American
Association of
Physics
Teachers

Northern California and Northern Nevada Section

Fall Meeting

Friday, November 15, 2013
Saturday, November 16, 2013

~ Carondelet High School ~

1133 Winton Dr.
Concord, CA 94518

Local Host: Lee Trampleasure

email: lee@trampleasure.net
(510) 495-7035

www.ncnaapt.org

Friday Evening Social

Program—5 PM
DOE Joint Genome Institute
2800 Mitchell Drive
Walnut Creek, CA 94598
Join us for a tour and presentation on some of the cutting edge energy research being conducted at the institute.

Directions: Same as to CHS (see page 10), only drive ½ mile past CHS, turn right on Oak Grove, then ½ miles to Mitchell Drive. Turn right on Mitchell, then look for *Joint Genome Institute* on the right.

No-host Dinner 7:30-9 PM
Rocco's Ristorante Pizzeria
2909 Ygnacio Valley Road
Walnut Creek, CA 94598
Phone: (925) 947-6105

REGISTRATION - *What a deal!*
$20 for NCNAAPT members (includes lunch), Free for first-time attendees and students (Lunch tickets will be available for $10.)
A bargain at twice the price!

Please pre-register at www.NCNAAPT.org/register

We will distribute a group photo documenting attendance for any teacher who needs one for their district/professional development purposes.

~ Program ~

SATURDAY, November 16, 2013

Morning Session—Inner Courtyard

8:00 Registration, Coffee, & Breakfast Food

8:45 Welcome and Announcements

8:55 Show & Tell

Share your favorite demonstration or teaching tip. Since new teachers and section members will be at this meeting, you are encouraged to dust off some of your oldies but goodies. If you have handouts, please bring 75 copies. *Time limit is 5 minutes per person or you risk the dreaded GONG by referee David Kagan!*

9:55 Break

10:00 Invited Talk: "S4: Small Satellites for Secondary Students"

Lynn Cominsky

Sonoma State University, lynnc@universe.sonoma.edu

Professor Lynn Cominsky, Director of Sonoma State University's NASA Education and Public Outreach group will discuss an exciting project that teaches STEM principles to middle and high school students by incorporating Arduino-based electronics and programming with the thrill of launching high-powered rockets or flying tethered weather balloons. Learn how to build the S4 payload with your students, how to launch the payloads, the types of experiments you can do, and how you can receive the data in real time using standard WiFi communications.

10:55 Break

11:00 Panel Discussion: "The Elephant in the Room — Cheating in the Modern Classroom"

Dean Baird (Rio Americano HS, dean@phyz.org), Pablo Robinson (San Mateo HS, retired, Pablo@laserpablo.com), Dan Burns (Los Gatos HS, DBurns@lgsuhsd.org) plus special guests

Teachers have been dealing with cheating since the dawn of time. What are the hows and whys in today's classrooms?

11:55 Group Photo

12:00 Lunch w/Topic Tables

Sit with old friends, new friends or at a topic table. Possible topic tables: AP Physics, Physics First, Rookie Teachers, Two Year Colleges, Next Generation Science Standards, and/or Labs.

Resume Program—Inner Courtyard

1:15 "NITARP Participation"

Lauren Novatne

Reedley College, lauren.novatne@reedleycollege

NITARP is NASA IPAC Teacher Archive Research Program. My presentation will outline the program as well as report out my experience with it. As a community college instructor, I am one of a few who were able to participate as such, as the program is targeted mostly for middle and high school teachers and their students. This is a fantastic opportunity for teachers and their students to participate in real, rigorous astronomy research with NASA scientists, and can lead to journal publications.

2:00 “Teaching Students to Do Work in Teams”

Karen Lowande

Mt. Diablo High School, lowandek@mdusd.org

Have you struggled with students being off task during lab time? Maybe they don't know how to do what you expect of them. I've used portions of this process of teaching working in teams from low performing classes to AP Physics and everything in between. For students that require the most scaffolding I focus on all parts of the process. For higher performing students only one or two of the steps are required. First we learn about what is a team. Next, by having them select their own team’s student buy-in is increased. They develop their norms, consequences and acknowledgement of each member’s attributes. Finally, at the end of every lab or group work students reflect and grade each other on their contribution to their team. Use some or all of this method and increase student engagement during group work.

2:20 “Using Your Test Scanner Software to Reveal Patterns in Student Knowledge ”

Lee Trampleasure

Carondelet High School, lee@trampleasure.net

Many of us use multiple-choice tests to save time. But are you getting the most information possible from your test results? I will show how you can use test scanner software to evaluate your students' performance in standards/content areas within a test. Want to know how the average student did on a specific question or class of questions? There's a report for that! Want to provide your students with individualized reports highlighting the content areas they are succeeding with and those they are struggling with? There's a report for that.

I will be demonstrating with the Apperson ScanMaster scanner and DataLink software, but if your school has another brand (ScanTron, perhaps?), the keystrokes may be different, but the reports and value from them are the same.

