

# Jodi A. Cooley

## Curriculum Vitae

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SMU Physics Department  
P.O. Box 0175  
Dallas, TX 75275-0175

telephone: (214)768-4687  
email: [cooley@physics.smu.edu](mailto:cooley@physics.smu.edu)  
website: <http://www.physics.smu.edu/cooley>

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### Education

- 1998-2003 The University of Wisconsin-Madison, College of Letters and Science, Madison, WI.  
Ph.D. in Physics Thesis title: "Searching for Neutrinos from Diffuse Astronomical Sources with the AMANDA -II Detector", December 2003.
- 1992-1997 The University of Wisconsin-Milwaukee, College of Letters and Science, Milwaukee, WI. B.S., Applied Mathematics and Physics, August 1997.

### Professional Appointments

- 2014-present Associate Professor of Physics at Southern Methodist University, Department of Physics, TX.  
  - Principle Investigator on SuperCDMS Dark Matter Experiment in Soudan, MN and Sudbury, Canada.
- 2009-2014 Assistant Professor of Physics at Southern Methodist University, Department of Physics, TX.  
  - Principle Investigator on SuperCDMS in the Soudan Underground Laboratory, Soudan, MN,
  - Principle Investigator in the Assays and Acquisition of Radio-pure Materials (AARM) Collaboration
  - Principle Investigator on CDMS II in the Soudan Underground Laboratory, Soudan, MN
- 2004-2009 Postdoctoral Scholar, Stanford University, Department of Physics, CA.  
  - Cryogenic Dark Matter Search (CDMS II), Soudan Underground Laboratory, Soudan, MN.
- 2003-2004 Postdoctoral Associate, Massachusetts Institute of Technology, Laboratory for Nuclear Science  
  - Super-Kamiokande, K2K, and T2K experiments, Japan.

## Management/Leadership Activities

- 2018 – present Deputy NSF Operations PI for the SuperCDMS SNOLAB Experiment
- Preparation of 10-year operations plan for the SuperCDMS SNOLAB experiment. During this time the collaboration plans include pre-operations, commissioning, operations and an upgrade. My responsibilities included planning the travel budget and resource loading the activity schedule. I also assisted in planning the estimated budget for materials and supplies.
- 2015 – present Chair-line Texas Section of the American Physical Society (elected).
- Chair serves first year as vice-chair, second year as chair-elect, third year as chair and final year as past chair.
  - Responsible for oversight of the Texas Section activities which include two annual section meetings, chairing meetings of the executive committee, overseeing the Awarding of the Annual Hyer Graduate Student and Undergraduate Student Research Awards, the Distinguished Service Award and the judging of the graduate and undergraduate presentations at the fall annual meeting.
  - During my term as chair (2016-2017) I reinvigorated the Hyer Award. In prior years the number of applications had been dwindling. Through my efforts, both the number and quality of applications increased.
- 2014 – present Level 2 Deputy Manager for Background Control and Material Characterization for the SuperCDMS SNOLAB Project
- Responsible for oversight of five subsystems for the SuperCDMS experiment: (1) background budget and material specifications of all materials and components used in construction, (2) the materials assay and screening program, (3) procedures, tracking and monitoring, (4) radon exclusion infrastructure and (5) background control management.
  - Compile monthly progress reports on this subsystem for report to the Department of Energy. These reports include documentation in P6 (Primavera Professional Project Management software) and written progress reports.
  - Present progress and answer questions at various SuperCDMS funding project reviews.
  - Plan activities within the subsystem and coordinate those activities across other systems within the experiment.
  - Conduct readiness reviews that are coordinated with other systems prior to procurements of materials or the start of processes or major steps in the experiment where backgrounds are a concern.
- 2010 – 2016 Director of the Undergraduate Physics Program at SMU
- Oversaw all aspects of the undergraduate physics program at SMU including advising physics majors, recruiting and retention and implementation of new curriculum and assessment requirements. During my tenure as director, the number of physics majors at SMU doubled. Recognition by the American Institute of Physics for graduating more than 50% female majors for two years.
- 2016 Created New Biophysical Science Major
- Created the first interdisciplinary major between the Biology, Chemistry and Physics departments at SMU. I led all aspects of this process, including the research into the assessment of the need, required courses, negotiations with the chairs of the three departments involved, and acting as the advocate to both the dean and provost approval committees.

