$Curriculum \ Vitae - Edo \ Berger$

Professor of Astronomy Harvard College Observatory, MS-19, 60 Garden Street, Cambridge, MA 02138 eberger@cfa.harvard.edu https://scholar.harvard.edu/eberger

Education	
Ph.D., Astrophysics, California Institute of Technology	May 2004
Advisor: Prof. Shrinivas R. Kulkarni	
Cosmic Explosions: The Beasts and Their Lair	
M.S., Astrophysics, California Institute of Technology	May 2001
Advisor: Prof. Shrinivas R. Kulkarni	
B.S. , Astrophysics (Summa Cum Laude), UNIVERSITY OF CALIFORNIA, LOS ANGELES Advisor: Prof. Bernard M. K. Nefkens	June 1999
The Total and Differential Cross Sections of the Reaction $K^-p \to \Lambda \eta$.	
Positions	
Professor of Astronomy, HARVARD UNIVERSITY	2014 -
John L. Loeb Associate Professor of the Natural Sciences, HARVARD UNIVERSITY	2011 - 2014
Associate Professor of Astronomy, HARVARD UNIVERSITY	2011 - 2014
Assistant Professor, HARVARD UNIVERSITY	2008 - 2011
Carnegie-Princeton Postdoctoral Fellow, PRINCETON /CARNEGIE OBSERVATORIES	2004 - 2008
Hubble Postdoctoral Fellow, CARNEGIE OBSERVATORIES	2004 - 2007
Honors and Awards	
CSH Distinguished Lectures University of Bern	2018
Star Family Challenge for Promising Scientific Research, HARVARD UNIVERSITY	2016
Fannie Cox Prize for Excellence in Science Teaching, HARVARD UNIVERSITY	2013
Robert J. Trumpler Award for an Outstanding PhD Thesis, ASTRONOMICAL SOCIETY OF THE PACIFIC	2007
Kingsley Fellowship, California Institute of Technology	2002
E. Lee Kinsey Prize, UNIVERSITY OF CALIFORNIA, LOS ANGELES	1999
Professional Services	
SOC, "10th Sackler Conference in Theoretical Astrophysics: Gravitational	
WAVE ASTROPHYSICS"	2018
SOC, "Deciphering the violent universe"	2017
SOC, "Gravitational Waves Physics & Astronomy Workshop 2017"	2017
SOC, "Radio Exploration of Planetary Habitability"	2017
SOC, "Aspen 2017 Winter Conference on Fast Radio Bursts"	2017
SOC, "9th Sackler Conference in Theoretical Astrophysics: The Transient	
SKY"	2016
SOC, "Gravitational Waves Physics & Astronomy Workshop 2016"	2016

Harvard representative, MAGELLAN COUNCIL	2015 -
Harvard member representative, ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN	
Astronomy, Inc	2015 -
SOC, "Gravitational Waves Physics & Astronomy Workshop 2015"	2015
SOC, "Swift: Ten Years of Discovery"	2014
SOC Chair, Second Annual GMT Community Science Meeting: "Time-Domain	
Astrophysics in the Era of Exremely Large Telescopes"	2014
Member, Gemini Observatory Board	2013 - 2015
Harvard representative, GIANT MAGELLAN TELESCOPE SCIENCE ADVISORY COUNCIL	2012-
Organizing Committee, KITP workshop "CHIRPS, MERGERS AND EXPLOSIONS: THE	
FINAL MOMENTS OF COALESCING COMPACT BINARIES"	2012
Organizing Committee, KITP conference "RATTLE AND SHINE: GRAVITATIONAL WAVE	
and Electromagnetic Studies of Compact Binary Mergers"	2012
Editorial Board, SCIENTIFIC REPORTS	2011 -
Chair, National Radio Astronomy Observatory Users Committee	2011
Member, NRAO Telescopes Time Allocation Panel	2011 - 2012
Splinter session co-organizer, "COOL STARS 16"	2010
SOC, "Cosmic magnetism: From stellar to intergalactic scales"	2010
Member, CFA TELESCOPE TIME ALLOCATION COMMITTEE	2010-2014
Instrument PI, MAGELLAN/LDSS3	2008-
Harvard representative, MAGELLAN OBSERVATORY SCIENCE ADVISORY COUNCIL	2008-2015
Chair, Gemini Staff Telescope Time Allocation Committee	2008-2010
Member, National Radio Astronomy Observatory Users Committee	2008-2010
Co-chair, NASA/Swift guest investigator review panel	2007
SOC, "New Views of the Universe"	2005
Member, American Astronomical Society	1998–
Referee, NATURE, SCIENCE, ASTROPHYSICAL JOURNAL, ASTRONOMY & ASTROPHYSICS,	
NEW ASTRONOMY, MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	

