, G. Chabrier, A. V. Filippenko, A. L. Coil and M. E. Brown, *The Astrophysical Journal*, Vol. 550, pp. 448-456 (March 2001).
35. "Tests of the Accelerating Universe with Near-Infrared Observations of a High-Redshift Type IA Supernova" by A. G. Riess et al. *The Astrophysical Journal*, Vol. 536, pp. 62-67 (June 2000).
36. "Infrared spectrum of an extremely cool white-dwarf star" by S. T. Hodgkin, B. R. Oppenheimer, N. C. Hambly, R. F. Jameson, S. J. Smartt, I. A. Steele, *Nature*, Vol. 403, pp. 57-59 (January 2000).
37. "The Visual Orbit of 64 Piscum" by A. Boden et al., *The Astrophysical Journal*, Vol. 527, pp. 360-368 (December 1999).
38. "The Spectrum of the Brown Dwarf Gliese 229B" by B. R. Oppenheimer, S. R. Kulkarni, K. Matthews and M. H. van Kerkwijk, *The Astrophysical Journal*, Vol. 502, pp. 932-943 (August 1998).
39. "Wide Field Planetary Camera 2 Observations of Brown Dwarf Gliese 229B: Optical Colors and Orbital Motion" by D. A. Golimowski, C. J. Burrows, S. R. Kulkarni, B. R. Oppenheimer, and R. A. Brukardt, *Astronomical Journal*, Vol. 115, pp. 2579-2586 (June 1998).
40. "A Survey of the Einstein IPC Database for Extended X-Ray Sources" by B. R. Oppenheimer, D. J. Helfand, E. J. Gaidos, *Astronomical Journal*, Vol. 113, pp. 2134-2146 (June 1997).
41. "Lithium in Very Low-Mass Stars in the Pleiades" by B. R. Oppenheimer, G. Basri, T. Nakajima and S. R. Kulkarni, *Astronomical Journal*, Vol. 113, pp. 296-305 (January 1997).

42. “Spectral Energy Distribution and Bolometric Luminosity of the Cool Brown Dwarf Gliese 229B” by K. Matthews, T. Nakajima, S. R. Kulkarni and B. R. Oppenheimer, *Astronomical Journal*, Vol. 112, pp. 1678-1682 (October 1996).
43. “Near IR spectrum of the cool brown dwarf GL 229B” by B. R. Oppenheimer, S. R. Kulkarni, K. Matthews, T. Nakajima, *Science*, Vol. 270, pp. 1478-1479 (December 1995).
44. “Discovery of a cool brown dwarf” by T. Nakajima, B. R. Oppenheimer, S. R. Kulkarni, D. A. Golimowski, S. T. Durrance, K. Matthews, *Nature*, Vol. 378, pp. 463-465 (November 1995).
45. “Detection of a very low mass companion to the astrometric binary Gliese 105A” by D. A. Golimowski, T. Nakajima, S. R. Kulkarni, B. R. Oppenheimer, *Astrophysical Journal Letters*, Vol. 444, pp. L101-L104 (May 1995).
46. “Test of Unified Schemes Using Jet Opening Angles” by B. R. Oppenheimer and J. A. Biretta, *Astronomical Journal*, Vol. 107, pp. 892-903 (March 1994).

Patents

1. “Telescope Accessory-Coronagraph,” Ben R. Oppenheimer and Michael Shara, Inventors; American Museum of Natural History, Assignee; United States Patent Office, Patent Number 7,130,051 B2, December 16, 2003-December 15, 2026, awarded October 16, 2006.
2. “Astrometry and Photometry with Coronagraphs” by Anand Sivaramakrishnan and Ben R. Oppenheimer, Inventors; American Museum of Natural History, Assignee, United States Patent Office, Patent Number 7,777,943, August 17, 2010-March 1, 2027, Awarded August 17-2010.
3. “Spectroscopy of Exoplanets from a Ground-Based Telescope ,” Ben R. Oppenheimer, Inventor; American Museum of Natural History, Assignee, United States Patent Office, Patent Number 7,852,555, April 20, 2007-April 19,2027, awarded December 14, 2010.

