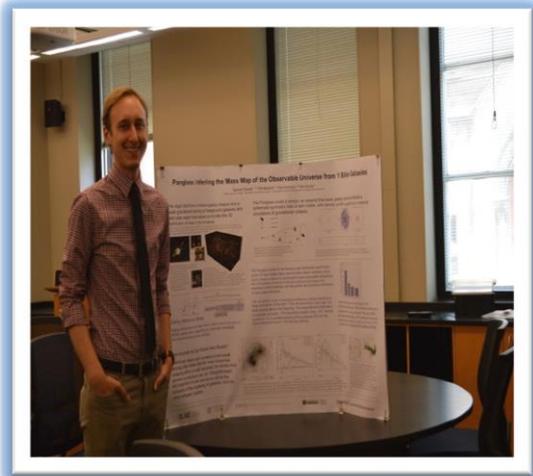


DEPARTMENT OF PHYSICS



Senior Award Recipients

As recipient of the Physics Student of the Year award, **Spencer Everett** is graduating as a physics and pure math major with a 4.0 GPA. Spencer participated in undergraduate research, spending two summers at DePaul University and one summer at the Stanford Linear Accelerator Laboratory developing methods for mapping dark matter with gravitational lensing. His honors thesis was based on this research. He has presented his work at the DePaul Undergraduate Research Symposium and the Chicago Area Undergraduate Research Symposium (CAURS). Additionally, he has co-authored two publications in the academic journal *DePaul Discoveries*. Spencer has served as a teaching assistant and the president of the Society of Pi Sigma (SPS), DePaul chapter. As the recipient of multiple academic scholarships, including the James J. Vasa Memorial Scholarship for Excellence in Physics, Spencer has managed to excel in a wide range of physics courses. In the fall, he will attend University of California to begin work on a PhD in physics with interest in continuing research in astrophysics and cosmology. You can often see Spencer visiting the faculty just to chat about physics or other topics. We congratulate Spencer on his academic success and significant contributions to the department.

Megan Mikota and **Mary Tarpley** are recognized with the Dean's Award for Outstanding Academic Achievement. In addition to their academic excellence, both students have been actively involved in research and participated in the DePaul Undergraduate Research Symposiums. Megan has worked as a teaching assistant and tutor where she shares her warm smile and enthusiasm for physics. Megan hopes to continue at DePaul University to pursue a Master of Science in Physics. Mary, an active member and officer of the physics club, SPS, is a double major in pure math and physics. Whether creating magnetic slime or traveling with a telescope designed by SPS, her passion for physics is evident. She plans to apply to graduate school in the fall to pursue a PhD in particle physics. Congratulations to Megan and Mary on their great accomplishments.

Physics Graduates 2015-2016

- Joe Boesso
- Rita Dawod
- Spencer Everett
- Steven Hull
- Mir Iqbal
- Ashar Khan
- Mark Latocha
- John Linehan
- Kayla Lynch
- Joanna McCall
- Sean MacIntosh
- Megan Mikota
- Jennifer Rodriguez
- Matthew Ross
- Chase Ruschel
- Ryan Shitakis
- Mary Tarpley



DEPAUL UNIVERSITY

College of Science & Health

Special Recognition

Dr. Jesús Pando, Physics Chair, was elected President of the National Society of Hispanic Physicist. He was appointed to the Committee on Minorities of the American Physical Society. He received the Service and Leadership Award from the Chicago area Louis Stokes Alliances for Minority Participation (LSAMP).

Dr. Eric Landahl and Dr. Bernhard Beck-Winchatz received a Quality of Instruction Council Collaborative Award entitled “Curricular Integration of Maker Culture” which seeks to establish a new subfield of Physics Education Research.

Dr. Eric Landahl and Mark Potosnak (ENV) received a Vincentian Endowment Fund, “Wearable Environmental Monitors for Social Justice”.