UNDERGRADUATE, GRADUATE, AND POST-DOCTORAL ADVISING

2016 -
2015 - 2018
2012 -
2010 - 2014
2009 - 2014
2017 -
2015 -
2015 - 2018
2014 -
2014 -
2014 - 2016
2013 - 2018
2013 -
2011 - 2015
2010 - 2012
2009 - 2015

Graduate Research Advisor, Margaret McLean	2008 - 2010
Graduate Research Advisor, Wen-fai Fong	2008 - 2014
Graduate Project Advisor, Khee-Gan Lee (Princeton)	2007
Graduate Project Advisor, Min-Su Shin (Princeton)	2006
Undergraduate Research Advisor, Mahlet Shiferaw	2017
Undergraduate Summer Research Advisor (CfA/REU), Erin Fong (Tufts)	2015
Undergraduate Summer Research Advisor, Melissa McIntosh	2013
Undergraduate Summer Research Advisor (CfA/REU), Benjamin Cook (Princeton)	2013
Undergraduate Summer Research Advisor (HCRP), Natania Wolansky	2013
Undergraduate Research Advisor (Junior Thesis), Natania Wolansky	2013
Undergraduate Summer Research Advisor (PRISE), Caroline Huang	2011
Undergraduate Research Advisor (Junior Thesis), Tova Holmes	2011
Undergraduate Research Advisor (Senior Thesis), Meredith MacGregor (Goldberg Prize)	2010 - 2011
Undergraduate Summer Research Advisor (HCRP), Camille Leibler	2010
Undergraduate Research Advisor (Junior Thesis), Meredith MacGregor (Goldberg Prize)	2010
Undergraduate Research Advisor (Junior Thesis), Isaac Shivvers	2010
Undergraduate Summer Research Advisor (PRISE), Ethan Kruse	2009
Undergraduate Research Advisor (Junior Thesis), Jordan Bock	2009
Undergraduate Research Advisor, Carroll Wainwright (Pomona)	2005

PRIMARY RESEARCH INTERESTS

- The physics, progenitors, and host galaxies of gamma-ray bursts
- The use of gamma-ray bursts as probes of the high-redshift universe
- Short-duration gamma-ray bursts as sources of gravitational wave radiation
- The classification, physics, and progenitors of optical transients
- Tidal disruption events as probes of dormant supermassive black holes
- Magnetic fields in low mass stars, brown dwarfs, and extrasolar planets

PUBLICATIONS

41 first-author; 252 total (15 Nature); H-index: 81

Invited Talks & Colloquiua

- CSH Distinguished Lectures, University of Bern, Bern, Switzerland, April 2018
- Colloquium, University of Maryland, College Park, MD, March 2018
- Colloquium, UCLA, Los Angeles, CA, March 2018
- Colloquium, Yale University, New Haven, CT, February 2018
- Colloquium, Tufts University, Medford, MA, February 2018
- Colloquium, University of Massachusetts Amherst, Amherst, MA, January 2018
- Colloquium, Black Hole Initiative, Cambridge, MA, December 2017
- Invited talk at "GW170817: The First Double Neutron Star Merger", KITP, Santa Barbara, CA, December 2017
- Colloquium, Harvard University (Physics), Cambridge, MA, November 2017
- Colloquium, Columbia University, NY, NY, November 2017
- Colloquium, Harvard-Smithsonian CfA, Cambridge, MA, November 2017