Book Chapters

1. “Direct Imaging of Exoplanets” by Wesley A. Traub and Ben R. Oppenheimer in *Exoplanets*, S. Seager, ed. (Tucson: University of Arizona Press), 2010, p.111-156.
2. “Direct Detection of Exoplanets” by J.-L. Beuzit, D. Mouillet, B. R. Oppenheimer, J. D. Monnier, in *Protostars and Planets V*, B. Reipurth, D. Jewitt, K. Keil, eds. (Tucson: University of Arizona Press), Sec. 7, Chap. 9, pp. 129-144 (April 2007). Invited review.
- 3-6. *Terrestrial Planet Finder Coronagraph Science and Technology Definition Report*, ed. M. Levine, S. Shaklan, J. Kasting (NASA/JPL Publication 06-155). First Author, Chapters 1.1 (Introduction to Science Requirements), 1.2 (Definition of Scientific Terms), Co-author Chapters 1.3 (Science Objectives), 1.4 (Specific Science Requirements). (January 2007).

- 7-9. *Navigator Program: The Science of and Search for Habitable Planets*, ed. W. Traub, S. Unwin, P. Lawson (NASA/JPL Publication 06-131). First Author of Chapter 1 (Introduction to Exoplanetary Science) and co-author of Chapters 2 (The Search for Earth-Like Planets) and 3 (Frequency of Terrestrial Planets). (December 2006)
10. “Imaging Exoplanets: The Role of Small Telescopes” by B. R. Oppenheimer, A. Sivaramakrishnan and R. B. Makidon in *The Future of Small Telescopes*, Terry Oswalt, ed., Vol. III, p. 155 (Dordrecht, The Netherlands: Kluwer Academic Publishers; 2003). Invited review.
11. “Searches for Galactic Halo Remnants” by N. C. Hambly and B. R. Oppenheimer, in *The Future of Small Telescopes*, Terry Oswalt, ed., Vol. III, p. 295 (Dordrecht, The Netherlands: Kluwer Academic Publishers; 2003). Invited review.
12. “Brown Dwarfs” by B. R. Oppenheimer, S. R. Kulkarni and J. R. Stauffer, in *Protostars and Planets IV*, V. Mannings, A. Boss and S. Russell, eds. (Tucson: University of Arizona Press; 1999). Invited review.

SPIE Papers

SPIE papers are instrumentation papers. While not anonymously refereed, they are refereed by the editors of the volume (who are experts in the field) and are full, final references, sometimes widely cited, in the field of astronomical instrumentation.

1. “Imaging polarimetry with the Gemini Planet Imager.” Perrin, M. D., J. R. Graham, J. E. Larkin, S. Wiktorowicz, J. Maire, S. Thibault, M. P. Fitzgerald, R. Doyon, B. A. Macintosh, D. T. Gavel, B. R. Oppenheimer, D. W. Palmer, L. Saddlemyer, & J. K. Wallace. 2010. *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, 7736: 77365R-77365R-9.
2. “Gemini Planet Imager coronagraph testbed results.” Sivaramakrishnan, A., R. Soummer, B. R. Oppenheimer, G. L. Carr, J. L. Mey, D. Brenner, C. W. Mandeville, N. Zimmerman, B. A. Macintosh, J. R. Graham, L. Saddlemyer, B. Bauman, A. Carlotti, L. Pueyo, P. G. Tuthill, C. Dorrer, R. Roberts, & A. Greenbaum. 2010. *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series* 7735: 773586-773586-12.
3. “Data reduction pipeline for the Gemini Planet Imager.” Maire, J., M. D. Perrin, R. Doyon, E. Artigau, J. Dunn, D. T. Gavel, J. R. Graham, D. Lafreniere, J. E. Larkin, J.-F. Lavigne, B. A. Macintosh, C. Marois, B. Oppenheimer, D. W. Palmer, L. A. Poyneer, S. Thibault, & J.-P. Veran. 2010. *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series* 7735: 773531-773531-11.
4. “Calibrating IR optical densities for the Gemini Planet Imager extreme adaptive optics coronagraph apodizers” by Sivaramakrishnan, Anand; Soummer, Rémi; Carr, G. Lawrence; Dorrer, Christophe; Bolognesi, Allen; Zimmerman, Neil; Oppenheimer, Ben R.; Roberts, Robin; Greenbaum, Alexandra, in *Techniques and Instrumentation for Detection of Exoplanets IV*, Shaklan, Stuart B., ed., *Proceedings of the SPIE*, Vol. 7440, pp. 74401C-74401C-10 (August 2009).
5. “The Gemini Planet Imager coronagraph testbed” by Soummer, Rémi; Sivaramakrishnan, Anand; Oppenheimer, Ben R.; Roberts, Robin; Brenner, Douglas; Carlotti, Alexis; Pueyo, Laurent; Macintosh, Bruce; Bauman, Brian; Saddlemyer, Les; Palmer, David; Erickson, Darren; Dorrer, Christophe; Caputa, Kris; Marois, Christian; Wallace, Kent;