## Awards/Recognitions

- 2018 Elected Fellow of the American Association for the Advancement of Science (AAAS).  
- Awarded for contributions to the search for dark matter scattering with nuclei, particularly using cryogenic technologies.
- 2016 Gerald J. Ford Research Fellowship, Southern Methodist University.  
- Awarded based on the significance of a faculty member's scholarly contributions and future research plans.
- 2015 Rotunda Outstanding Professor Award, Southern Methodist University.  
- Awarded to faculty whose commitment to teaching excellence is reflected in their classroom instruction and interactions with students.
- 2014 The Texas Section of the American Physics Society's Robert S. Hyer Award  
- Awarded to a student/research advisor pair for research excellence.
- 2012 National Science Foundation Faculty Early Career Development (CAREER) Award, National Science Foundation  
- The NSF's most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations.
- American Physical Society Committee on Status of Women in Physics Women Physicist of the Month, December.  
- Awardees nominated by their students for having a substantial impact on their life or career.  
(<http://www.aps.org/programs/women/scholarships/womanmonth/2012.cfm>)
- Honoring Our Professor's Excellence (HOPE) Award, Southern Methodist University.  
- Awardees have had significant impact on student lives both inside and outside the classroom. Selected by SMU Student Resident Assistants and SMU Honor Students
- 2011 Ralph E. Powe Jr. Faculty Enhancement Award, Oak Ridge Associated Universities.  
- Competitive award provides seed money for research conducted by junior faculty members at ORAU associated universities.
- 2000 Antarctica Service Medal and Bar  
- Congressional Service Medal and Bar for participating in scientific operations in Antarctica for a period of more than 30 days.

## External Funding Awards

- 2017
- National Science Foundation(Award Number: 1707704, period 2017 - 2020) base support for work at SMU on the SuperCDMS SNOLAB experiment.
- 2016
- Department of Energy (subaward from SLAC, period 2016 -2019) to surface screen materials for the SuperCDMS SNOLAB project.

- Department of Energy SCGSR Award - to fund graduate student research at Pacific Northwest National Laboratory for 6 months.

2012

- National Science Foundation Career Award (Award Number: 1151869, period 2012 – 2017) to work towards second generation dark matter experiments.
- National Science Foundation (Award Number: 1242640, period 2012-2014) to develop integrative tools for underground science.

2011

- Oak Ridge Associated Universities Ralph E. Powe Jr. Faculty Enhancement Award (period 2011-2012).

## **Internal Funding Awards**

2018

- Hamilton Undergraduate Research Scholar Award, SMU.

2017

- Hamilton Undergraduate Research Scholar Award, SMU.

2016

- Gerald J. Ford Research Fellowship, SMU.
- Hamilton Undergraduate Research Scholar Award, SMU.

2015

- Hamilton Undergraduate Research Scholar Award, SMU.
- Engaged Learning Grant, SMU.

2014

- Hamilton Undergraduate Research Scholar Award, SMU.
- Engaged Learning Grant, SMU.

2013

- Hamilton Undergraduate Research Scholar Award, SMU.

2012

- Hamilton Undergraduate Research Scholar Award, SMU.

2011

- Hamilton Undergraduate Research Scholar Award, SMU.

## **Recent Research Experience**

- SuperCDMS (Super Cryogenic Dark Matter Search) Activities
  - Level 2 Deputy Manager for Background Control and Material Characterization.
  - Guide current SMU effort to analyze SuperCDMS data search for low mass dark matter that manifests in a recoiling nucleus from a DM interaction radiating energy as a photon.
  - Directed the SMU analysis of Frenkel defects in the SuperCDMS detector crystals and their effects on the energy resolution, analysis threshold and sensitivity for the SuperCDMS SNOLAB experiment. This analysis has opened the door to lowering the analysis threshold for SuperCDMS and has implications for dark matter groups exploring directional techniques using germanium detectors. A publication on these results is in preparation.

