

Dr. Louis E. Strigari

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College Station, Texas 77843

ACADEMIC WORK EXPERIENCE **Texas A&M University**, College Station, TX, USA
Assistant Professor, Department of Physics and Astronomy **September 2014- present**

Indiana University, Bloomington, IN, USA
Assistant Professor, Department of Physics **August 2013– July 2014**

Stanford University/Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), Stanford, CA, USA
Research Associate **September 2011 – August 2013**
Hubble Fellow, Postdoctoral researcher **September 2008 – September 2011**

University of California, Irvine, Irvine, CA, USA
Postdoctoral researcher **September 2005 – August 2008**

EDUCATION **The Ohio State University**, Columbus, OH
Ph.D. Physics, June 2005
Graduate Research Assistant **August 2003 – August 2005**
Teaching Assistant **September 2000 – August 2003**

Miami University, Oxford, OH, B.A., Physics, May 1999

GRANTS FUNDED NSF Theoretical Particle Astrophysics and Cosmology, “Exploring the WIMP Parameter Space Above and Below the Neutrino Floor,” PI: \$150k, 2014-2017

NASA Astrophysics Theory Program (ATP) grant, “Astrophysics with a Space-Based Gravitational Lensing Survey,” PI: \$400k, 2012-2017,

Co-investigator on the KIPAC Enterprise Grant, “Understanding Dark Matter on Galactic Scales: Applications for Particle Dark Matter Detection” (PI: Risa Wechsler, 2009, \$50k)

Co-investigator on the NASA grant, “The Effects of Reionization and Environment on the Formation and Evolution of Milky Way Halos” (PI: Risa Wechsler, 2009, \$328k)

Co-investigator on the NASA grant “Determining the nature of dark matter using proper motions of stars in the Milky Way satellites” (PI: Manoj Kaplinghat, 2008, \$50k)

Co-investigator on the NSF grant “Structure Formation on Small Scales and the Nature of Cold Dark Matter” (PI: Manoj Kaplinghat, 2007, \$307k)

COURSES TAUGHT	<ul style="list-style-type: none"> • ASTR 606/PHY 646: Radiative transfer (Spring 2015 & Fall 2017) • PHY 218: Mechanics (Fall 2016) • ASTR 403: Extragalactic astronomy and Cosmology (Spring 2016 & Spring 2017) • ASTR 401: Stars and Planets (Fall 2016)
HONORS AND AWARDS	<ul style="list-style-type: none"> • Mitchell/Munnerlyn/Heep Early Career Award, Texas A&M University Department of Physics and Astronomy, 2015 • Kavli Frontiers of Science Fellow, 2015 • Hubble Fellowship, NASA/STScI, 2008-2011 • McCue Fellowship, UC Irvine, 2006-2008
RESEARCH PUBLICATIONS	<p>74 papers in peer-reviewed journals (see publication list), including Nature, ApJ, PRL, PRD</p> <p>Eighteen first author papers</p> <p>Fifteen papers with 100+ citations; Thirty-four papers with 50+ citations</p> <p><i>h</i>-index of 44</p> <p>(All of the above according to SAO/NASA Astrophysics Data System)</p>
MENTORING	<p>Mei-Yu Wang (Postdoc, 2013-2017): Cosmological simulations and dwarf galaxies</p> <p>Andrew Pace (Postdoc, 2016-present): Dark Energy Survey and dwarf galaxies</p> <p>Steven Clark: (Co-advisor, 4th year graduate student): Dark matter and CMB</p> <p>Peter Chi (3rd year graduate student): Cosmological simulations and dwarf galaxies</p> <p>Sarah Cantu (2nd year graduate student): Dark Energy Survey and dwarf galaxies</p> <p>Alexander Riley (1st year graduate student): Cosmological simulations and dwarf galaxies; Fermi-LAT</p> <p>Virisha Timmaaraju (Electrical Engineering masters student, 2016-2017)</p> <p>Devin Carr (Computer Science undergraduate, 2016-2017)</p> <p>Connor Gregg (Aerospace Engineering 2016-2017)</p>
STUDENT COMMITTEES	<p>Tathataga Ghosh (2016); Steven Boada (2016); Leo Alcorn (2016); Andrew Quick (2017), Sean Wu (2017)</p>
PROFESSIONAL ACTIVITIES	<ul style="list-style-type: none"> • Member of Dark Energy Survey (DES) Collaboration; MINER Collaboration; Fermi-LAT Collaboration • Scientific organizing committee, ν Eclipse workshop, Knoxville, TX, Aug 2017 • Scientific organizing committee, PPC, Corpus Christi, TX, May 2017 • Scientific organizing committee, CETUP dark matter workshop 2015, 2016 • Scientific organizing committee, Mitchell Institute Workshop on Collider and Dark Matter Physics 2015, 2016, 2017 • Scientific organizing committee, Potsdam AIP thinkshop on dwarf galaxies 2014 • Manuscript referee for the Astrophysical Journal, Astrophysical Journal Letters, Astronomy and Astrophysics, Journal of Cosmology and Astroparticle Physics, Monthly Notices of the Royal Astronomical Society, Nature, New Journal of Physics, Physical Review D, Physical Review Letters • Review panels: NASA Astrophysics Theory program (2013 and 2017), Hubble Space Telescope (2016, 2017), NASA postdoctoral fellowship program (2015) • Convener of Dark Matter session, CosPA 2013 • Kavli Foundation Scientific Spotlight Roundtable Discussion on Nomad Planets: http://www.kavlifoundation.org/astrophysics-science-spotlights • Organizing committee for SLAC workshop “Detecting Dark Matter with Gamma-rays”,