- Griffiths, Emily; Mey, Jacob, in *Techniques and Instrumentation for Detection of Exoplanets IV*, Shaklan, Stuart B., ed., *Proceedings of the SPIE*, Vol. 7440, pp. 74400R-74400R-17 (August 2009).
6. “Testing the APLC on the LAO ExAO testbed” by Thomas, Sandrine J.; Soummer, Rémi; Dillon, Daren; Macintosh, Bruce; Evans, Julia W.; Gavel, Donald; Sivaramakrishnan, Anand; Marois, Christian; Oppenheimer, Ben R., in *Adaptive Optics Systems*, Hubin, Norbert; Max, Claire E.; Wizinowich, Peter L., eds., *Proceedings of the SPIE*, Vol. 7015, pp. 70156I-70156I-11 (July 2008).
 7. “A new integral field spectrograph for exoplanetary science at Palomar” by Hinkley, Sasha; Oppenheimer, Ben R.; Brenner, Douglas; Parry, Ian R.; Sivaramakrishnan, Anand; Soummer, Remi; King, David, in *Adaptive Optics Systems*, Hubin, Norbert; Max, Claire E.; Wizinowich, Peter L., eds., *Proceedings of the SPIE*, Vol. 7015, pp. 701519-701519-10 (July 2008).
 8. “The Gemini Planet Imager: from science to design to construction” by Macintosh, Bruce A.; Graham, James R.; Palmer, David W.; Doyon, René; Dunn, Jennifer; Gavel, Donald T.; Larkin, James; Oppenheimer, Ben; Saddlemyer, Les; Sivaramakrishnan, Anand; Wallace, J. Kent; Bauman, Brian; Erickson, Darren A.; Marois, Christian; Poyneer, Lisa A.; Soummer, Remi, in *Adaptive Optics Systems*, Hubin, Norbert; Max, Claire E.; Wizinowich, Peter L., eds., *Proceedings of the SPIE*, Vol. 7015, pp. 701518-701518-13 (July 2008).
 9. “The Gemini Planet Imager” by Bruce Macintosh, James Graham, David Palmer, Rene Doyon, Don Gavel, James Larkin, Ben Oppenheimer, Leslie Saddlemyer, J. Kent Wallace, Brian Bauman, Julia Evans, Darren Erikson, Katie Morzinski, Donald Phillion, Lisa Poyneer, Anand Sivaramakrishnan, Remi Soummer, Simon Thibault, Jean-Pierre-Veran, in *Advancements in Adaptive Optics*, Calia, D.B., B. Ellerbroek and R. Ragazzoni, eds., *Proceedings of the SPIE*, Vol. 6272, No. 12.672430 (July 2006).
 10. “TPF-C: Status and Recent Progress” by Wesley A. Traub et al., in *Advances in Stellar Interferometry*, Monnier, J. D., Schöller, M., Danchi, W. C., eds., *Proceedings of the SPIE*, Vol. 6268, No. 12.673608 (July 2006).
 11. “MEMS-based extreme adaptive optics for planet detection” by Bruce Macintosh, James Graham, Ben R. Oppenheimer, Lisa Poyneer, Anand Sivaramakrishnan, Jean-Pierre Veran, in *MEMS/MOEMS Components and their Applications III*, S. S. Olivier, S. A. Tadigadapa, A. K. Henning, eds., *Proceedings of the SPIE*, Vol. 6113, pp. 48-57 (July 2006). Invited Paper.
 12. “The Lyot Project: toward exoplanet imaging and spectroscopy” by Oppenheimer, Ben R.; Digby, Andrew P.; Newburgh, Laura; Brenner, Douglas; Shara, Michael; Mey, Jacob; Mandeville, Charles; Makidon, Russell B.; Sivaramakrishnan, Anand; Soummer, Remi; Graham, James R.; Kalas, Paul; Perrin, Marshall D.; Roberts, Lewis C., Jr.; Kuhn, Jeffrey R.; Whitman, Kathryn; Lloyd, James P., in *Advancements in Adaptive Optics*, Calia, D.B., B. Ellerbroek and R. Ragazzoni, eds., *Proceedings of the SPIE*, Vol. 5490, pp. 433-442 (October 2004).
 13. “The adaptive optics point-spread function at moderate and high Strehl ratios” by A. Sivaramakrishnan, P. E. Hodge, R. B. Makidon, M. D. Perrin, J. P. Lloyd, E. E.