- Led SMU effort to analyze current SuperCDMS data searching for WIMPs with mass greater than  $10 \text{ GeV}/c^2$ .
  - Led SMU effort to study surface event rejection capabilities of the new SuperCDMS iZIP detectors. To demonstrate the surface rejection capabilities, two  $^{210}\text{Pb}$  sources which produce background particles were installed with the detectors. The SMU group studied the alpha particles and the  $^{206}\text{Pb}$  recoiling nuclei produced by the decay of this source. These results have been published in PRL.
  - Developed a program to characterize radioactivity in detectors and experiment components, and for selecting materials that will meet specifications to construct the next phase of our experiment, SuperCDMS at SNOLAB.
  - Responsible for analysis that indicated the majority of background particles in the CDMS experiment resulted from radon exposure of the detectors during fabrication.
  - Initiated the SMU effort to study the irreducible radiogenic neutron particles rates as part of an effort to design the shielding required for the next generation SuperCDMS experiment. We are performing simulations of multiple configurations to optimize the final design.
  - Direct activities involving the XIA alpha particle counter located in the LUMINA laboratory at SMU. We use this counter to study the backgrounds of materials which have been exposed to radon and techniques to remove radio-impurities from material surfaces.
- AARM (Assays and Acquisition of Radiopure Materials) Activities
    - Initiated a new international collaboration which developed and launched radiopurity.org, a database of material assays used by the world-wide community of researchers who require radiopure materials in the construction of their experiments. This database now is hosted by SNOLAB and continues to grow. The details of this database are described in a NIM publication.
    - Led a collaboration of scientists from the SuperCDMS and LUX/LZ collaborations to make systematic comparison of tools available to do calculations of neutrons resulting from radiogenic decays. This effort resulted in a NIM publication.
- CDMS II (Cryogenic Dark Matter Search) Activities
    - Elected Analysis Coordinator from 2008-2009. During that period, I led the analysis effort that resulted in the observation of 2 dark matter candidate events, achieved the world's best sensitivity for WIMPs with mass greater than  $44 \text{ GeV}/c^2$  and has restricted parameter space for some favored supersymmetric models of particle physics. This analysis was published in the journal Science, has received over 550 citations and was widely noted by the media. I also led analyses that resulted in publications on the following topics: results from an axion search using CDMS II and results from the analysis of the low energy recoil spectrum of CDMS II.
    - Appointed Moderator of the DAQ, Data Quality and Computing working group from 2005-2008. During that time I led data quality and directed data processing efforts for the analysis of the first data taken with the completed CDMS II experiment. Heavily involved in the data analysis effort which resulted in zero dark matter candidate events and achieved the world's best limit on the WIMP-nucleon cross-section at time of publication.
    - Analyzed alphas particles as tool for estimating beta backgrounds from  $^{210}\text{Pb}$  contamination and developed estimates of beta backgrounds based on data.
    - Developed and maintain various components of the data acquisition system.

## Recent Appointments and Elected Positions

### Scientific:

- 2016 – present SuperCDMS Collaboration Executive Committee (elected).
- 2014 – present Level 2 Deputy Manager for Background Control and Material Characterization Subsystem for the SuperCDMS SNOLAB project (appointed).
- 2018 – present Chair, Science Working Group (elected).

- 2015 – present Chair, Conferences and Presentation Committee (elected).  
2018 – present Deputy NSF Operations PI (appointed).  
2011 – 2015 Co-Chair, Documentations and Policies Committee, SuperCDMS collaboration (elected).  
2014 Member of G2 Backgrounds and Screening Working Group, Joint working group between SuperCDMS/LZ Collaborations (appointed).  
2012 – 2014 Co-Leader, Materials and Screening Working Group, SuperCDMS collaboration (appointed).  
2010 – 2012 Moderator, Screening working group, SuperCDMS collaboration (appointed).  
2008 – 2009 Analysis Coordinator, CDMS collaboration (appointed).