October 2011

- Organizing committee for the Aspen Summer 2011 Workshop: “A theoretical and experimental vision for direct and indirect dark matter detection”
- Lead-organizer for the Stanford Cosmology Seminars, 2009-present
- Co-organizer for the UCI “Astrophysical Probes of the Nature of Dark Matter” workshop, March 2007
- Lead-organizer for the UCI Astrophysics Seminars, Fall 2007- Winter 2008
- Member of the Local Organizing Committee, “Fundamental Physics with the Cosmic Microwave Background” workshop, March 2006

COMPUTATIONAL
SKILLS

Proficient in Mathematica, IDL, Fortran, Python, Perl

BOOK CHAPTERS

Particle Dark Matter, Contributing author to the Chapter: Milky Way Substructures, Ed. Gianfranco Bertone, 2009

SIM Lite: Astrometric Observatory, Contributing author to the Chapter: Galactic Dynamics and Local Dark Matter, Eds. John Davidson, Stephen Edberg, Rolf Danner, Bijan Nemati, Stephen Unwin, 2008

LECTURES

Experimental Searches for Dark Matter, BCVSPIN - MSPF - Mitchell 2014 Joint School: BCVSPIN Advanced School in Particle Physics and Cosmology / XVI Mexican School of Particles and Fields / Mitchell Institute, Nov 2014

Astrophysical Constraints on Dark Matter, SLAC Summer Institute, Nov 2014

SEMINARS AND
COLLOQUIA

Astrophysical applications of coherent neutrino scattering, Washington University St Louis, Physics seminar, Nov 2017

Astrophysical applications of coherent neutrino scattering, Pitt PAC Seminar, Nov 2017

Astrophysical applications of coherent neutrino scattering, Arizona State cosmology seminar, Oct 2017

Detecting neutrino coherent scattering (and maybe dark matter), Baylor University Physics Colloquium, Feb 2017

Detecting neutrino coherent scattering (and maybe dark matter), Texas A&M Physics and Astronomy Colloquium, Feb 2017

Detecting neutrino coherent scattering (and maybe dark matter), University of Texas, Austin, High Energy Seminar, Feb 2017

New Directions in Dark Matter and Neutrino Astrophysics, Virginia Tech Physics and Astronomy Colloquium, Dec 2016

Detecting neutrino coherent scattering (and maybe dark matter), Vanderbilt University, Oct 2016

Galactic Searches for Dark Matter, Rice University, Astrophysics Seminar, Feb 2016

Galactic Searches for Dark Matter, University of North Florida, Jacksonville, FL, Nov 2015