- Bloemhof, B. R. Oppenheimer, in *High-Contrast Imaging for Exo-Planet Detection*, Alfred B. Schultz, ed., *Proceedings of the SPIE*, Vol. 4860, pp. 161-170 (February 2003).
14. "Waffle mode error in the AEOS adaptive optics point-spread function" by R. B. Makidon, A. Sivaramakrishnan, L. C. Roberts, Jr., B. R. Oppenheimer, J. R. Graham, in *High-Contrast Imaging for Exo-Planet Detection*, Alfred B. Schultz, ed., *Proceedings of the SPIE*, Vol. 4860, p. 315-323 (February 2003).
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7. "Gerard Kuiper and the Trans-Neptunian Comet Belt"
8. "Georges Lemaitre, Father of the Big Bang"
9. "John Michell and Black Holes"
10. "Ole Roemer and the Speed of Light"
11. "Vera Rubin and Dark Matter"
12. "Neutrino Observatories"
13. "Lyman Spitzer and the Space Telescope"
14. "Fritz Zwicky's Extraordinary Vision"
15. "Cecilia Payne-Gaposchkin and the Stuff of Stars"
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Exhibitions and Films:

1. "Looking for Other Worlds," temporary exhibition in the Hall of the Universe, March 13, 2007-March 12, 2008, with one permanent addition to the Hall, a set of public programs, a website, and off-site participation by NASA and the Mt. Wilson Observatory.
2. Co-Curator, with M. Mac Low, Space Show IV: "Journey to The Stars," July 2010 opening. Full dome 26 minute film narrated by Whoopi Goldberg.
3. Co-Curator (with M. Brauen) part of "Visions of the Cosmos," Rubin Museum of Art, December 11, 2009-May 10, 2010. Exhibition concerning the cosmologies of several Himalayan religions and the modern cosmology of astrophysics.
4. "The Known Universe," curator of film production, launched on YouTube and available for download December 15, 2009. Over 10 million people have viewed it on-line, ~400,000 have downloaded it, and it is widely used in classrooms around the world.