**Community:**

- 2018 - present Past Chair, Texas Section of the American Physical Society (elected).  
2016 – 2018 Chair, Texas Section of the American Physical Society (elected).  
2015 Vice Chair, Texas Section of the American Physical Society (elected).

## Conference and Workshop Organization

2018

- APS Division of Particle and Fields Program Committee, Columbus, Ohio
- Scientific Organizing Committee, 30th Rencontres de Blois, Blois, France
- International Organizing Committee, Interplay of Particle and Astroparticle Physics

2017

- Convener, American Physical Society Division of Particle Physics Meeting, Fermilab, Illinois
- Scientific Organizing Committee, 29th Rencontres de Blois, Blois, France

2016

- Scientific Organizing Committee, 28th Rencontres de Blois, Blois, France
- International Organizing Committee, Interplay of Particle and Astroparticle Physics

2015

- Scientific Organizing Committee, 27th Rencontres de Blois, Blois, France
- Local Organizing Committee, Deep-Inelastic Scattering Conference, Dallas, Texas

2014

- Program Committee, APS Texas 2014 Fall Meeting, College Station, Texas
- International Organizing Committee, Interplay of Particle and Astroparticle Physics, London, England
- Scientific Organizing Committee, 26th Rencontres de Blois, Blois, France

2013

- Scientific Organizing Committee, Big Questions in Particle Astrophysics and Cosmology, Stanford University
- Chair of Organizing Committee, Closing in on Dark Matter - Aspen, Colorado

2012

- Convener of Cosmology and Astrophysics session, International Conference on High Energy Physics (ICHEP), Melbourne, Australia

## Professional and Public Service Activities

### Grants

- Panelist NSF Grant Reviews
- Panelist DOE Grant Reviews
- Reviewer NSF Grants
- Reviewer DOE Grants
- Reviewer CFI Grants
- Reviewer Research Corporation for Science Advancement Grants

### Journals

- Editorial Board *The Universe* (*joined in 2018*)
- Reviewer Astroparticle Physics Journal (Astropart. Phys.)
- Reviewer European Physical Journal C
- Reviewer Journal of Physics G: Nuclear and Particle Physics
- Reviewer Nuclear Instruments and Methods in Physics (NIM A)
- Reviewer Journal of Instrumentation (JINST)
- Reviewer Physica Status Solidi

### 2021

- Invited Lecturer for the 2021 Les Houches Dark Matter Summer School, Les Houches, Switzerland

### 2019

- Editorial Board *The Universe*
- APS Division of Particles and Fields Program Committee

### 2018

- Editorial Board *The Universe*
- APS Division of Particles and Fields Program Committee
- DOE Basic Research Needs (BRN) Workshop & Whitepaper Participant (Invited).
- Review Committee - US Naval Academy Physics Department Review (Invited).
- DOE Office of High Energy Physics Graduate Instrumentation Research Award (GIRA) selection panel.

### 2016

- Discussion Leader - Closeout of the Sub-eV Dark Matter Workshop, LBNL, USA (Invited).
- Speaker, Wallace Herbert Memorial Astronomy Lecture, Louisiana Tech University, Ruston, LA (Invited).
- Speaker, Clare Luce Boothe Lecture, University of Dallas, TX (Invited).

### 2015

- Opponent, Ph.D. Defense of Henric Taavolas, Uppsala Univeritet, Uppsala, Sweden. (Invited)

### 2014

- Lecturer for the 2014 Gran Sasso Summer Institute, Laboratori Nazionali del Gran Sasso, Italy. (Invited)

2013

- Contributor to the APS Division of Particles and Fields long term planning exercise, SNOWMASS 2013
- Lecturer for the Fermilab Academic Lecture Series, December 2013, Fermilab, Batavia, IL. (Invited)
- Lecturer for the 2013 Invisibles Summer School, Durham, England. (Invited)

2012

- Speaker, Colloquium Marcos Moshinsky, Universidad de Guanajuato, Mexico. (Invited)

2011

- Opponent, Ph.D. Defense of Olle Engdegard, Uppsala Univeritet, Uppsala, Sweden 2011. (Invited)

## Recent Conference Talks

### Invited *Review* Talks at International Conferences:

2018 “Current Status and Prospects for Direct Dark Matter Searches”. Presented at the 22nd International Conference on Particle Physics and Cosmology (COSMOS 2018) in Daejeon, Korea. (August 2018). Invited plenary review talk.

