

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/](http://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](mailto:macisadl@buffalostate.edu).

### • A new modeling website for introductory university physics

[univ-modelinginstruction.com/teachbetter.co/blog/2017/10/27/tbp-episode-65/teachbetter.co/podcast.html](http://univ-modelinginstruction.com/teachbetter.co/blog/2017/10/27/tbp-episode-65/teachbetter.co/podcast.html)

An extensive new website describing and promoting post-secondary Modeling Instruction curriculum in mechanics has been developed by the Florida International University Physics Education Research Group. Instructional details are provided for each of 14 weeks of instruction, including activity plans, instructor guides, video examples, a set of appendices discussing white-boarding, notational issues and group exams, printable homework, and activity worksheets. The site includes scholarly publication references and a list of all contributors. Eric Brewé, one of the principal investigators discussed the project in the downloadable Oct 27, 2017, edition “Podcast Episode 65: Modeling Instruction with Eric Brewé” of Douglas McKee’s “Teach Better Podcast” series.

*Posted to the modeling digest list at [modeling@lists.asu.edu](mailto:modeling@lists.asu.edu) by Jane Jackson, acknowledging Frank Noschese*

### • Mark Rober’s YouTube channel and human scale buoyancy adventures

[youtube.com/MarkRober](http://youtube.com/MarkRober)  
[en.wikipedia.org/wiki/Mark\\_Rober](http://en.wikipedia.org/wiki/Mark_Rober)  
[wired.com/2012/02/gorilla-cam/](http://wired.com/2012/02/gorilla-cam/)  
[gizmodo.com/tag/mark-rober](http://gizmodo.com/tag/mark-rober)  
[tinyurl.com/WS-MRoberFluidBed](http://tinyurl.com/WS-MRoberFluidBed)  
[mayatoys.net/pages/orbeez](http://mayatoys.net/pages/orbeez)  
[tinyurl.com/WS-MRoberOrbeez](http://tinyurl.com/WS-MRoberOrbeez)

I had seen several of Mark Rober’s playful and ingenious viral videos before, for instance, his Halloween costume using two iPads streaming video to fake a large hole blasted through his torso, and his snowball machine gun. Rober is a past NASA engineer who is now making YouTube videos, and recently he has improved his pedagogical game by including explanations and discussions of the science behind his projects. For instance, he has done several imaginative videos on buoyancy: one demonstrating the physics of fluid beds (using sand and compressed air in a hot tub, with a 60-year-old video citation to the Royal Society) and another using 25 million water-filled Orbeez® (inexpensive toy water-absorbent polymer spheres that look like marbles and feel like eyeballs) in a pool. These are accompanied by simple insightful physical analyses. Rober’s videos on windshield defrosting and on competitions like science fairs, the physics egg drop, and pinewood derby cars are also compelling.

*Suggested by Kathleen Falconer*

### • U.S. STEM graduate students face proposed alarming tax increase

[tinyurl.com/WS-WaPoGradStu](http://tinyurl.com/WS-WaPoGradStu)

[tinyurl.com/WS-LAT-GradStu](http://tinyurl.com/WS-LAT-GradStu)  
[time.com/5041947/graduate-student-protest-gop-tax-bill/nature.com/articles/d41586-017-05925-6](http://time.com/5041947/graduate-student-protest-gop-tax-bill/nature.com/articles/d41586-017-05925-6)  
[insidehighered.com/news/2017/11/30/graduate-students-across-country-protest-tax-plan](http://insidehighered.com/news/2017/11/30/graduate-students-across-country-protest-tax-plan)  
[money.cnn.com/2017/11/29/pf/college/house-tax-plan-graduate-students/](http://money.cnn.com/2017/11/29/pf/college/house-tax-plan-graduate-students/)  
[sciencefriday.com/segments/how-much-will-the-house-tax-plan-cost-grad-students/](http://sciencefriday.com/segments/how-much-will-the-house-tax-plan-cost-grad-students/)  
[science.sciencemag.org/content/276/5320/s-scope](http://science.sciencemag.org/content/276/5320/s-scope)

At the time of this writing, the U.S. Senate and House of Representatives are negotiating a new tax bill that proposes a significant impact on graduate student personal finances for teaching and research assistants, which would adversely impact finances for the majority of full-time physics graduate students in the United States. Graduate students around the country are concerned, protesting and marching. There are several excellent articles in online news about the situation, particularly the *Washington Post* piece discussing the parts of the situation owned by U.S. research academic institutions. Many column readers, most of my higher education colleagues, and myself all benefitted from the tax-free tuition scholarship system, which is in jeopardy for future graduate students; a tax increase in the thousands of dollars would greatly impact graduate students, particularly those already living below the poverty line. While similar initiatives have been historically advanced by Congress and dropped during reconciliation (e.g., in 1997), this time this “small constituency” issue may get lost in the general outrage associated with this particular reconciliation. Please consider making yourself heard to your representatives on this issue.

### • Weekly and monthly newsletters/blogs/columns regarding general physics education and physics

[physedweekly.blogspot.de/](http://physedweekly.blogspot.de/)  
[physicstoday-info.org/1Y69-5AULR-C4E1P1H8CB/cr.aspx](http://physicstoday-info.org/1Y69-5AULR-C4E1P1H8CB/cr.aspx)  
[physicstoday.scitation.org/journal/pto](http://physicstoday.scitation.org/journal/pto)  
[aapt.org/aboutaapt/ennouncer/](http://aapt.org/aboutaapt/ennouncer/)

I have been enjoying University of Pittsburgh PER PhD candidate Danny Doucette’s “Physics Education Weekly” blog hitting highlights of the physics education journals, news, and blogs. He has been blogging weekly since September and his very active twitter feed @danny\_doucette is also worth following for the Twitterati. The AIP (American Institute of Physics) publication *Physics Today*, which all AAPT members should be receiving, also produces a highly readable and enjoyable weekly newsletter, *Physics Today: The Week in Physics*, for physicists of every age and which can be had by registering on the *Physics Today* website—scroll down and look for “receive weekly updates.” TPT readers should also be receiving the AAPT NEWS eNNOUNCER newsletter.