Galactic Searches for Dark Matter, TAMU Commerce, Oct 2015

Exploring the WIMP Parameter Space Above and Below the Neutrino Floor, University of New Mexico, April 2015

Galactic Searches for Dark Matter, Miami U., Oxford, OH, Oct 2014

Signals and Backgrounds in Dark Matter Searches, University of Cincinnati, High Energy Seminar, Oct 2014

Galactic Searches for Dark Matter, University of Texas– Dallas, Sept 2014

Exploring the WIMP Parameter Space Above and Below the Neutrino Floor, Southern Methodist University, Sept 2014

Micro and Macro-Physics in Searches for Dark Matter, Texas A&M University, March 2014

Micro and Macro-Physics in Searches for Dark Matter, University of Maryland, Department of Astronomy, February 2014

Galactic Searches for Dark Matter, University of Richmond, Department of Physics, February 2014

Astrophysical Interplay in Dark Matter Searches, Michigan State University, Department of Physics and Astronomy, January 2014

Astrophysical Interplay in Dark Matter Searches, Harvard/ITC Colloquium, November 2013

Astrophysical Interplay in Dark Matter Searches, Mitchell Institute Seminar, Texas A&M, October 2013

Galactic Searches for Dark Matter, University of California– Santa Barbara, Physics and Astronomy Colloquium, May 2013

Galactic Searches for Dark Matter, University of California–Riverside, Department of Physics and Astronomy Seminar, March 2013

Galactic Searches for Dark Matter, Indiana University, Department of Physics Seminar, February 2013

Galactic Searches for Dark Matter, University of North Carolina–Chapel Hill, Department of Physics and Astronomy Colloquium, February 2013

Multiple Facets of Galactic Dark Matter Searches, INPA Seminar, UC Berkeley, October 2012

Dark Matter Properties from the Faintest Galaxies, Fermilab Astrophysics Seminar, April 2012

Dark Matter Properties from the Faintest Galaxies, Astronomy Colloquium, University of Texas, March 2012

Dark Matter Properties from the Faintest Galaxies, Physics and Astronomy Colloquium, Clemson University, March 2012

Dark Matter Properties from the Faintest Galaxies, Astronomy Colloquium, Indiana University, February 2012

Dark Matter Properties from the Faintest Galaxies, Physics and Astronomy Colloquium, University of Alabama, February 2012

Dark Matter Properties from the Faintest Galaxies, CTA Theoretical Astrophysics and General Relativity Seminar, Department of Physics, University of Illinois, January 2012

Dark Matter Limits from Dwarf Galaxies, Astrophysics Seminar, Brown University, October 2011

Multiple Facets of Galactic Dark Matter Searches, Physics Colloquium, Yale University, October 2011

Multiple Facets of Galactic Dark Matter Searches, STScI Colloquium, Baltimore, MD, September 2011

The Search for WIMP Dark Matter, Cosmology Seminar, University of California–Davis, April 2011

The Search for WIMP Dark Matter, Joint Space Institute Seminar, Department of Physics, University of Maryland, March 2011

Milky Way Structure, Substructure, and Satellite Galaxies, Astrophysics Seminar, University of Waterloo, February 2011

The Search for WIMP Dark Matter, Cosmology and Gravitation Seminar, Perimeter Institute, February 2011

Milky Way Satellites in a Lambda-Cold Dark Matter Universe, Joint Astrophysics Seminar, McGill University, Montreal, CA, January 2011

Dark Matter in Faint Galactic Satellites, Department of Physics and Astronomy, University of Utah, December 2010

Multi-wavelength Studies of Galactic Satellites and Implications for Dark Matter Detection, Center for Cosmology and Astroparticle Physics, The Ohio State University, October 2010

Milky Way Satellites and Lambda Cold Dark Matter, Santa Cruz Institute for Particle Physics, University of California– Santa Cruz, April 2010

Topics in Dark Matter: Substructure and Direction Detection, Department of Physics and Astronomy, University of California–Davis, March 2010

Dark Matter Substructure in the Milky Way: Properties and Prospects for Detection, Department of Physics, Case Western Reserve University, January 2010