“mK Dark Matter Detectors and Low Mass WIMP Searches”. Presented at Dark Matter Detection and Detectability: Paradigm Confirmation or Shift? (April 2018, Santa Barbara, CA). Invited plenary review talk.

2017 “WIMP Dark Matter”. Presented at the International Committee on Future Accelerators (ICFA) Seminar Series (November 2017). Invited plenary review talk.

“Dark Matter Searches”. Presented Weak Interactions and Neutrinos (June 2017). Invited plenary review talk.

2014 “A Brief Overview of Direct Searches for Dark matter”. Presented at the Progress in New and Old Themes in cosmology (April 2014), Avignon, France. Invited plenary review talk.

“Other WIMP Dark Matter Direct Detection Experiments”. Presented at the 13th International Conference on Topics in Astroparticle and Underground Physics (TAUP 2013), Asilomar, CA. (September 2013). Invited plenary review talk.

“Direct Searches for Dark Matter”. Presented at XXV Rencontres de Blois, Blois, France. (May 2013). Invited plenary review talk.

2012 “Overview of Direct Detection Dark Matter Experiments”. Presented at the VIII International Workshop on the Dark Side of the Universe, Buzios, Brazil. (June 2012). Invited plenary review talk

### Invited *Review* Talks at National Conferences:

2018 “Low Radioactivity Background Techniques”. Presented at the American Physical Society April Meeting (April 2018). *Invited review talk* to kick off a mini-symposium on low radioactivity techniques in underground science.



2013 “Dark Matter: An Experimentalist’s Perspective”. Presented at the Ohio Section American Physical Society Meeting (October 2013). Invited plenary review talk.

**Invited Review Talks at Regional Conferences:**

2018 “Overview of Astrophysics/Cosmology Program at SMU”. Presented at the Building Astronomy Program in Texas Symposium (January 2018). Invited plenary talk.

**Invited Talks at International Conferences/Workshops:**

2018 “SuperCDMS in a Nutshell”. Presented at KITP Program The Small Scale Structure of Dark Matter (April - June 2018). Invited Participant.

2015 “Light Dark Matter at SuperCDMS”. Presented at Beyond WIMPS: From Theory to Detection, Israel (May 2015). Invited plenary talk.

“[radiopurity.org](http://radiopurity.org): A Community Assays Database”. Presented at Low Radioactivity Techniques, Seattle, WA. (March, 2015). Invited plenary talk.

2014 “Recent Result from SuperCDMS for Low Mass WIMPs”. Presented at the workshop entitled Latest Results in Dark Matter (May 2014), Stockholm, Sweden. Invited plenary talk.

2010 “Recent Results from the CDMS II Experiment and Status and Prospects for SuperCDMS”. Presented at the 2010 International Symposium on Particles, Strings and Cosmology, Valencia, Spain. (Invited plenary talk).

“The XIA Alpha Particle Counter”. Presented at Low Radioactivity Techniques, Sudbury, Canada (Invited plenary talk).

2009 “Results from the CDMS II Experiment”. Present at the 2009 Topics in Astrophysics and Underground Physics Conference, Rome, Italy (Invited plenary talk).

**Contributed Talks at International Conferences/Workshops:**

2017 “Recent Results from the SuperCDMS Soudan Experiment”. Presented at Topics in Underground Physics and Astrophysics 2017 (August 2017).

2013 “Background Considerations for SuperCDMS”. Presented at Low Radioactivity Techniques, Gran Sasso, Italy. (April 2013)

2012 “Results from CDMS II and Status of SuperCDMS”. Presented at “The LHC, Particle Physics and the Cosmos”, Auckland, New Zealand. (July 2012)

2011 “Constraints on Low Mass WIMPs from the CDMS II Experiment”. Presented at the XXIII Rencontres de Blois, Blois, France.