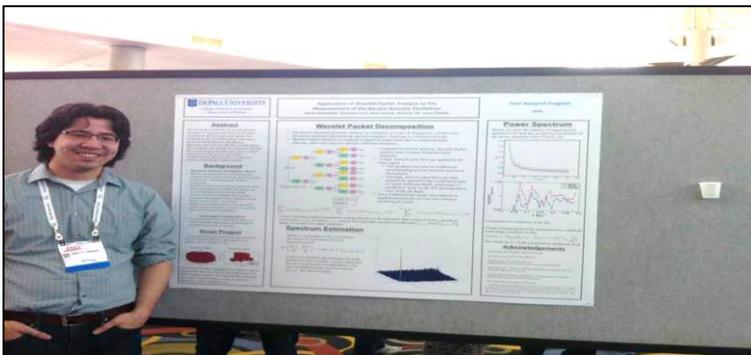
Dr. Eric Landahl received a University Research Council leave for the Autumn and Winter quarters 2016-2017. His activities will include collaborations with Northwestern University Feinberg School of Medicine and Pohang Light Source in South Korea.

Dr. Mary Bridget Kustusich and Dr. Susan Fischer and students Jaime Bryant and Rita Dawod were published in the 2015 Physics Education Research Conference Proceedings - entitled “Exploring Student Difficulties with Observation Location”.

Dr. Susan Fischer presented a contributed talk entitled “From Psychology Experiment to Physics Lab: Feeling Angular Momentum” at the AAPT Winter Meeting.

Dr. Christopher Goedde, professor and former department chair, celebrates 20 years in the Physics Department.

Dr. Anuj Sarma recently attended the Midwest Magnetic Fields Conference in Madison, WI where he gave a presentation on magnetic fields measurement research.



Student Research Presented at APS by Kevin Kadowaki

The American Physical Society (APS) April Meeting in Salt Lake City brought together hundreds of physicists to present the latest research in numerous scientific disciplines. In attendance with faculty mentor Dr. Jesús Pando, graduate student Kevin Kadowaki presented a poster at the conference based on his research in collaboration with Noel Garcia and Taurean Ford. Entitled “Application of Wavelet Packet Analysis to the Measurement of the Baryon Acoustic Oscillation”, the poster showed their research in detecting the baryonic acoustic oscillation using the wavelet packet transform. Baryonic acoustic oscillations (BAO) are pressure waves in matter formed early in the universe then frozen when matter and radiation decouple. These oscillations carry important cosmological information imprinted in them. The oscillations are tricky to measure in the current matter density field, and the team has worked on developing a unique and efficient way to measure these oscillations. They developed a method of wavelet packet analysis to measure the baryon acoustic oscillation peak and apply this method to the CMASS galaxy catalog from the SDSS Baryon Oscillation Spectroscopic Survey (BOSS) collaboration. This work was funded by a grant from the Sloan Digital Sky Survey (SDSS). Kevin commented, “Not only was it a great experience to present at the conference, it was also an opportunity to see all the cutting edge research in physics, especially with regard to gravitational waves”.

DePaul SPS



SPS president Spencer Everett and treasurer Kayla Lynch, coordinated several events this year for the physics enthusiasts. Kicking off the year with a field trip to the Adler Planetarium to view the lunar eclipse, they captured some amazing photos. After completing production of their radio telescope, they tested its productivity and conducted their first observation. A visit to the Museum of Science and Industry with other SPS clubs and the making of magnetic slime putty were just a few other experiences that built their camaraderie. Good times were had by all. The club meets informally to talk physics and catch up. The success of this club is due to the strong and enthusiastic participation of its members, and it is seeking to build its membership. The chapter allows students to meet new people, network and keep up on the latest trends in physics. Noel Garcia has been nominated as President for the 2016-2017 school year.

DePaul SACNAS Chapter



SACNAS members attended the Regional Conference at Northwestern University on May 13th where they experienced professional development sessions on various science and diversity topics, viewed oral and poster research presentations, and networked with other mentors and peers.