- Colloquium, MIT, Cambridge, MA, November 2017
- Colloquium, Perimeter Institute, Waterloo, ON, Canada, November 2017
- Invited talk at "Electromagnetic Signatures of R-process Nucleosynthesis in Neutr7on Star Binary Mergers", Institute for Nuclear Theory, University of Washington, Seattle, WA, August 2017
- Public Lecture, "Public AstroNight", McGill University, Montreal, Canada, June 2017
- Invited talk at "Workshop on Fast Radio Bursts", McGill University, Montreal, Canada, June 2017
- Public Lecture, "Supernovae: the LSST revolution", Northwestern University, Evanston, IL, June 2017
- Invited talk at "First Annual BHI Conference", Cambridge, MA, May 2017
- Colloquium, Texas A&Ml University, College Station, TX April 2017
- Colloquium, McGill University, Montreal, Canada March 2017
- Invited talk at "Aspen 2017 Winter Conference on Fast Radio Bursts", Aspen, CO, February 2017
- Invited talk at "Physics and Astrophysics at the Extreme (PAX) Workshop", State College, PA, December 2016
- Invited talk at "Astrophysics in the Era of Gravitational Wave and Multimessenger Observations", Annapolis, MD, November 2016
- Invited talk at "GWPAW 2016", Cape Cod, MA, June 2016
- Invited talk at "The r-Process Nucleosynthesis: Connecting FRIB with the Cosmos", Michigan State University, MI, May 2016
- Invited talk at "GR100++", Princeton University, NJ, April 2016
- Astronomy Colloquium, Case Western Reserve University, Cleveland, OH, December 2015
- Public Lecture, Frontiers of Astronomy Lecture Series, Cleveland Museum of Natural History, OH, December 2015
- Invited review talk at "Time Domain Astrophysics with Swift", Clemson, SC, October 2015
- Astronomy Colloquium, Leiden University, Leiden, The Netherlands, October 2015
- Astronomy Colloquium, Anton Pannekoek Institute for Astronomy (University of Amsterdam), Amsterdam, The Netherlands, October 2015
- Astronomy Colloquium, Radboud University, Nijmegen, The Netherlands, October 2015
- Invited review talk at "Gravitational Wave Physics and Astronomy Workshop (GWPAW) 2015", Osaka, Japan, June 2015
- Invited talk at "A Centennial Perspective: General Relativity and Gravitation", State College, PA, June 2015
- Astronomy Colloquium, University of Chicago, Chicago, IL, May 2015
- Astronomy Colloquium, Northwestern University, Evanston, IL, March 2015
- Invited talk at "Swift: 10 Years of Discovery", Rome, Italy, December 2014
- Astronomy Colloquium, Boston University, Boston, MA, October 2014
- Invited talk at "Binary Neutron Star Coalescence as a Fundamental Physics Laboratory", Seattle, WA, July 2014
- Invited talk at "Gravitational Waves and Gamma Ray Bursts", Buckinghamshire, UK, June 2014
- Invited talk at "Frontiers of Neutron Star Astrophysics", Ithaca, NY, May 2014
- Invited talk at "The Structure and Signals of Neutron Stars from Birth to Death", Florence, Italy, March 2014
- Colloquium, Origins Institute at McMaster University, Hamilton, Canada, February 2014
- Invited talk at "223rd Meeting of the American Astronomical Society", Washington, DC, January 2014
- YCAA Seminar, Yale University, New Haven, CT, December 2013
- Astronomy Colloquium, University of Arizona, Tucson, AZ, November 2013
- Invited talk at "Swift Science Planning Meeting", State College, PA, October 2013
- Astronomy Colloquium, Stanford/KIPAC, Stanford, CA, October 2013
- Astronomy Colloquium, UC Santa Cruz, Santa Cruz, CA, October 2013

