In the news...

Dr. Molly McCartney has been recognized as Fellow of the American Physics Society. Her nomination was through the Division of Materials Physics and her citation notes her achievements in Electron Holography Microscopy.

New Student Worker
My name is Daniel Alejandro Vargas. I was born in Anaheim, California. I am a Genetics and Cell Development Major and I am in my Junior year. I enjoy playing sports and spending time with my family. I would like to get into cancer research lab and earn a PHD in Molecular Biology. I would also like to become a fitness guru for fun.

New Student Worker
Sali Avades is a Junior studying Biochemistry. She plans on attending medical school once she completes her undergraduate studies at ASU. Sali is an expert at social media, and she loves coffee and country music.

Four Corner -APS conference award Recipient
Ross Bennett-Kennett

Senior Ross Bennett-Kennett was presented with the award for the best undergraduate oral presentation at the Four Corners American Physical Society conference. He is currently working under the supervision of Dr. Nicole Herbot’s. Below Ross shares his experience in receiving this positive recognition.

My name is Ross Bennett-Kennett. I am a senior physics student here at ASU, and I have had the great fortune to work with Dr. Nicole Herbot’s research group (Now looking for additional student researchers) for the past three years. I began as a volunteer taking safety courses and washing glassware, but as soon as last year, I was given the privilege to present my research with the group at scientific conference.

I have since presented this work on a new method of silicon wafer bonding at multiple undergraduate symposiums here at ASU, the AVS meeting in Nashville, TN, and the AAAS in Vancouver, BC. This experience culminated a few weeks ago at the four corners meeting of the APS. Another member of the group and I left Arizona at 9 PM for the long drive to New Mexico. To make a long journey short, we arrived 15 minutes before my 10:30 AM session with less than three hours of sleep. Suffice it to say, I was running on auto-pilot. Thanks to the insistence of Dr. Herbots that I present at all opportunities up to this point and the opportunities presented by Dr. Treacy with the undergraduate symposiums, I was able to present a coherent talk under such conditions. Cue the following week where Dr. Bennett contacts me to meet him in his office about something left for me in New Mexico. To my fortune, he held for me a one hundred dollar award from the APS for “Outstanding Student Presentation,” and he would only fork it over once I had heard the ASU graduate physics pitch. I assured him that ASU physics has given me great opportunities thus far, and I don’t expect that to change any time soon.

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Doctoral student Avishek Kumar investigates “wonder material” of the future. Mr. Kumar was recently named an outstanding graduate student. Kumar completed his undergraduate studies at Carnegie Mellon University, where he was president of the Society of Physics Students. He graduated with a bachelor’s degree in physics with honors in 2009.

Avishek was attracted to ASU because of the distinguished faculty and the chance to pursue advanced research, he says. “I knew I would be working with the best in the field. I have grown tremendously at ASU.” During his time at ASU Avishek has received numerous awards such as the prestigious GAANN scholarship for his first year at ASU, he has since been awarded a Molecular Imaging Corporation Fellowship and twice been named an ARCS scholar (Achievement Rewards for College Scientists) for 2011 and 2012. Among other educational outreach programs, he was the co-organizer for the AZ Biophest Conference and the Center for Biological Physics Graduate Seminar Series. Throughout, he has maintained a 4.0 GPA.

Avishek shares his surprise when he received the nomination, “I really have no idea what to say. When I was nominated I thought they had made a mistake. Then when I actual saw the article my initial reaction was, "HOLY …!" Avishek while modest with his recent nomination continues to surprise staff and faculty with his continued success. His advisor Michael Thorpe shares this about the future of Mr.Kumar, “Progress in science is often made by either talented young researchers, or by people who cross disciplinary boundaries, bringing fresh insights. Avishek Kumar falls into both categories,” says Michael Thorpe, an ASU Foundation Professor of Physics, Chemistry and Biochemistry. “Avishek is a scholastically outstanding graduate student who I anticipate will have an illustrious career.”

Get to know our Students…
Reid Juday works under the supervision of Dr. Fernando Ponce and will defend his dissertation in the near future—Spring 2013. During his time at ASU-Physics Reid has been a recipient of the ARC award & the Stoelzel fellowship which allowed him to expand his academic opportunities. Additionally, Reid has published several journals with the help of his advisor. His research is primarily focused on optical properties of wide band gap semiconductors, specifically the III-nitrides. After, Reid completes his degree he is excited to join the workforce.

Reid shares his ASU-Physics experience

The culture of the graduate physics department at ASU is focused on helping the graduate students. When I first arrived, everyone from the department chair to the undergraduate student workers in the main office were incredibly kind and helpful. I knew that if I ever need anything, the staff and faculty will do their best to help.

The instructors of the classes were always understanding with regards to homework and test dates. The required research rotation classes were extremely beneficial.

Everybody was very kind to everybody else, but I wish more was done to integrate the class. Perhaps more out-of-class organized functions would increase the feeling of community.
The final defense – the pinnacle milestone of academic achievement

Students working towards graduate degrees have many significant milestones including completing their courses, establishing their research directions and presenting their research to their colleagues or to the research community at scientific conferences. For our PhD and Professional Science Masters candidates the most notable achievement is completing their final defense. In the last month there has been a flurry of activity in the Department as a number of candidates have arranged and completed their dissertation or applied project defense.

The PhD defense follows the preparation of the candidate’s dissertation. Many dissertations include chapters that were presented in journal publications or conference presentations. Still, assembling a dissertation is always a challenge. It is the document that presents results and analysis that explore the research at a depth that is not possible for typical publications. It includes a substantial introduction that presents the scientific context of the research hypothesis and the potential impact to both applications and scientific understanding. It is long, deep and in the end forward looking.

This is the time when the PhD candidate organizes every aspect of the document. The candidate typically seeks the advice of their faculty supervisor, yet the challenge of organizing this comprehensive document is formidable. The effort elevates our candidate’s knowledge to the point that they confidently present their work to a panel of faculty and colleagues in attendance at the final defense.

Our PSM-Nanoscience candidates prepare a presentation of their applied project to a panel of faculty typically of several departments which reflects the interdisciplinary character of the program and the projects. They also present their results at a Capstone Conference for the program. Here too, the candidates’ confidence in their knowledge is evident as they answer questions about their research and its impact.

Anyone who has been through a final defense will have clear memories of the day. Most of us will even be able to recall the questions from our faculty panel many years after leaving the university. I certainly do. Completing a final defense is truly the pinnacle of academic accomplishment, and it is wonderful to congratulate each and every student on their triumphal day.

Sincerely,

Chair’s Note

Upcoming Dates & Events

Month of November & December

- November 20,: Faculty Meeting
- November 22 & 23: Holiday—ASU Closed
- December 3: PSM Capstone Conference
- December 12: Open House/Student Recognition
- December 17: End of Toy & Food Drive
- December 24&25: Holiday– ASU Closed
- January 1: Holiday—ASU Closed

Physics Toy & Food Drive
Physics has set out to collect a 100 cans of food to stock the shelf’s of local food centers.

Last day to bring in a food or toy is December 17, 2012

We are also collection toys for underprivileged youth. Please donate one toy.

Physics Trivia

How well do you know your physics colleagues? Try your hand at the trivia question below:

Which Physics faculty played billiard in college and won state championship in 2000 at Brown University.

Click here to submit your guess and discover the answer.