Colloquium Series

This year the department had the pleasure of hosting four colloquia speakers who shared their passion and work in the various fields of science. The speakers introduce students and faculty to unique science or industry-related fields and topics. To kick off the series, DePaul physics alumnus **Dr. Tom Crawford** (BS 1996), now a senior research associate in the Department of Astronomy and Astrophysics at the University of Chicago, presented his session entitled "Probing Fundamental Physics with the Oldest Light in the Universe" based in part on his research at the South Pole Telescope. In February, **Dr. Taviare L. Hawkins**, assistant physics professor at University of Wisconsin, La Crosse presented her talk "Introduction to Microtubule Mechanics". Assistant physicist at Argonne National Laboratory's Chemical Sciences and Engineering Division, **Dr. Anne Marie March**, discussed her research on "Capturing Photo-excited Molecules in Action Using X-Rays". The final presentation by **Professor Jayson Margalus** from DePaul University School of Design shared his interest and work as a game developer, hardware and data analysis entitled "Designing for Physical Technology". Thank you to Dr. Eric Landahl for organizing the colloquium series.

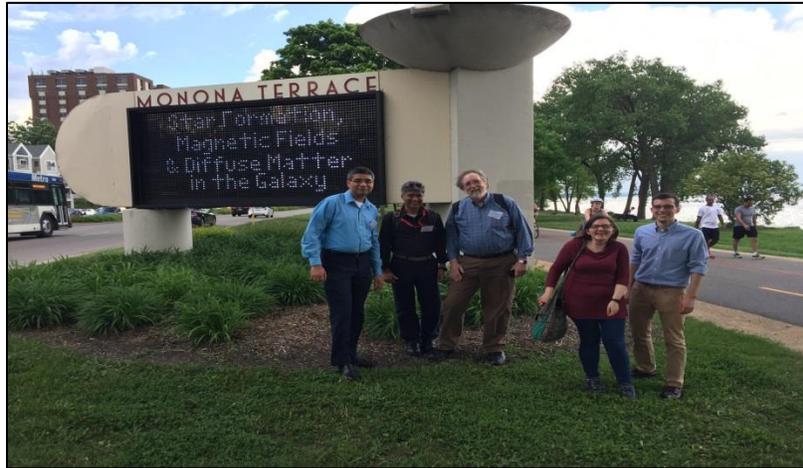
Tribute to Thomas Stinchcomb, PhD



1922 - 2016

The Department of Physics mourns the death of Thomas Stinchcomb, PhD, a long-time professor and department chair. Dr. Stinchcomb graduated from Heidelberg College in Tiffin, OH, was commissioned in the US Naval Reserve at Annapolis, and served as a radar officer on the USS Mississippi during World War II. He began his graduate studies in physics at the University of Chicago specializing in high altitude radiation physics. His research and teaching career included Washington State University, Heidelberg College and Illinois Institute of Technology. In 1968, Tom joined the physics faculty at DePaul University as chairman, taught medical physics and served as the primary thesis advisor for many students before retiring in 1991. Tom enjoyed many service and personal activities, including the American Association of Physicists in Medicine, volunteering with the Senior Health Insurance Program of Illinois, playing bridge with friends and playing flute in several community bands and orchestras. He was a teacher, role-model and mentor to many. With a heartfelt "thank you", a smile, and a great sense of humor, he was an inspiration to all. DePaul Music School played a flute and piano duet in his honor. In lieu of flowers, memorial donations can be made to DePaul University General Scholarship Fund.

Dr. Sarma Attends Midwest Magnetic Fields Conference



Star formation, magnetic fields, and diffuse matter in the galaxy, a conference honoring the contributions of Richard Crutcher and Carl Heiles, was held at the Wisconsin Institute for Discovery in Madison, WI from May 23-27. At the conference, Dr. Anuj Sarma delivered a talk summarizing his research on magnetic field measurements including his discovery of the Zeeman effect in Class I methanol masers about eight years ago. In his talk, Dr. Sarma also presented his recent result on the measurement of the Zeeman effect at 44 GHz in the star forming region DR21(OH). Moreover, this was a great opportunity for him to interact closely with the two honorees at the conference, both of whom have played a significant role in his career. Professor Richard Crutcher was Sarma's postdoctoral supervisor at the University of Illinois at Urbana-Champaign, and Professor Heiles from University of California, Berkeley who actually pioneered the Zeeman effect technique that Dr. Sarma uses in his research. Both honorees have given very generously of their time for advice and help. Sarma met Thomas Troland, his PhD advisor and Carl Heiles's former student, and he also interacted with a number of other prominent worldwide scientists.