**Teaching Experience**

2009 – present Southern Methodist University, Department of Physics, Dallas, TX  
Honors Physics (Spring 2019, Fall 2018)  
General Physics II (Fall 2018)

- Introduction to Mechanics (Fall 2010, Spring 2011, Fall 2011)  
Principles of Astrophysics and Cosmology (Fall 2009, Spring 2014)  
Introductory Astronomy (August 2016, Fall 2012)  
Modern Physics (Fall 2017, Spring 2016, Fall 2016, Fall 2015, Spring 2014, Fall 2014,  
Fall 2013, Spring 2012, Fall 2012)
- 2016 Developed New Major: Biophysical Sciences  
- This is SMU's first interdisciplinary major between the Physics, Chemistry and  
Biology departments.
- 2017 Developed New Course: Foundations of Cosmology

## University Service Work

- 2017 – Present Director and Major Advisor for the Biophysical Sciences Program, SMU  
2018 – Present Assessment Coordinator for the Biophysical Sciences Program, SMU  
2009 – Present Member Undergraduate Physics Committee, SMU  
2017 – Present Hunt's Scholar Selection Committee, SMU  
2014 – 2016 Elected Member of the Dedman College Undergraduate Council, SMU  
2014 – 2016 Member of the President's Commission on the Status of Women, SMU  
2014 – 2016 Faculty Affiliate for Morrison McGinnis Residential Commons, SMU  
2015 Member of the Provost Search Committee, SMU  
2012 – 2013, 2015  
Spring Commencement Faculty Marshal, SMU  
2010 – 2016 Director of the Undergraduate Physics Program, SMU  
2010 – 2012, 2015-2016  
Undergraduate Physics Major Advisor, SMU  
2009 – 2010 Physics Department Seminar Organizer, SMU  
2009 – 2010 Physics Department Radiation Officer, SMU

## Graduate Student Thesis Advisees and Postdoctoral Mentoring Activities

- 2013 – present Daniel Jardin, SMU, graduate student  
2013 – present Robert Calkins, SMU Postdoctoral Scholar
- 2010 – 2013 Silvia Scorza, SMU Postdoctoral Scholar (Research Scientist at SNOLAB, Canada)
- 2015 – 2018 Matt Stein, SMU graduate student, PhD (Satellite Communications Systems Engineer at  
RT Logic, Colorado Springs, CO)
- 2010 – 2017 Hang Qiu, SMU graduate student, PhD (Postdoc at Weizmann Institute, Israel)
- 2010 – 2014 Bedile Karabuga, SMU graduate student, MS

## Graduate Student Thesis Committees

- 2018 Govinda Dhugana, SMU Physics  
2015 Henric Taavola, Uppsala Univeritet, Uppsala, Sweden (invited, opponent)  
2012 Kamile Dindar-Yagci, SMU Physics  
2011 Olle Engdegard, Uppsala Univeritet, Uppsala, Sweden (invited, opponent)  
2011 Andrea Adams, SMU Chemistry (external member)

## Recent Invited Colloquia and Seminars

2017	Colloquium Seminar Seminar	UT Arlington Michigan State University SMU
2015	Colloquium Seminar	University of Massachusetts, Amherst Uppsala Univeritet
2014	Colloquium Seminar Colloquium Colloquium Seminar Seminar	UT Dallas Tel Aviv University, Israel Georgia Tech Georgia State University LAL, Orsay, France Karlsruhe Institute of Technology, Germany
2013	Seminar Physics Department Colloquium	CERN, Geneva Switzerland University of Kentucky
2012	Physics Department Colloquium Physics Institute Seminar Colloquium Marcos Moshinsky	UT Arlington Universidad de Guanajuato Universidad de Guanajuato
2011	TUNL Seminar  Astrophysics Seminar	TUNL (Triangle Universities Nuclear Laboratory) Uppsala Univeritet
2010	Nuclear Physics Seminar Particle Physics Seminar Particle Physics Seminar Particle Physics Seminar Particle Physics Seminar Physics Department Colloquium Physics Department Seminar	Indiana University SLAC National Accelerator Laboratory Columbia University Rutgers University University of Maryland University of Delaware Southern Methodist University
2009	Astrophysics Seminar Joint EP/PP Seminar What Do Physicists Do? Series Particle Physics Seminar Physics Department Colloquium	SLAC National Accelerator Laboratory CERN, Geneva Switzerland Sonoma State University University of Rochester University of Alberta, Canada