- Invited talk at "Second Annual Moscow Extreme Universe Laboratory Workshop on Gamma-Ray Bursts", Moscow, Russia, October 2013
- Astronomy Colloquium, Harvard-Smithsonian CfA, Cambridge, MA, September 2013
- Colloquium, Institute for Advanced Studies, Princeton, NJ, September 2013
- Colloquium, Canadian Institute for Theoretical Physics, Toronto, Canada, September 2013
- Colloquium, Perimeter Institute, Waterloo, Canada, September 2013
- Invited talk at "Gravitational Waves", Kyoto, Japan, May 2013
- Invited review talk at "GR Science Workshop", South Padre Island, TX, May 2013
- Colloquium, Perimeter Institute, Waterloo, Canada, April 2013
- Astronomy Colloquium, Cornell University, Ithaca, NY, November 2012
- Astronomy Colloquium, Tufts University, Medford, MA, November 2012
- KITP Director's Blackboard Talk, Kavli Institute for Theoretical Physics, Santa Barbara, CA, September 2012
- Astronomy Colloquium, Las Cumbres Observatory, Santa Barbara, CA, August 2012
- Astronomy Colloquium, UC Berkeley, Berkeley, CA, August 2012
- Invited talk at "Gamma Ray Bursts in the Era of Rapid Follow-up", Liverpool, United Kingdom, June 2012
- Invited talk at "Testing General Relativity with Astrophysical Systems", Cambridge, MA, May 2012
- Invited talk at "Connecting the Electromagnetic and Gravitational Wave Skies in the Era of Advanced LIGO", Princeton, NJ, May 2012
- Theoretical Astrophysics Colloquium, Caltech, Pasadena, CA, March 2012
- Invited talk at "Outflows, Winds and Jets: From Young Stars to Supermassive Black Holes", Charlottesville, VA, March 2012
- Invited talk at "TIARA Workshop on the Transient Universe", Hsinchu, Taiwan, December 2011
- Astronomy Colloquium, Syracuse University, Syracuse, NY, December 2011
- Astronomy Colloquium, Harvard-Smithsonian CfA, Cambridge, MA, October 2011
- Astronomy Colloquium, University of Nevada, Las Vega, NV September 2011
- Invited talk at "HEAD 2011", Newport, RI, September 2011
- Invited talk at "Explosive Ideas about Massive Stars from Observations to Modeling", Stockholm, Sweden, August 2011
- Invited review talk at "GRBs as Probes: From the Progenitor's Environment to the High Redshift Universe", Como, Italy, May 2011
- Invited talk at "A Decade of Exploration With The Magellan Telescopes", Pasadena, CA, April 2011
- Invited talk at "The Prompt Activity of Gamma-Ray Bursts: their Progenitors, Engines, and Radiation Mechanisms", Raleigh, NC, March 2011
- Astronomy Colloquium, University of Rochester, NY February 2011
- Invited talk at "Gravitational-wave Physics and Astronomy", Milwaukee, WI, January 2011
- Invited talk at "Binary Star Evolution: Mass Loss, Accretion, and Mergers", Mykonos, Greece, June 2010
- Invited talk at "The First Galaxies, Quasars & Gamma-Ray Bursts", Penn State, PA, June 2010
- Invited talk at "The First Stars and Galaxies: Challenges for the Next Decade", Austin, TX, March 2010
- Invited review talk at "HEAD 2010: The 11th Meeting of the High-Energy Astrophysics Division of the American Astronomical Society", Hawaii, HI, March 2010
- Astronomy Colloquium, University of Texas, Austin, TX, January 2010
- Invited talk at the "Frontiers in High-Energy Astrophysics" winter school, Hebrew University, Jerusalem, Israel, December 2009
- Astronomy Colloquium, Tel Aviv University, Tel Aviv, Israel, December 2009
- Astronomy Colloquium, Boston University, Boston, MA, September 2009