STUDENTS, POSTDOCTORAL SCHOLARS AND SCIENTIFIC ASSOCIATES ADVISED

Undergraduate:	Laura Newburgh (Barnard) Kaitlin Kratter (Barnard) Jeremy Leconte (ENS, France, Kade Fellow at AMNH) Stefanie Fiorenza (AMNH REU program) Andrew Brown (AMNH post Master student) Bence Beky (Tampere University of Technology, Finland) Robin Roberts (CUNY) Crystal Latham (FIT) Jennifer Moses (Franklin and Marshall College) Dax Feliz (UMass-Amherst) Erica Rosenblum (UCSC)
Graduate:	Sasha Hinkley (Columbia, Ph.D., primary advisor) Neil Zimmerman (Columbia, Ph.D., primary advisor) Destry Saul (Columbia, Ph.D., primary advisor) Laurent Pueyo (Princeton University, Ph.D.) Alexis Carlotti (University of Nice, Ph.D.) Andrew Brown (Columbia M.A., primary advisor) Stephanie Hunt (Cambridge University, Ph.D.)
Post Doctoral:	Andrew Digby (AMNH) Remi Soummer (AMNH) Emily Rice (AMNH) Laurent Pueyo (STScI) Justin Crepp (Caltech)
Scientific Associates:	Douglas Brenner (AMNH) Anand Sivaramakrishnan (AMNH)

INSTITUTIONAL SERVICE SINCE 2004

Administrative Positions:

Vice Chair of the Senate of the Scientific Staff, September 2010-August 2012

Secretary of the Senate of the Scientific Staff, September 2008-August 2010

Curator-in-Charge of Digital Universe, January 2006-present

Curator-in-Charge of Astrobuletins, October 2005-present

AMNH Committees:

Appointments and Promotions Committee: September 2010-August 2012

Senate Executive Committee, September 2008-August 2012

Microscopy and Imaging Facility, Sept. 2004-August 2008

Education Committee, September 2006-August 2008

Library Committee, December 2007-August 2008

Academic Affairs and Fellowships Committee, October 2007-September 2012

Ben R. Oppenheimer

Invertebrate Zoology Curatorial Search Committee, September 2007-June 2008

Curriculum Committee for Graduate School, January 2005, 1 year

Student Life Committee for Graduate School, January 2005, 1 year

Meetings Hosted and Organized at AMNH:

1. NASA Terrestrial Planet Finder-Interferometer and Coronagraph Meetings at AMNH September 13-16, 2005, entire mission staff and science advisory boards (of which I am a member) had one of its six meetings at AMNH.
2. Center for High Angular Resolution Astronomy, Annual Science Meeting, March 15 and 16, 2007.
3. Space Show IV Science Colloquium, February 7 and 8, 2008.
4. Gemini Planet Imager Science Team, May 23-25, 2010.

Service to Science and Education Since 2004

Offices or editorial positions held in scholarly organizations:

1. AMNH's Institutional Representative for the Astronomical Society of New York, February 2006-present, led the successful application for membership in this society for the Museum.

Official committees of governmental organizations or NGO agencies:

1. National Science Foundation, Advanced Technologies and Instrumentation Panel, 2004.
2. National Research Council Committee on Astronomy and Astrophysics, Terrestrial Planet Finder Subpanel, May 2004-September 2004.
3. National Optical Astronomical Observatories Adaptive Optics Development Panel, 2004.
4. National Aeronautics and Space Administration, ASTID Program Panelist, 2004.
5. Gemini Observatory, Adaptive Optics Science Working Group, September 2003-August 2004.
6. National Aeronautics and Space Administration, TPF Foundation Science Program Referee, 2004.
7. European Southern Observatory, Very Large Telescope Planet Finder Review Committee, 2004.
8. National Aeronautics and Space Administration, Terrestrial Planet Finder Coronagraph Mission, Science and Technology Definition Team, February 2005-May 2006.
9. Nederlandse Organisatie voor Wetenschappelijk Onderzoek, Astronomy Open Competition 2005, Proposal Reviewer.
10. Scientific Organizing Committee, Ultra-Low-Mass Star and Brown Dwarf Formation Conference, La Palma, Canary Islands, June 2005.
11. National Research Council Panel to Review NASA Capabilities Roadmap: Panel C Observatories and Telescopes, Instruments and Sensors, March 2005-April 2005.

