

Will Hogan Flanagan

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EMPLOYMENT **Assistant Professor of Physics, University of Dallas**, Irving, TX USA
(Starting August 2017)

Postdoctoral Fellow, University of Texas, Austin, TX USA
(Current)

Advisor: Dr Karol Lang

- Main Injector Neutrino Oscillation Search (MINOS+/MINOS)
 - Standard neutrino oscillation measurements and sterile neutrino searches, Monte-Carlo production, software coordination
- Liquid Argon In A Testbeam (LArIAT)
 - Aerogel Cherenkov detector, data acquisition, deputy run coordination, beamline measurements and simulation
- Mitchell Institute Neutrino Experiment at a Reactor (MINER)
 - Fast and thermal neutron background measurements, Geant4 shielding simulations
- NuMI Off-Axis ν_e Appearance (NO ν A)
 - Data Acquisition coordinator for the test beam effort

EDUCATION **Texas A&M University**, College Station, TX USA

PhD Physics (2014)

Advisor: Dr Teruki Kamon

- Topic: Search for supersymmetry using weak boson fusion processes in proton-proton collisions at the Large Hadron Collider

University of Colorado, Boulder, CO USA

B.A. Physics, B.A. Mathematics, minor Astronomy (2010)

Advisor: Dr Uriel Nauenberg

- Summa Cum Laude

AWARDS Fermi National Laboratory
 • URA Visiting Scholar, Summer 2017

Fermi National Laboratory
 • Neutrino Physics Center Fellow, Fall 2016

Fermi National Laboratory
 • LHC Physics Center Graduate Scholar, September-October 2013

Texas A&M Division of Research and Graduate Studies
 • Graduate Merit Fellow 2010-2012

REFEREED MINER Collaboration, Background Studies for the MINER Coherent Neutrino Scattering
PUBLICATIONS Reactor Experiment, *NIM A* 853, 5360 (2017).

CMS Collaboration, Search for Dark Matter and Supersymmetry with a Compressed Mass Spectrum in the Vector Boson Fusion Topology in Proton-Proton Collisions at $\sqrt{s} = 8$ TeV, *Phys. Rev. Lett.* 118, 021802 (2017).

MINOS Collaboration, Constraints on Large Extra Dimensions from the MINOS Experiment, *PRD* 94, 111101 (2016).

MINOS Collaboration, A search for sterile neutrinos mixing with muon neutrinos in MINOS, *PRL* 117, 151803 (2016).

MINOS and Daya Bay Collaborations, Limits on Active to Sterile Neutrino Oscillations from Disappearance Searches in the MINOS, Daya Bay, and Bugey-3 Experiments, accepted by *PRL* 117, 151801 (2016).

CMS Collaboration, Search for supersymmetry in the vector-boson fusion topology in proton-proton collisions at $\sqrt{s} = 8$ TeV. *JHEP* 11, 189 (2015).

Dutta B., Flanagan W., Gurrola A., Johns W., Kamon T., Sheldon P., Sinha K., Wang K., Wu S., Probing Compressed Top Squarks at the LHC at 14 TeV. *PRD* 90, 095022 (2014).

CMS Collaboration, Search for supersymmetry in all-hadronic events with tau leptons. *European Physical Journal C* 73, 2493 (2013).

Abbaneo D., et. al, Status of the Triple-GEM Project for the Upgrade of the CMS Muon System. *Journal of Instrumentation.* 8 C12031 (2013).

Abbaneo D., et. al, Development and performance of large scale triple GEM for CMS. *Journal of Instrumentation.* 8 C11017 (2013).

CMS Collaboration, Missing transverse energy performance of the CMS detector, *Journal of Instrumentation.* 6, 09001 (2011).

CMS Collaboration, Search for Supersymmetry in pp Collisions at $\sqrt{s} = 7$ TeV in Events with Two Photons and Missing Transverse Energy. *PRL* 106, 211802 (2011).

CONFERENCE
TALKS AND
INVITED
SEMINARS

The 2017 Tamura Symposium: Lepton and Baryon Symmetry, 'Latest Results from MINOS and MINOS+'. May 2017

Lake Louise Winter Institute. 'Latest Results from MINOS and MINOS+'. February 2016

International Workshop for the Next Generation Nucleon Decay and Neutrino Detector (NNN15). 'ArgoNeuT and LArIAT: Status and Progress on Measurements Relevant for DUNE'. October 2015

APS April Meeting. 'Muon Neutrino Disappearance Measurements at MINOS+'. April 2015

Workshop on the Intermediate Neutrino Program. 'MINOS+ Results and Future Plans'. February 2015

Baylor University Seminar. 'Supersymmetry Searches Using Vector Boson Fusion, Present and Future'. March 2014

VII International Conference on Interconnections between Particle Physics and Cosmology (PPC2013). ‘Search for Supersymmetric Stops Using Weak Boson Fusion Processes at the CERN LHC’. July 2013.

215th Meeting of the American Astronomical Society. ‘Quantifying the Clustering around Intermediate Mass Pre-Main Sequence Stars’. January 2010.

Fall 2009 Meeting of the Four Corners Section of the APS. ‘Measuring Charginos and Neutralinos at the CERN LHC’. October 2009.

Seminar for Universidad de La Serena. ‘Medir Materia Oscura en el Gran Colisionador de Hadrones’. May 2009.

Joint Fall Meeting of the Texas and Four Corners Sections of the APS. ‘Searching for SUSY in the Focus Point Region of mSUGRA at the CERN LHC’. October 2008.

2008 Annual Meeting of the APS Division of Nuclear Physics. ‘Probing 23% of the Universe at the Large Hadron Collider’. October 2008.

MEMBERSHIPS/
COLLABORATIONS

- NuMI Off-Axis ν_e Appearance (NO ν A) Collaboration, 2017-Present
- Main Injector Neutrino Oscillation Search (MINOS) Collaboration, 2014-Present
- Liquid Argon in a Testbeam (LArIAT) Collaboration, 2014-Present
- Compact Muon Solenoid (CMS) Collaboration, 2009-2014
- American Physics Society, 2007-Present
- American Astronomical Society, 2007-Present
- Texas Academy of Science, 2014-Present

TEACHING

Physics 202 - Electricity and Magnetism (Summer 2011)

- Taught recitations, supervised lab, and provided quizzes.

Astronomy 2600 - Computational Techniques (Fall 2008, Fall 2009)

- Taught recitations, supervised lab, and graded programming assignments.

OUTREACH

O’Neal Elementary School - Elgin IL - November 2014

- Presentation on ‘Forces and Motion’ for a 5th grade class

Sterling High School - Sterling IL - March 2015

- Underground tour of the MINOS+, MINER ν A, and NO ν A experiments at Fermilab for high school physics students

Quarknet Masterclass at Fermilab - Batavia IL - March 2015

- Gave a presentation to two high school classes and led a hands-on activity in which we rediscovered the J/Ψ particle with actual CMS data

Liberty Elementary - Carpentersville IL - May 2015

- Presentation on ‘Charge! Electricity and Magnetism’ for a 4th grade class

Quarknet Summer Intern Program at Fermilab - Batavia IL - Summer 2015

- Supervised a high school student on the topic ‘Firmware Upgrades for the LArIAT Data Acquisition’