

OUR NEXT MEETING...

...is at **DePaul University**
Tuesday
December 6, 2011
6:30 – 9:00 p.m.

Go the last page for a map and directions.

Future Meetings

January 18 Tri-Physics Meeting Elmhurst College

AT OUR LAST MEETING...

...November 16, we were welcomed to **Joliet West High School** by **Debby Lojkutz** with her usual display of fine dining and a nice demonstration of projectile motion. Debby had the Pasco projectile launcher fixed to the table at a height of the table top. ($h_0 = 0$). She covered the table with butcher paper and then had the students use carbon paper (Office Max \$7/100 sheets) to mark where the ball landed when fired at various angles from 15° to 75° . The students graphed their results and got a nice maximum at 45° . Nice physics... no math.

Debby then introduced two new teachers (at least new to us) and gave them “new teacher bags”. She mentioned the next couple of meetings and **Roy Coleman** said he talked to **Earl Zwicker**. Earl’s feeling good and working with a couple of middle school/high school teachers in Appleton, WI. Roy said the *SMILE* site is approaching one million hits. If you’d like to check it out go to www.iit.edu/~smile



Michelle Gattuso (Sandburg High School) brought an introduction to vectors lab exercise that has been making the rounds. She got it from **Steve Hogan** (Oak Forest High School) who she says wrote a computer program to follow the progress of the exercise. The whole thing works like those sports fantasy games in which you are presented with a large group of players with various talents and you try to pick the best team. In this exercise you divide the class into four or five groups of students with 20 vectors and each group chooses one vector in turn until all twenty are chosen. The winning team has the group of vectors with the smallest total after they have been added as vectors. Extra credit is awarded for how well your team did.

This was an exciting exercise for the students especially since there is a part where they can exchange a vector with another team and improve their standing in the game (thereby reducing the standings of other teams). With extra credit on the line the trading can get exciting. The entire exercise is 12 pages long with pre lab problems, post lab evaluations, etc. In addition a computer program can track the exercise as vectors are chosen and traded. Michelle says she can help you if you need it. Email her at MGattuso@d230.org. Start out next September with something different.

Andy Morrison (Joliet Junior College) said this can all be done by way of a “drop box” and he explained how that works. You can store 2GB in the “cloud.” Downloadable on all computers at [dropbox.com](https://www.dropbox.com). To get the program described by Michelle, contact Andy at amorrison@jjc.edu.

And speaking of computers, some videos of Julius Summer Miller (from the 1960s) are now available where he would do a brief physics demo and then use it to advertise a product. One example was the two fingers under the meter stick trick. When moved together the fingers meet at the center of the stick. **Roy Coleman** added then added some weights to the stick and the fingers met at the center of mass of the system. Roy held a dish with three fingers and again they met at the center of mass of the dish.



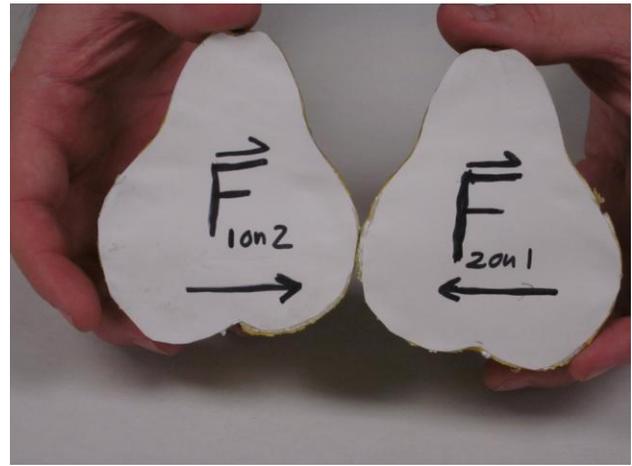
John Milton (De Paul, retired) reminded us of the PSSC introductory thought experiment describing the times it took water to exit a can from a hole in the bottom. The diameter of the hole, the height of the water, and the diameter of the can were the variables considered. John combined these variables into a single equation and then drilled a hole in a can to check it out. He was off by a factor of 1.33 which he attributed to friction effects. John also brought two books that he personally recommended for general audiences:

- *The 4% Universe* by Richard Panek
- *The Quantum Story* by Jim Baggott

The Panek book covers modern questions of dark mass and energy. The Baggott book is more of a history of different people involved in quantum theory.