12. National Aeronautics and Space Administration, Terrestrial Planet Finder Foundation Science Review Panel, 2005.
13. Chair, Astronomy Section, US Air Force Maui Optical Site Technical Conference, September 2005.
14. Columbia University, Committee on Graduate Admissions, 2005-2006 academic year.
15. National Aeronautics and Space Administration, Universe Working Group for direct advisory to the Astrophysics Subcommittee of the NASA Advisory Committee, April 2006-April 2009.
16. World Scientific Publishing, book proposal referee, 2006.
17. US Air Force, Advanced Maui Optical Station, External Advisor for telescope and system upgrades, AO Integrated Product Team, March 2006-October 2006.
18. National Aeronautics and Space Administration, Navigator Science Forum and Chapter writer, May 2006.
19. National Aeronautics and Space Administration, Discovery Class Missions Review Panel, 2006.
20. National Aeronautics and Space Administration, Origins Review Panel, 2007.
21. Columbia University, Committee on Graduate Admissions, 2007-2008 academic year.
22. Cool Stars 15, Scientific Organizing Committee, Conference to be held at St. Andrew's, Scotland, July 2008 (August 2007-July 2008).
23. Philadelphia Retina Endowment Fund, proposal referee, 2008.
24. National Science Foundation, proposal referee, MRI Program, 2009.
25. National Academies of Science, Astro2010, Electromagnetic Observations from Space, April 2009-May 2010.

Adjunct appointments with universities or other institutions:

1. Adjunct Associate Professor of Astronomy, Columbia University, September 2008-.
2. Visiting Scientist, Cambridge University, Institute for Astronomy, February 2010.
3. Adjunct Assistant Professor of Astronomy, Columbia University, September 2004-2008.
4. Visiting Scientist, Cambridge University, Institute for Astronomy, April-May 2006.
5. Visiting Scientist, Cambridge University, Institute for Astronomy, October 2004.

Courses taught:

1. Kobe University International Summer School on Exoplanetary Science (3 lectures), July 2006.
2. Frontiers of Science, Columbia University, core undergraduate course (17 lectures and lab classes), Spring 2009.
3. Physical Sciences Lecture Series, Richard Gilder Graduate School, American Museum of Natural History, Spring 2009 (1 lecture).

Student committees:

1. Gail Schaeffer, Ph.D., Thesis Defense Committee, Stony Brook University, November 5, 2004.
2. Sasha Hinkley, Ph.D., Columbia University, 2005-June 2009. I was his primary advisor. Graduated with distinction.
3. Neil Zimmerman, Ph.D., Columbia University, 2006-2011. I was his primary advisor.
4. Andrew Brown, M.A., Columbia University, 2008-2011. I was his primary advisor
5. Sarah Tuttle, Ph.D., Columbia University, February 2007-June 2010.
6. Emily Rauscher, Ph.D., Columbia University, November 2007-June 2010.

Served as an expert for the following press articles or other media, which either covered my own research or related work:

1. *Research Highlights*: Maj. Paul Belaire, Air Force Office of Scientific Research, "Coronagraph Used in Exoplanet Hunting," Jan/Feb/Mar 2004, p. 1.
2. *Sky and Telescope*: David Shiga, "Imaging Exoplanets," April 2004, Vol. 107, No. 4, p. 44 (Cover story).
3. *New York Times*: Dennis Overbye, "Grasping for Light of Distant Worlds," June 22, 2004, p. F1.
4. *Natural History Magazine*: At the Museum, "Picturing Planets," September, 2004, p. 76.
5. *New York Times*: Dennis Overbye, "Is it a Planet?" April 5, 2005, p. F4.
6. *MSNBC* and *Space.com*: Robert Roy Britt, "Planet Photo Debate Takes Wild Twist," April 30, 2005, <http://www.msnbc.msn.com/id/7684871/>.
7. *New York Times*: Dennis Overbye, "One Find, Two Astronomers: An Ethical Brawl," September 13, 2005, p. F1.
8. *Eyepiece*: Bruce Kamiat, "Finding other Earths," September 26, 2005, p. 1.
9. *USA Today*: Dan Vergano, "The definition of a planet is going under the telescope," September 22, 2005, p. E2.
10. *Danbury Times News*: Robert Miller, "Mars back in View," October 2, 2005, p. 4.
11. *Distant Light*: "Planet 10 with Dr. Ben Oppenheimer & Keith Murdock," November, 2005, pg. 3.
12. *Popular Mechanics*: "Cosmic Collisions," March 16, 2006.
13. *ABC Good Morning America*: "Asteroid Near Miss," interview with Bill Weir, July 3, 2006.
14. *ABC World News Tonight*: "Giant Asteroid," interview with Charles Gibson and Terry Moran, July 3, 2006.
15. *Sky and Telescope*: Valerie C. Coffey, "MACHO Prediction Challenged," October, 2006, p. 8.
16. *Popular Science*: Lauren Aaronson, "How Big can Planets be?" December, 2006, p. 23.