2:40 Break

2:50 Workshop A—Room 35

"Details of the Cavendish Balance"

Chuck Hunt

American River College—Retired, chunt@surewest.net

Using Video Analysis turns the Cavendish balance into a laboratory that is easily done in a three hour lab. Examination of the system in detail allows us to change this from a lab with an accuracy of 10% to a lab with an accuracy of 1%. Also a nice example of how one does error analysis and how one examines an experiment for systematic errors. For those without a Cavendish balance but with PASCO Capstone, the video is available on flash drive.

2:50 Workshop B– Room 33

"Converting a Computer Power Supply into a Lab Supply"

Zeke Kossover

The Jewish Community High School of the Bay, zeke_kossover@yahoo.com

Computer power supplies are cheap--often free--and are bullet-proof. Many can handle 20 A or more and nearly all have excel-

lent short circuit protection. I'll bring some computer power supplies and we'll convert them for lab use. Then we'll do a few experiments so that you'll see how great they are for the classroom.

3:20 Break—Program will resume in Inner Courtyard

3:30 "Hollywood Movie Physics and Quantitative Analysis"

Dan Burns

Los Gatos High School, dburns@lgsuhsd.org

Several clips from popular and classic Hollywood movies will be used to do quantitative analysis to answer questions about the events shown. This will include pouring lead on an alien, trying to reenter the Discovery One over Hal's objections, and lighting up the Griswald family house for the holidays. Attendees will gain access to the clips and the slides containing the analysis for use with their students.

Attention New Physics Teachers! PTSOS is here to help you! ***PTSOS*** is an NCN-AAPT-sponsored project funded by a donation from the Karl Brown Foundation that assists physics teachers in their vulnerable first years of teaching. **PTSOS has expanded** and now offers four workshops at Los Gatos High School hosted by **Dan Burns, Paul Robinson**, and **Stephanie Finander**. New teachers should email Stephanie Finander at **sfinander@sbcglobal.net** for more information on how to get signed up.

4:00 "Next Generation Science Standards - Pendulum on a Moving Platform "

Michael Boykin

Golden Valley High School, mboykin@muhsd.org

The NGSS have been adopted by the California State Board of Education. How are they different from current standards? The NGSS contain an expectation of how content is presented in the classroom. There are changes in the way students will be tested in the future. We will discuss the changes and give all an opportunity to respond.

4:30 Close

WHAT TO DO ABOUT DUES?

Currently our annual dues are $25 and we charge meeting fees of $20 (includes lunch). We waive fees for first-timers at our meetings (but there is no such thing as a free lunch). It has been noted that some institutions will pay for meeting fees, but not membership dues. To account for this, the following structure is being proposed:

$25—Corresponding Membership—Designed for people who wish to be members, but don't come to meetings.

$45—Fee for Fall Meeting—Includes membership + lunch ($10 discount for first-timers)

$45—Fee for Spring Meeting— Includes membership + lunch ($10 discount for first-timers, $25 for people who attended Fall)

Under this plan people will be charged the same amount they are now, but may be able to get a larger reimbursement from their institutions. We will discuss this change at the Spring Meeting and hold a vote for approval.

American Association of Physics Teachers

Northern California/Northern Nevada Section

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All Positions Are Open!
Job Descriptions at http://ncnaapt.org/officers
Elections will be held at the Spring Meeting.

If you wish to run send email to marascodavid@foothill.edu

~ Hotel Information ~

Our host suggests you Google:
"Hotels, Waldon, CA"

Embassy Suites
1345 Treat Blvd
Walnut Creek
(866) 654-8205

Holiday Inn Express
2730 N. Main Street
Walnut Creek, CA 94597
(925) 932-3332

Motel 6
2389 North Main Street
Walnut Creek, CA 94596
(925) 935-4010

~ Directions to Carondelet High School ~

By car

- From I-680, take the Treat Blvd exit (between the cities of Walnut Creek and Pleasant Hill).
- Head East on Treat Blvd
- After 1.5 miles on Treat, you will see Carondelet High School on the right.
- Turn right into Winton Drive, then immediately right into the parking lot.
- Park in any spot as soon as you can find one.
- Follow the signs to our meeting.