- Invited review talk at "The Shocking Universe: Gamma Ray Bursts and High Energy Shock phenomena in the Universe", Venice, Italy, September 2009
- Invited talk at "Stellar Death and Supernovae", KITP, Santa Barbara, CA, August 2009
- Invited talk at "A Festival of Cosmic Explosions: Celebrating the Contributions and Accomplishments of Roger Chevalier", Caltech, Pasadena, CA, August 2009
- Astronomy Colloquium, Space Telescope Science Institute, Baltimore, MD, January 2009
- Astronomy Colloquium, Massachussetts Institute of Technology, Cambridge, MA, December 2008
- Physics Colloquium, Harvard University, Cambridge, MA, November 2008
- Invited talk at "Classification & Discovery in Large Astronomical Surveys", Ringberg, Germany, October 2008
- Astronomy Colloquium, Yale University, New Haven, CT, October 2008
- Invited talk at "Far Away: Light in the Young Universe at Redshift Beyond Three", Paris, France, July 2008
- Astronomy Colloquium, Carnegie Institution Dept. of Terrestrial Magnetism, Washington, DC, May 2008
- Astronomy Colloquium, University of Toronto, Toronto, Canada, March 2008
- Astronomy Colloquium, New York University, New York, NY, March 2008
- Astronomy Colloquium, Columbia University, New York, NY, March 2008
- Invited review talk at "Gamma Ray Bursts 2007", Santa Fe, NM, November 2007
- Invited talk at "The 10th Anniversary Marseille Cosmology International Conference Energetic Events in the Universe: From Physics to Cosmology", Marseille, France, June 2007
- Astronomy Colloquium, Observatories of the Carnegie Institution of Washington, Pasadena, CA, June 2007
- Invited review talk at "Swift and GRBs: Unveiling the Relativistic Universe", Venice, Italy, June 2006
- Astronomy Colloquium, UC Irvine, Irvine, CA, January 2006
- Invited review talk at "16th Annual October Astrophysics Conference in Maryland: Gamma Ray Bursts in the Swift Era", Washington, DC, November 2005
- Invited talk at "The 47th Annual Meeting of the Division of Plasma Physics", Denver, CO, October 2005
- Invited talk at "22nd Texas Symposium on Relativistic Astrophysics", Stanford, CA, December 2004
- Astronomy colloquium, Carnegie Observatories, Pasadena, CA, November 2004
- Invited talk at "Gamma-Ray Bursts in the Afterglow Era: 4th Workshop", Rome, Italy, October 2004
- Astronomy colloquium, UC Berkeley, Berkeley, CA, September 2003
- Invited talk at "GRB 2003 Conference: Celebration of the 30th anniversary of GRB discovery", Santa Fe, NM, September 2003
- Astronomy Colloquium, National Radio Astronomy Observatory, Socorro, NM, August 2003
- Invited talk at "3-D Signatures in Stellar Explosions", Austin, TX, June 2003
- Invited talk at "Gamma-Ray Bursts in the Afterglow Era: 3rd Workshop", Rome, Italy, September 2002
- Astronomy Colloquium, Joint Astronomy Center, Hilo, HI, January 2002
- Astronomy Colloquium, Mount Stromlo Observatory, Canberra, Australia, September 2001
- Astronomy Colloquium, University of Melbourne, Melbourne, Australia, September 2001
- Astronomy Colloquium, Australia Telescope National Facility, Epping, Australia, August 2001

Press Releases

- "Astronomers See Light Show Associated With Gravitational Waves." October 16, 2017 https://www.cfa.harvard.edu/news/2017-30
- "Cosmic Forge of Rare Heavy Elements Discovered." October 16, 2017 https://www.noao.edu/news/2017/pr1705.php

- "Astronomers Feast on First Light From Gravitational Wave Event." October 16, 2017 http://www.gemini.edu/node/12719
- "Scientists spot explosive counterpart of LIGO/Virgos latest gravitational waves." October 16, 2017 http://news.fnal.gov/2017/10/scientists-spot-explosive-counterpart-ligovirgos-latest-gravitational-waves/
- "Astronomers Discover 'Heavy Metal' Supernova Rocking Out." July 31, 2017 https://www.cfa.havvard.edu/news/2017-24
- "Fast Radio Burst Afterglow Was Actually a Flickering Black Hole." April 4, 2016 https://www.cfa.harvard.edu/news/2016-10
- "Astronomers Report Results of First Search for Visible Light Associated with Gravitational Waves." February 13, 2016