Pete Insley (Columbia College Chicago) brought back his compass needle from the June 2011 meeting. It's composed of a pencil pushed through the hole of a couple neodymium magnets and suspended from a string. This time he had two of them hanging from a coat hanger about 30 cm apart. Both were pointing North. One of the compasses was then displaced about 60° and it began to oscillate. It quickly stopped and the other compass began to oscillate. Then that one stopped and the other began. The oscillations were coupled through the magnetic fields of the magnets. Pete then hit one of the compasses and set it wildly swinging and twisting. This broke the coupling. He said he didn't mean to hit it so hard.



We ended the meeting with some fine giveaways. **Debby** had prepared some “Turkey Squawkers” which are paper cups with strings through the bottom. When the string is pulled with a damp cloth the cup makes the turkey squawk sound. Fun!

Andrew Morrison brought a supply of halved pears for us to put forces in so our students will always remember: forces come in pears. It’s one of my favorite jokes – thanks Andrew!

Very nice meeting!

Reported by Peter Insley

Future Meetings (expanded list courtesy of Paul Dolan)

January 18 (W) Elmhurst College Brian Wilhite/Venkatesh Gopal/Earl Swallow
Twenty-Eighth Annual Tri-Physics Meeting

Feb 4 - 8 (Sat – W) AAPT-Winter Meeting Ontario, CA (CALIFORNIA !)

February 16 (R) Lane Tech HS Karlene Joseph

APS March Meeting Feb 27 – March 2 (M – F) Boston, MA

March 7 (W) Loyola Gordon Ramsey

March/April ?? (Sat) CSAAPT Thornton HS, Harvey

March 29 – April 1 (R – Sun) NSTA National Meeting Indianapolis

April ?? (F-Sat.) ISAAPT U of I, Urbana-Champaign

April 10<or>17 (T) Lake Forest College Bailey Donnally/Mike Kash/Scott Schappe

May 7 (M) Niles West HS Martha Lietz

May ? (T) Physics Day @ Great America Krystal Bern (kbern@sftp.com) (or Nate Unterman)

June 5 (T) MSI (Ruth Goehmann) <tentative>
(& annual Host Meeting)

To get to DePaul University:

From the north and northwest

From the Kennedy Expressway (I-90/I-94) exit at Fullerton Avenue and turn left (east.) The Lincoln Park campus is approximately two mile from the expressway on Fullerton Avenue at Kenmore Avenue.

From the west

From the Eisenhower Expressway (I-290), turn onto the Kennedy Expressway (I-90/I-94) heading toward Wisconsin. From the Kennedy Expressway (I-90/I-94) exit at Fullerton Avenue and turn right (east.). The Lincoln Park campus is approximately two miles from the expressway on Fullerton Avenue at Kenmore Avenue.

From the south

From the Dan Ryan Expressway (I-90/I-94) continue as the expressway becomes the Kennedy Expressway (I-90/I-94). Exit at Fullerton Avenue and turn right (east.) The Lincoln Park campus is approximately two miles from the expressway on Fullerton Avenue at Kenmore Avenue.

From Lake Shore Drive (north or south)

Exit Lake Shore Drive at Fullerton Avenue. Head west for approximately three miles. The Lincoln Park campus is located at Fullerton Avenue at Kenmore Avenue.

If you use the Sheffield Avenue high-rise parking structure, get a chit at the meeting that will cover the cost.