By Public Transit

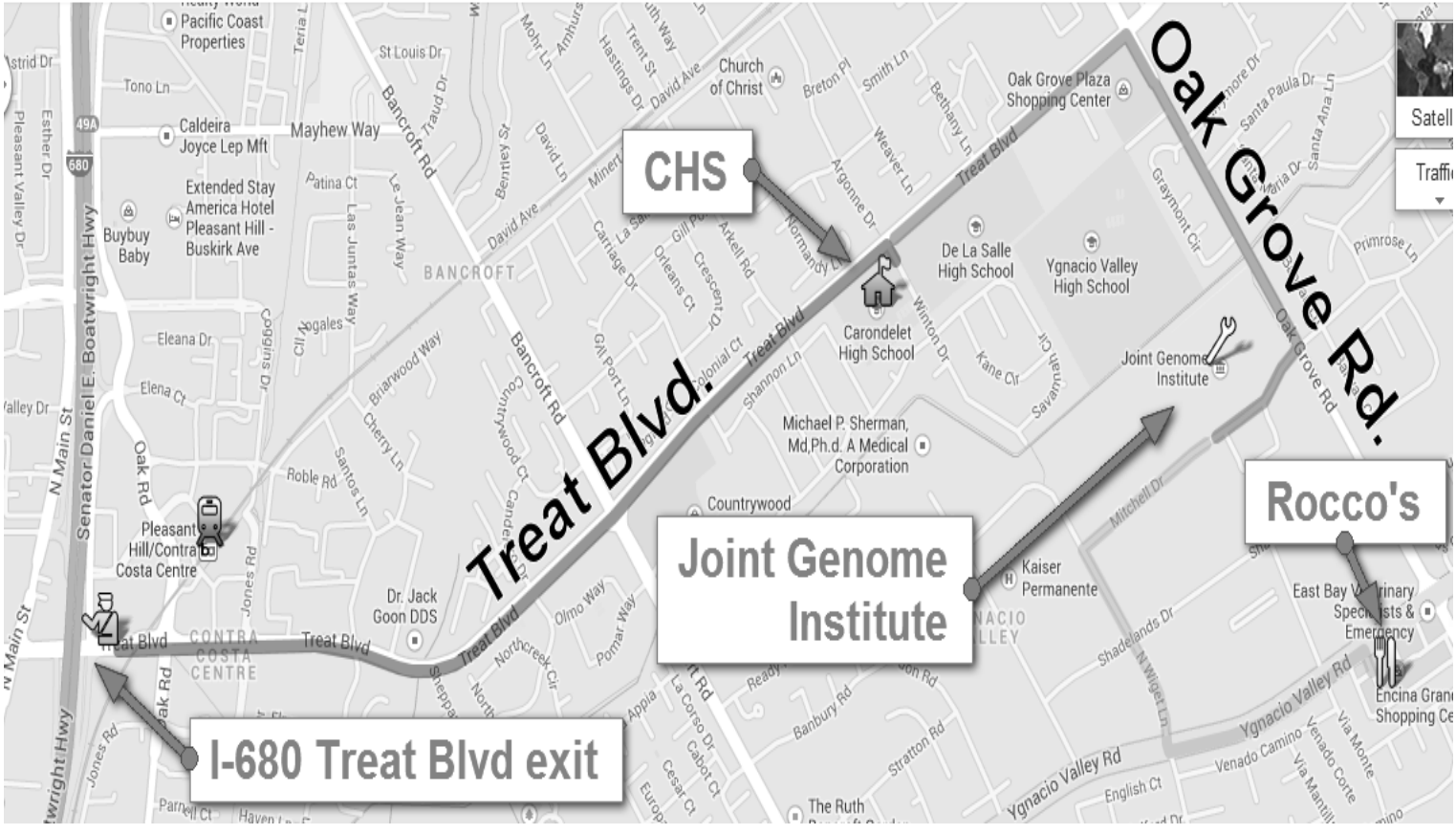
- Take BART to the Pleasant Hill Station.
- Take the County Connections bus line 311 "BART Concord" (7:31, 8:51, or 10:11 AM) from the bus lanes at the BART station, get off at Carondelet High School (bus stops on Treat right across Winton from Carondelet at De La Salle High School).
- Best bet: Ask driver when you get on if it is the bus going down Treat towards CHS/DLS

SAVE THE DATE!

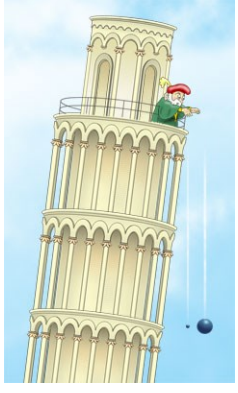
Spring Meeting @ The Exploratorium

Saturday April 12, 2014

TBA Social Event(s) Friday Night


CHS
Treat Blvd.
Oak Grove Rd.
Joint Genome Institute
Rocco's
I-680 Treat Blvd exit
Pacific Coast Properties
Caldeira Joyce Lep Mft
Mayhew Way
Extended Stay America Hotel Pleasant Hill - Buskirk Ave
Buybuy Baby
BANCROFT
Bancroft Rd
Senator Daniel E. Boatwright Hwy
N Main St
Oak Rd
Pleasant Hill/Contra Costa Centre
CONTRA COSTA CENTRE
Dr. Jack Goon DDS
Church of Christ
Oak Grove Plaza Shopping Center
De La Salle High School
Ygnacio Valley High School
Carondelet High School
Joint Genome Institute
Michael P. Sherman, Md,Ph.d. A Medical Corporation
Countrywood
Kaiser Permanente
East Bay Veterinary Specialists & Emergency
Encina Grande Shopping Ce
Ygnacio Valley Rd
The Ruth

Dennis Buckley
P O Box 735
Brentwood, CA 94513



**It's not a myth!
Everyone loves
the demo show!**

Attention: Physics Staff
Address Correction Requested