## Recent Outreach and Synergistic Activities

2018	NPR Science Friday Interview (June 8, 2018) - <a href="https://www.sciencefriday.com/segments/dark-matter-eludes-particle-physicists/">https://www.sciencefriday.com/segments/dark-matter-eludes-particle-physicists/</a> APS News, Interview for Article (July 2018 “ <i>Diversifying the Dark Matter Portfolio</i> ”) Living Physicists Project, W.H. Adamson High School, Dallas ISD Popular Science, Interview for Article (March 28, 2018 “ <i>Why a galaxy with no dark matter could make it hard to prove there’s no dark matter</i> ”)	
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- 2017 Dark Matter Days Activities @ SMU  
APS Viewpoint, “Dark Matter Still at Large”, *Physics 10* (2017)  
- <https://physics.aps.org/articles/v10/3>
- 2016 Wallace Herbert Memorial Astronomy Lecture, Louisiana Tech, LA  
Clare Luce Boothe Lecture, University of Dallas, TX  
Living Physicists Project, W.H. Adamson High School, Dallas ISD  
Dallas Region Science Fair, Grand Prize Judge
- 2015 Sciencecast, Perot Museum of Science, Dallas, TX  
Keynote Speaker, Texas Astronomical Society of Dallas (July meeting)  
Mentor, Girl Scouts of North Texas, STEM College Journey  
Living Physicists Project, W.H. Adamson High School, Dallas ISD  
Speaker, Women in Science Alliance, University of Texas - Dallas  
NPR Science Friday Interview (March 27, 2015)  
- <http://www.sciencefriday.com/segment/03/27/2015/understanding-the-dark-side-of-physics.html>  
Keynote Speaker, SMU Physics Symposium  
Dallas Regional Science Fair, Grand Prize Judge
- 2014 Dallas Regional Science Fair, Grand Prize Judge
- 2013 Interview for Odyssey Magazine (children’s science magazine)  
Town and Gown Lecture, Southern Methodist University  
Keynote Speaker, Dallas Regional Science Fair Awards Banquet  
Dallas Regional Science Fair, Grand Prize Judge
- 2012 Keynote Speaker, Honors Convocation, Southern Methodist University  
Dallas Regional Science Fair, Grand Prize Judge
- 2011 QuarkNet, talk, SMU (June, 2011)
- 2010 Collegium da Vinci, SMU (November, 2010)  
ABC – WFAA Interview (November, 2010)  
- <http://www.wfaa.com/news/technology/Minnesota-mine-could-yield-secrets-of-the-universe-to-SMU-professor-110539874.html>
- 2009 What Do Physicists Do?, Outreach Colloquium at Sonoma State University

## Refereed Publications

### General Publications

Papers published outside of the experimental collaborations of which I am a member.

