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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.*

• *Nobel Prize in Physics awarded to Arthur Ashkin, Gérard Mourou, and Donna Strickland for laser physics techniques (optical tweezers and chirp pulse amplification)*

www.nobelprize.org/
www.nobelprize.org/prizes/physics/2018/summary/
history.aip.org/phn/11409018.html
www.polytechnique.edu/en/content/gerard-mourou-2018-nobel-prize-winner-physics
uwaterloo.ca/physics-astronomy/people-profiles/donna-strickland
physicstoday.scitation.org/do/10.1063/PT.6.1.20181002a/full/
www.sciencemag.org/news/2018/10/physics-nobel-three-scientists-who-turned-laser-light-tools

Professor Ashkin received half the prize for developing optical tweezers, which he then used to mechanically manipulate biological systems, including DNA, viruses, bacteria and other living cells. The other half of the prize was shared by Professors Mourou and Strickland, who developed chirp pulse amplification (CPA), a now-ubiquitous technique for high intensity lasers used in millions of corrective eye surgeries as well as for scientific research requiring femtosecond pulses. Associate Professor Dr. Strickland is the first female in 55 years, and the third woman ever to receive the Nobel Prize in Physics, and CPA emerged from her 1985 dissertation research. Congratulations to all of the new laureates.

• *Dropping a tennis ball on a basketball: Rhett Allain's coding models of collisions*

wired.com/story/why-a-tennis-ball-goes-flying-when-bounced-on-a-basketball/

Rhett Allain's excellent Wired column has received a lot of recent attention for his analysis of the classic demo dropping a tennis ball on a basketball (be careful not to hit yourself in the face). His article, which is appropriate for 1D collisions in introductory mechanics class, includes graphs, videos, exposition, and Glowscript model code that runs in the browser and can be modified by the reader with relevant "what-if" model modification and homework questions. Kudos for an excellent article.

• *Are you ready to study physics? An Online Mathematics Bridge Course for HS students*

www.ombplus.de/ombplus/link/Start
www.dpg-physik.de/programme/index.html?lang=en
www.omb-physik.de/
(The Chrome browser offers on-the-fly translation to English for webpages, see settings: advanced preferences, languages)

The German Physical Society (*Deutsche Physikalische Gesellschaft* or DPG) hosts a "check if you're fit for physics study" mathematics refresher course targeting German HS students who want to study university physics. The free "Online Mathematics Bridging Course OMB+" is delivered in 13 modules, of which the first 10 are available in English. Each module presents expository text, examples, interactive pictures, exercises, problems, quizzes, and a test, and modules are claimed to require about six hours each to complete. The mathematics review topics include: Elementary Calculus, Equations in One Variable, Inequalities in One Variable, Linear Systems of Equations, Geometry, Elementary Functions, Differential Calculus, Integral Calculus, the 2D Coordinate System and Vector Geometry. Three advanced units not yet available in English include Complex Numbers, Logic and Sets, and Probability. Developed by 12 German universities, OMB+ provides live on-demand tutor help available (in German) via text, chat, phone, or Skype from 10:00 a.m.-10:00 p.m. CET. Registration is required, and a free certificate of completion for passing the basic 10 modules at 80% or more is available. This is an interesting opportunity for gifted HS students, or students who are looking to review university physics mathematics in a no-stakes environment at their own pace.