Dark Matter on Galactic Scales, Imperial College London, Astrophysics Seminar, London, UK, June 2009

Dynamics of the Milky Way Dwarf Satellites, ACKS Seminar Series, Stanford University, Stanford, CA, October 2008

Dark Matter, Small-Scale Structure, and Dwarf Galaxies, Joint Tufts/CfA/MIT Cosmology Seminar Series, Institute for Theory and Computation, Cambridge, MA, March 2008

Dark Matter, Small-Scale Structure, and Dwarf Galaxies, Michigan Center for Theoretical Physics, Department of Physics, University of Michigan, Ann Arbor, MI, February 2008

Dark Matter, Small-Scale Structure, and Dwarf Galaxies, Berkeley Cosmology Group Seminar, University of California–Berkeley, November 2007

Dark Matter Annihilation in Dwarf Galaxies, GLAST Science Lunch, Kavli Institute for Particle Astrophysics and Cosmology, Stanford, CA, November 2007

Dark Matter, Small-Scale Structure, and Dwarf Galaxies, Astrophysics Seminar, Center for Cosmology and Particle Physics, New York University, October 2007

Dark Matter, Small-Scale Structure, and Dwarf Galaxies, Astrophysics Informal Seminar Series, Institute for Advanced Study, Princeton, NJ, October 2007

Dark Matter in Dwarf Galaxies, Department of Astronomy, Columbia University, New York, NY, October 2007

Dark Matter, Small-Scale Structure, and Dwarf Galaxies, Particle Astrophysics Seminar, Department of Physics, Case Western Reserve University, Cleveland, OH, September 2007

Determining the Nature of Dark Matter with Astrometry, Seminar, Kavli Institute for Cosmological Physics, University of Chicago, May 2007

Determining the Nature of Dark Matter with Astrometry, Particle Astrophysics Seminar, Fermilab, Batavia, IL, April 2007

Cosmological Implications of Dark Matter from Late Decays, Astrophysics and Cosmology Seminar, Los Alamos National Laboratory, Los Alamos, NM, April 2006

Prospects for Detecting Supernova Neutrinos, High Energy Physics Seminar, University of California–Berkeley, February 2006

Prospects for Detecting Supernova Neutrinos, Joint Particle Seminar, University of California–Irvine, October 2005

The Supernova Relic Neutrino Background, High Energy Physics Seminar, The Ohio State University, Columbus, OH, March 2004

INVITED
CONFERENCE AND
WORKSHOP
TALKS

- Neutrino backgrounds at dark matter detectors*, WIN, Irvine, CA, Jun 2017
- Neutrino cross sections at Solar energies*, APS meeting, Washington D.C., Jan 2017
- Neutrinos and dark matter*, Identification of dark matter (IDM) 2016, Sheffield, UK
- Coherent neutrino scattering*, Neutrino 2016, London, UK
- Mayacamas workshop on Dust, proper motions, and gravitational waves*, March 2016
- Astrophysics of Dark Matter*, Sexten, Italy, Feb 2016
- Dark Matter in Dwarf Galaxies*, GMTO conference, “(re)Solving Galaxies in the Era of Extremely Large Telescopes,” October 2015
- New Technologies for Discovery*, CPAD workshop, UT Arlington, Oct 2015
- Gamma-ray signal from Dark Matter*, Particle Physics and Cosmology (PPC 2015) workshop, Lead, SD, July 2015
- Indirect Detection of Dark Matter*, 27th Rencontre de Blois -Particle Physics and Cosmology, Blois, France, June 2015
- Neutrinos at Dark Matter Detectors*, Coherent Neutrino Theory Workshop, North Carolina State University, Jan 2015
- Review of Galactic Searches for Dark Matter*, What are we learning from the gamma-ray sky, University of Minnesota, Oct 2013
- Do we need alternatives to Cold Dark Matter?*, Self-Interacting Dark Matter Workshop, Harvard, Aug 2013, Cambridge, MA 2013
- Gamma-ray signal from Dark Matter*, Particle Physics and Cosmology (PPC 2013) workshop, Lead, SD, July 2013
- Galactic Searches for Dark Matter*, Identifying and Characterizing Dark Matter via Multiple Probes, KITP Workshop, May 2013
- Astrophysical uncertainties on the Dark Matter Problem*, Closing in on Dark Matter, Aspen January 2013
- Astrophysical modeling of dark matter distribution*, DarkAttack! Cross-disciplinary strategies to dark matter discovery and characterization, Ascona, Switzerland, July 2012
- Astrophysical Interplay in Dark Matter Searches*, CETUP* Workshop, Homestake, South Dakota, July 2012
- Addressing systematics in dark matter masses of dwarf spheroidals*, Dark Matter Signatures in the Gamma-Ray Sky, University of Texas, May 2012
- Astrophysical parameters and their impact on direct dark matter searches*, Dark Matter in Collision, UC Davis, April 2012
- Dark Matter Detection*, First Light and Faintest Galaxies: Extreme Probes of the Cold Dark