17. *WOR Radio*: “The Orionid Meteor Shower,” interview with Joe Bartlett and Donna Hanover, October 20, 2006.
18. *CSPAN*: “Death by Black Hole,” introduction for Neil DeGrasse Tyson’s book lecture, February 13, 2007.
19. *Reuters*: “Looking for New Worlds,” exhibition opening coverage, March 14, 2007.
20. *NBC*: “Looking for New Worlds,” exhibition opening coverage, March 14, 2007.
21. *Travelers Magazine*: “Looking for New Worlds,” exhibition opening coverage, March 14, 2007.
22. *CBS News HD*: “Earth Like Planet,” Evening spot, Scott Rapoport reporter, April 28, 2007.
23. *AT&T Tech News*: “Looking for Other Worlds,” program on the exoplanet exhibit in the Rose Center, October 16, 2007.
24. *NASA/PlanetQuest Website*: “The Lyot Project,” November 27, 2007.
25. *New York Times*: Dennis Overbye, “Star’s Dust May Hold Clue to New Planet,” March 26, 2008.
26. *Space.com*: Jeanna Bryner, “Photo Suggests Planet Under Construction,” March 26, 2008.
27. *New Scientist*: David Shiga, “New Image May Reveal Embryonic World,” March 27, 2008.
28. *Philadelphia Inquirer*: Tom Avril, “Image may be birth of distant planet,” March 31, 2008.
29. *Voice of America*: interview with Mona Dhuneim on AB Aurigae paper, March 29, 2008.
30. *Science News*: “Caught in the Act? Images may reveal planetary birth,” by Ron Cowen, April 5, 2008,
31. *AstroBulletins*: “Is this star gaining a planet?” Snapshot story, April 14, 2008.
32. *WNYC Leonard Lopate Show*: “Underreported: New Planet Forming?” 20 minute interview with Julie Burstein, April 17, 2008.
33. *New Scientist*: “Telescope could focus light without a mirror or lens” by David Shiga, May 1, 2008.
34. *Natural History*: “Science in the Summer,” by Kristin Phillips, June 2008.
35. *SEED Magazine*: “Profiles,” interview July 18, 2008, unpublished.
36. *NBC Nightly News*: “Planets imaged,” with Bob Bazell, November 13, 2008.
37. *New York Times*: “Images of Planetary Systems,” by Dennis Overbye, November 13, 2008.
38. *University of Cambridge*: “The Naked Astronomer,” February 15, 2010.
39. *Austrian Broadcasting Company*, “Other Worlds,” by Madeleine Amberger, interview on May 11, 2010.

40. *Washington Post*, “Stephen Hawking may be right about marauding aliens,” by Brian Palmer, September 27, 2010.
41. *About.com*, “What is a planet?” video interview, October 20, 2010.
42. *Science Magazine*: “A Distant Glimpse of Alien Life?,” by Yudhijit Bhattacharjee, Vol. 333, pp 930-932 (August 19, 2011)—major profile.
43. *MIT Press Release*: “Two new earth-sized exoplanets discovered” December 21, 2011.

Paid or unpaid professional activities not listed above:

Refereed 37 papers for *Astrophysical Journal*, *Astronomische Nachrichten*, *Publications of the Astronomical Society of the Pacific*, *Astronomical Journal*, *Astronomy and Astrophysics*, *Monthly Notices of the Royal Astronomical Society*.