https://www.cfa.harvard.edu/news/2016-04

- "Tiny, Ultracool Star is Super Stormy." November 19, 2015 https://www.cfa.harvard.edu/news/2015-26
- "Cool, Dim Dwarf Star is Magnetic Powerhouse." November 19, 2015 https://public.nrao.edu/news/pressreleases/alma-dwarf-star-2015
- "Explosion Illuminates Invisible Galaxy in the Dark Ages." August 6, 2013 http://www.cfa.harvard.edu/news/2013/pr201322.html
- "Earth's Gold Came from Colliding Dead Stars." July 17, 2013 http://www.cfa.harvard.edu/news/2013/pr201319.html
- "Multi-Tasking Supernova: Record-Breaking Stellar Explosion Helps Understand Far-Off Galaxy." August 30, 2012

http://www.gemini.edu/node/11882

- "Record-Breaking Stellar Explosion Helps Understand Far-Off Galaxy." August 30, 2012 http://www.cfa.harvard.edu/news/2012/pr201226.html
- "Black Hole Caught in a Feeding Frenzy." May 2, 2012 http://www.cfa.harvard.edu/news/2012/pr201213.html
- "Pan-STARRS Asteroid Hunter and Sky Surveyor Now Fully Operational." June 16, 2010 http://www.cfa.harvard.edu/news/2010/pr201008.html
- "Farthest Known Object: New Gamma-Ray Burst Smashes Cosmic Distance Record." April 28, 2009 http://www.cfa.harvard.edu/news/2009/pr200911.html
- "Gemini Observatory Releases Image of Most Distant Known Object in Universe." April 28, 2009 http://www.gemini.edu/furthestgrb
- "New Gamma-Ray Burst Smashes Cosmic Distance Record." April 28, 2009 http://www.nasa.gov/mission_pages/swift/bursts/cosmic_record.html
- "Birth of a Supernova". May 21, 2008 https://www.princeton.edu/presskits/astro/
- "Catching the Light of a Baby Supernova". May 21, 2008 http://www.gemini.edu/node/281
- "Odd Little Star has Magnetic Personality". November 29, 2007 http://www.gemini.edu/node/261
- "Astronomers link old stars and mysterious cosmic explosions". December 15, 2005 http://carnegiescience.edu/news/astronomers_link_old_stars_and_mysterious_cosmic_explosions
- "First gamma-ray bursts detected by new NASA satellite pinpointed by Carnegie and Caltech astronomers". February 14, 2005 http://carnegiescience.edu/news/first_gamma_ray_bursts_detected_new_nasa_satellite_pinpointed_carnegie_and_caltech_astronomers
- "Despite Appearances, Cosmic Explosions Have Common Origin, Astronomers Discover". November 12, 2003 http://www.nrao.edu/pr/2003/grbtwinjet/

- "Gamma-Ray Bursts, X-Ray Flashes, and Supernovae Not As Different As They Appear". November 12, 2003 http://www.caltech.edu/content/gamma-ray-bursts-x-ray-flashes-and-supernovae-not-different-they-appear
- "Cosmic X-ray Flashes Reveal Their Distance". September 11, 2003 http://chandra.harvard.edu/press/03_releases/press_091103.html
- "Closest Gamma Ray Burst Providing Scientists With Crucial Test for Burst Physics". May 28, 2003 http://www.nrao.edu/pr/2003/grb030329/
- "Gamma-ray bursts are caused by explosive death of massive stars, new study reveals". May 16, 2002 http://pr.caltech.edu/media/Press_Releases/PR12247.html
- "First gamma burst detected by new NASA satellite is pinpointed at Palomar Observatory". November 7, 2001 http://www.caltech.edu/content/first-gamma-burst-detected-new-nasa-satellite-pinpointed-palomar-observatory
- "From Enigma to Tool: Gamma-Ray Burst Reveals Secrets of Host Galaxy". June 5, 2001 http://www.nrao.edu/pr/2001/grbhost/
- "Distant Massive Explosion Reveals a Hidden Stellar Factory". April 4, 2001 http://m.caltech.edu/content/distant-massive-explosion-reveals-hidden-stellar-factory
- "Caltech grad student's team first to detect radio emission from a brown dwarf". March 14, 2001 http://www.caltech.edu/content/caltech-grad-students-team-first-detect-radio-emission-brown-dwarf
- "Students Use VLA to Make Startling Brown-Dwarf Discovery". March 14, 2001 http://www.nrao.edu/pr/2001/browndwarf/