Celebrating the End of the Year



The annual end of the year party on May 20th celebrated the academic success of five graduate and 17 undergraduate students who will be moving on to new horizons. Whether heading off to further their education in programs across the country or pursuing other opportunities, we have enjoyed teaching and learning from these students. Byrne Hall (and the candy jar) will not be the same without them.

NEWSWORTHY ALUMNI, GRADUATE STUDENTS, AND UNDERGRADUATE STUDENTS

William Murrey (BS 2012) received his MS in Nuclear Engineering from the Georgia Institute of Technology.

G. Jackson Williams (MS 2010) received his PhD in Applied Science from the University of California, Davis. His thesis work involved generating anti-matter using high intensity lasers at Lawrence Livermore National Laboratory where he has taken a postdoctoral position.

Jason Luce (BS 2013) who visited the department is a PhD student in Materials Science and Engineering at University of Michigan, Ann Arbor.

Bruce Griffin received a Graduate Student Research Grant from CSH to support his research on an inexpensive thermal-transport based medical diagnostic for use in developing countries.

Dylan Smith will be entering the Applied Physics PhD program at University of Michigan, Ann Arbor. He was also awarded a Rackham Merit Fellowship and Applied Physics Fellowship. With Graduate Research Funds from CSH, he will attend the Denver X-Ray Conference in August.

Kevin Kadowaki will be attending University of California, Irvine for his PhD in Philosophy in their Department of Logic and Philosophy of Science. He was also awarded the Social Science Merit Fellowship.

Thomas Bsaiibes will be attending University of Indiana/Purdue University, Indianapolis for his PhD in Physics. He was also awarded a teaching assistantship. With Graduate Research Funds from CSH, he will attend the Denver X-Ray Conference in August.

Fabricio Marin received a Dean's Undergraduate Fellowship to work at the Advanced Photon Source at Argonne National Laboratory.

Andrew Rocco and **Danielle Leppert-Simenauer** will be conducting Nano and materials engineering research, respectively, this summer at University of Connecticut as part of a Research Experience for Undergraduates.

Ellie Martin-Eberhardt received an Undergraduate Student Research Program award to work in Dr. Eric Landahl's laboratory.

Damian Mendez and **Danielle Leppert-Simenauer** are working with Dr. Mary Bridget Kustusich under her SoTL Grant "Exploring Student Use of Whiteboards Using Classroom Video" sponsored by Office of Teaching, Learning and Assessment", DePaul University.

Donkemezuo Raymond Tariladou will be working with Dr. Gabriela González-Aviles on research entitled "Developing a Flash-Sintering Setup to Study Complex Oxides" for Summer 2016 funded by CSH URAP.

Michael Shah will be working with Dr. Gabriela González-Aviles on research entitled "Analysis of Phase Transformations in Hydroxyapatite (synthetic bone) Doped with Heavy Metals" for Autumn 2016 which is funded by CSH URAP.

Miko Stulajter will be working with Dr. Bernhard Beck-Winchatz on research entitled "Investigating the Evolution of Galaxy Clustering with Sloan Digital Sky Survey Data," for Autumn 2016 funded by CSH URAP.

Aaila Ali, Noel Garica, Andres Munoz, Nicolas Santiago, and **Yunyun Wu** are working with Dr. Jesús Pando on the Sloan Digital Sky Survey research funded by the Sloan Foundation.

We are proud of our alumni, graduate students and undergraduate students, and we encourage you to keep us posted regarding any updates of personal or professional news. Please visit us on Facebook and Twitter as well as the department website at www.physics@depaul.edu.