Matter Paradigm, KITP Conference, Santa Barbara, CA, February 2012

Dark Matter Limits from Dwarf Galaxies, PITT-PACC Exploring Low-Mass Dark Matter Candidates Workshop, University of Pittsburgh, November 2011

Indirect Dark Matter Detection Results with Fermi, Santa Fe Summer Workshop, Implications of Neutrino Flavor Oscillations, July 2011

Indirect Dark Matter Detection, Dark Matter: It's Origin, Models, and Methods for Detection, University of New Mexico, May 2011

Dark Matter Searches, CCAPP Symposium, The Ohio State University, April 2011

Galactic Satellites and Substructure, Pioneering into the Extragalactic Frontier with the Giant Magellan Telescope, Texas A & M University, March 2011

Indirect Dark Matter Detection in Dwarf Galaxies, Indirect & Direct Dark Matter Detection, Aspen, CO, February 2011

Dark Matter Results with Fermi, Darkness Visible, Cambridge University, Cambridge, UK, August 2010

Theoretical Review of Direct Dark Matter Detection, AXION-WIMP 2010, University of Zurich, July 2010

Dark Matter Searches with Fermi, AXION-WIMP 2010, University of Zurich, July 2010

Particle Physics Applications with Extra-Galactic Background Light, Measuring the Diffuse Sky Brightness from the Outer Solar System, University of California–Irvine, Irvine, CA March 2010

Reconstructing WIMP Properties at Direct Detection Experiments, Direct, Indirect and Collider Signals of Dark Matter Workshop, Kavli Institute for Theoretical Physics, Santa Barbara, CA, December 2009

Dark Matter Dominated Objects, Shedding Light on the Nature of Dark Matter Workshop, Keck Institute for Space Sciences, Caltech, Pasadena, CA, June 2009

Dark Matter Astronomy, Shedding Light on the Nature of Dark Matter Workshop, Keck Institute for Space Sciences, Caltech, Pasadena, CA, June 2009

Dark Matter Signals from Dwarf Galaxies, Shedding Light on Dark Matter Workshop, University of Maryland, April 2009

Neutrino Backgrounds at Dark Matter Detectors, Dark Matter in the Milky Way Workshop, Case Western Reserve University, Cleveland, OH, March 2009

Astrophysical Uncertainties in Dark Matter Searches, Dark Matter in the Milky Way Workshop, Case Western Reserve University, Cleveland, OH, March 2009

Milky Way Satellites: Mass Distributions and Indirect Detection, Hubble Fellows Symposium, Space Telescope Science Institute, Baltimore, MD, March 2009

Milky Way Satellites: Galaxies with a Dark Side, Dark Matter Workshop, Galileo Galilei

Institute for Theoretical Physics, Arcetri, Florence, February 2009

Observed Properties of Dark Matter Halos, Dark Matter Workshop, European Organization for Nuclear Research (CERN), Geneva, Switzerland, February 2009

Kinematic and Luminosity Distribution of Milky Way Satellites, Virgo Collaboration Meeting, Munich, Germany, January 2009

Dynamics of the Milky Way Dwarf Satellites, Identification of Dark Matter 2008 Conference, Stockholm, Sweden, August 2008

