Dan MacIsaac, Column Editor, Physics Department,
SUNY-Buffalo State College, Buffalo, NY 14222; macisadl@buffalostate.edu

WebSights *features announcements and reviews of select sites of interest to physics teachers. All sites are copyrighted by their authors. This column is available as a web page at PhysicsEd.BuffaloState.Edu/pubs/WebSights/. If you have successfully used a physics website that you feel is outstanding and appropriate for* WebSights, *please email me the URL and describe how you use it to teach or learn physics—macisadl@buffalostate.edu.*

Recruitment of Physics Majors and STEM Teachers

www.aps.org/careers/insight/archive.cfm
/www.act.org/stemcondition/14

The American Physical Society (APS) continues to update and distribute a regular slideshow for recruiting (a common use is to play the show or parts of the show with added local slides on a department hallway monitor). The latest (Nov. 2014) slideshow includes

– Profiles of Brenda Rubenstein, postdoctoral research at Lawrence Livermore National Lab; Meghan Anzelc, a high-energy physicist who is currently Assistant VP of Pricing with CNA Financial; Keivan Stassun, a physics and astronomy professor at Vanderbilt University; and SPS 2014 Intern Ashley Finger, who spent a summer working on environmental policy with the U.S. House of Representatives Committee on Science, Space, and Technology.

– New data highlighting physics bachelors' performance on the 2012 LSAT and job satisfaction of physics bachelors working in the private sector.

–Information about *The Vector,* a new monthly mailing for APS undergraduate members that provides career advice, tips for applying to graduate school, and up-to-date information about new opportunities for students.

–Information about blue LEDs, the physics of pancakes, Monte Carlo simulations, and more!

The ACT Corporation (originally American College Testing, specialists in testing for college readiness, admissions, and placemen—their ACT test competes directly with the SAT) has surveyed the 2014 graduating high school class on STEM-related college intentions, including interest in STEM teaching careers. Their findings are available as an overall report and broken out by each U.S. state. Apparently graduating high school students have been paying attention to the impact of the recession on STEM teachers, and their interest in STEM careers is high, but interest in becoming STEM teachers is very, very low. This does not bode well for STEM teacher recruiting.

Funky experiment inspiring videos: A new linear electric motor; physics of sound performance art

tinyurl.com/WSElectricTrain
nigelstanford.com/Cymatics/

A colleague directed me to this new simple motor constructed from Nd magnets, coiled bare copper wire, and a battery from Japan, described as "The World's Simplest Electric Train." I have ordered this odd new-to-me A-134 5-6-V battery. Looks super cool.

Nigel Stanford has produced a nice performance art video with associated "how-to" videos focused on musical/visual performance expressly tuned to produce standing vibrations in fluids, ferrofluids, Chladni plates, Rubens' tubes, speakers with water hose, and Tesla coils. He also includes plasma globes, playing cards on a turntable, and high-speed photos of crash cymbals all tied together via video layering. Well worth showing to your physics of sound students to inspire projects.

Thanks to Michael Magnuson for the electric train link.

Galileo Redux: Dropping objects of unequal mass (the guinea and the feather) just to be cool

tinyurl.com/GalileoBSS
tinyurl.com/HWGalileoHUe4
tinyurl.com/WSGalileoBrainiacs

The first video by BackStage Science (backstagescience.com) shows a ball and feather dropped in a laboratory-sized vacuum chamber and incorporates the famous NASA video of David Scott doing the same from the lunar surface. The second video is a preview from the BBC's "Human Universe" episode 4 and is staged in a gigantic vacuum chamber (world's largest at 100 feet in diameter, 122 feet tall at the NASA Space Power Facility in Ohio) to drop feathers and bowling ball. The third is a "Brainiacs" episode (S05E06) dropping objects in races including pillow versus kitchen stove, soccer versus cannon balls, and ending with a car versus a tire from a crane (the car rotates—watch the centers of mass). Nicely humorous and low key, no fancy vacuum here but an insightful analysis. Three cool British videos for teaching gravitation.

Thanks to Kristin Angello, Paul J Camp, Anthony Mangiacapre and several others for supplying excellent Galileo's experiment video links on the OPHUN-L and PHYSOC lists.

Climate Physics

scitation.aip.org/content/aip/magazine/physicstoday/article/67/10/10.1063/PT.3.2548
www.epa.gov/climatechange/science/indicators/index.html

Finally, a pair of new publications on climate science. First, in the October issue of *Physics Today,* Paul Higgens of the AMS discusses "dealing with climate change" (including risk management via mitigation, adaptation, and geoengineering), advocates knowledge-base expansion, and discusses the relevant political landscape. Next, a new EPA report, *Climate Change Indicators in the United States*, describes what is happening in the United States in terms of greenhouse gases, weather and climate, oceans, snow and ice, health and society, and ecosystems. I found the presentation in the health and society section on heat-related deaths, extended growing seasons, Lyme disease, and pollen compelling, as well as the ecosystem discussion. Welcome to our brave new world.

Thanks to Antti Savinainen of Jyväskylä Physics on PHYS-L and Kevin Rosseel of EPA posting to OPHUN-L.