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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.*

• *The Arrow of Time, Entropy and Complexity by MinutePhysics*

tinyurl.com/WS-Carroll1
penguinrandomhouse.com/books/316646/the-big-picture-by-sean-carroll/
<preposterousuniverse.com>

The Big Picture: On The Origins of Life, Meaning, and the Universe Itself, a NY Times bestselling book by Sean Carroll, CalTech theoretical physicist has inspired a series of five very compelling short animated YouTube videos by Henry Reich's physics video team at MinutePhysics. The five 3- to 4-minute long videos discuss the flow of time (time's arrow), thermodynamics and entropy, cause and effect, complexity, useful energy and entropy, and the purpose of life. I particularly enjoyed the videos on complexity and useful energy, which are insightful to anyone thinking about how energy moves through systems.

• *Fourier Synthesis and the Lockin Amplifier by John Cerne*

cerne.physics.buffalo.edu/Fourier.html
claw.physics.buffalo.edu/
youtube.com/user/jcerne2

John Cerne of SUNY Buffalo has made a page on lockin amplifiers including a 13-minute video demonstrating lockin detection of an optical signal, a lockin simulation, simulations on Fourier analysis, and the HUP. A nice collection of resources for upper-level undergraduates. Cerne also hosts a webpage dedicated to conceptually learning about waves and a YouTube channel of interesting RC aircraft physics videos.

Submitted by Prof. John Cerne of SUNY Buffalo

• *The Mathologer: "e to the pi i for dummies"*

tinyurl.com/WS-mathologer

I was recently introduced to the Mathologers' YouTube channel of videos by a colleague who tweeted me an "extreme nerd alert" about the 15-minute long video titled "e to the pi i for dummies." The video is a delightful tour-de-force on Euler's famous identity and along the way treated me to new insights that I wish I had developed many years ago into the graphical multiplication of complex numbers on the complex plane (via sliding and scaling). The Mathologer is Monash University math professor Burkard Polster, and his channel contains about 50 videos on topics of considerable interest and insight to physicists as well as mathematicians, couched in formats approachable to introductory student.

Tweeted by M. Magnuson of Canisius HS Science

• *Colin Sullender's Science Gifs on Google+*

tinyurl.com/WS-CSSciGifs
plus.google.com/u/0/+ColinSullender

A very nice growing collection of inspiring science visualizations. Motors, orbits, vortices, gyroscopes, chemistry, explosions, social data, SEM, ferro-fluids, micron-sized rockets, and more gleaned from a large number of active online (including timely active news) STEM websites.