Dynamics of the Milky Way Dwarf Satellites, Small Scale Structure of Dark Matter Workshop, Perimeter Institute, Waterloo, CA, June 2008

The Dark Matter Mass Content of Milky Way Satellites, Dark Matter at Small Scales Workshop, Laboratoire d'Astroparticule et Cosmologie (APC), Paris, France, February 2008

Dark Matter in the Milky Way, Young Researchers Workshop, Perimeter Institute, Waterloo, CA, December 2007

The Mass Function of Milky Way Satellites, The Globular Cluster-Dwarf Galaxy Connection Workshop, Michigan Center for Theoretical Physics, Ann Arbor, MI, August 2007

Dark Matter Clues from Small-Scale Structure, TeV Particle Astrophysics Conference, Madison, WI, August 2006

Cosmological Implications of Dark Matter from Late Decays, 14th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Irvine, CA, June 2006

The Diffuse Supernova Neutrino Background, Conference in honor of Gary Steigman's 65th birthday, The Ohio State University, Columbus, OH, May 2006

Dark Matter and Galaxy Cores, Galaxies in the Cosmic Web Conference, New Mexico State University, Las Cruces, NM, May 2006

Prospects for Detecting Supernova Neutrinos, High Energy Physics and Underground Sciences (HUSEP) Collaboration Meeting, Colorado State University, Fort Collins, CO, November 2005

The Diffuse Supernova Neutrino Background, Weak Interactions and Neutrinos 2005 (WIN05), Delphi, Greece, June 2005

Theoretical Review of Supernova Relic Neutrinos, Underground Nucleon Observatory (UNO) Collaboration Meeting, University of Minnesota, Minneapolis, MN, April 2004

CONTRIBUTED
CONFERENCE
TALKS

Free-Floating Planets, NRO workshop, Princeton University, September 2012

Free-Floating Planets and Microlensing, Bay Area Exoplanet Meeting, SETI Institute, June 2012

Milky Way Satellites with Fermi, Darkness Visible, Cambridge University, Cambridge, UK, August 2010

Reconstructing WIMP Properties at Direct Detection Experiments, 2010 UCLA Dark Matter

Workshop, Marina del Ray, CA, February 2010

Galactic Satellites and the Aquarius Simulation, Aquarius and Virgo Collaboration Meeting, Durham, UK, December 2009

WIMP Constraints Including Astrophysical Uncertainties, TeV Particle Astrophysics, Stanford, CA, June 2009

Galactic Satellites and the Aquarius Simulation, Aquarius and Virgo Collaboration Meeting, Durham, UK, June 2009

Dark Matter Detection from Luminous Milky Way Satellites, Hunt for Dark Matter Symposium, Fermilab, Batavia, IL, May 2007

Resolving the Core/Cusp Issue with Astrometry, University of California–Irvine, 3rd Cosmology Conference, Astrophysical Probes of the Nature of Dark Matter, Irvine, CA, March 2007

Distinguishing Between Warm and Cold Dark Matter, Aspen Center for Physics, Neutrinos in Astrophysics and Cosmology, Aspen, CO, February 2007

Determining the Nature of Dark Matter with Astrometry, Theoretical Astrophysics in Southern California 2006 (TASC06), Kavli Institute for Theoretical Physics, University of California, Santa Barbara, October 2006

Measuring Dark Matter Distributions in Local Group Galaxies with Space Interferometry, Cosmo 2006 Conference, Lake Tahoe, CA, September 2006

Testing Warm Dark Matter Models with Dwarf Galaxies in the Local Group, UCLA Dark Matter Conference, February 2006

The Diffuse Supernova Neutrino Background, Theoretical Astrophysics in Southern California 2005 (TASC05), Caltech, Pasadena, CA, October 2005

The Type Ia Supernova Rate in the Local Universe, Astronomy with Radioactivities Conference, Clemson University, Clemson, SC, September 2005

The Diffuse Supernova Neutrino Background and the Cosmological Star Formation Rate, American Physical Society (APS) April Meeting, Tampa, FL, April 2005