1. Input Comparison of Radiogenic Neutron Estimates for Ultra-low Background Experiments  
By J. Cooley, K.J. Palladino, H. Qiu, M. Selvi, S. Scorza, C. Zhang.  
arXiv:1705.04736 [physics.ins-det].  
10.1016/j.nima.2017.11.028.  
Nucl.Instrum.Meth. A888 (2018) 110-118.
2. Radon daughter plate-out measurements at SNOLAB for polyethylene and copper  
By Matthew Stein, Dan Bauer, Ray Bunker, Rob Calkins, Jodi Cooley, Ben Loer, Silvia Scorza.  
arXiv:1708.09476 [astro-ph.IM].  
10.1016/j.nima.2017.10.054.  
Nucl.Instrum.Meth. A880 (2018) 92-97.
3. A Database for Storing the Results of Material Radiopurity Measurements  
By J.C. Loach, J. Cooley, G.A. Cox, Z. Li, K.D. Nguyen, A.W.P. Poon.  
arXiv:1604.06169 [physics.ins-det].  
10.1016/j.nima.2016.09.036.  
Nucl.Instrum.Meth. A839 (2016) 6-11.
4. Overview of Non-Liquid Noble Direct Detection Dark Matter Experiments  
By J. Cooley.  
arXiv:1410.4960 [astro-ph.IM].  
10.1016/j.dark.2014.10.005.  
Phys.Dark Univ. 4 (2014) 92-97.
5. Sources of Variability in Alpha Emissivity Measurements at LA and ULA Levels, a Multicenter Study  
By Brendan D. McNally, Stuart Coleman, William K. Warburton, Jean-Luc Autran, Brett M. Clark, Jodi Cooley, Michael S. Gordon, Zhengmao Zhu.  
arXiv:1401.1845 [physics.ins-det].  
10.1016/j.nima.2014.02.052.  
Nucl.Instrum.Meth. A750 (2014) 96-102

### CDMS/SuperCDMS Publications

Papers which were published as a member of the CDMS/SuperCDMS collaboration.

1. Search for Low-Mass Dark Matter with CDMSlite Using a Profile Likelihood Fit.  
Submitted to Phys Rev D.  
arXiv: 1808.09098.
2. Production Rate Measurement of Tritium and Other Cosmogenic Isotopes in Germanium with CDMSlite  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1806.07043 [physics.ins-det].  
10.1016/j.astropartphys.2018.08.006.  
Astropart.Phys. 104 (2019) 1-12.

3. Energy Loss Due to Defect Formation from  $^{206}\text{Pb}$  Recoils in SuperCDMS Germanium Detectors \* *Editors Pick*  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1805.09942 [physics.ins-det].  
10.1063/1.5041457.  
Appl.Phys.Lett. 113 (2018) 092101.
4. First Dark Matter Constraints from a SuperCDMS Single-Charge Sensitive Detector  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1804.10697 [hep-ex].  
10.1103/PhysRevLett.121.051301.  
Phys.Rev.Lett. 121 (2018) no.5, 051301.
5. Nuclear-Recoil Energy Scale in CDMS II Silicon Dark-Matter Detectors  
By CDMS Collaboration (R. Agnese et al.).  
arXiv:1803.02903 [physics.ins-det].  
10.1016/j.nima.2018.07.028.  
Nucl.Instrum.Meth. A905 (2018) 71-81.
6. Results from the Super Cryogenic Dark Matter Search Experiment at Soudan  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1708.08869 [hep-ex].  
10.1103/PhysRevLett.120.061802.  
Phys.Rev.Lett. 120 (2018) no.6, 061802.
7. Low-mass dark matter search with CDMSlite  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1707.01632 [astro-ph.CO].  
10.1103/PhysRevD.97.022002.  
Phys.Rev. D97 (2018) no.2, 022002.
8. Projected Sensitivity of the SuperCDMS SNOLAB experiment  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1610.00006 [physics.ins-det].  
10.1103/PhysRevD.95.082002.  
Phys.Rev. D95 (2017) no.8, 082002.
9. New Results from the Search for Low-Mass Weakly Interacting Massive Particles with the CDMS Low Ionization Threshold Experiment  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1509.02448 [astro-ph.CO].  
10.1103/PhysRevLett.116.071301.  
Phys.Rev.Lett. 116 (2016) no.7, 071301.
10. Improved WIMP-search reach of the CDMS II germanium data  
By SuperCDMS Collaboration (R. Agnese et al.).  
arXiv:1504.05871 [hep-ex].  
10.1103/PhysRevD.92.072003.  
Phys.Rev. D92 (2015) no.7, 072003.

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2. Viewpoint: Dark Matter Still at Large  
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