

Re: New Google Scholar search engine

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2004-11/5474.html>

From: Guy Macon (<http://www.guymacon.com>)

Date: 11/21/04

Date: Sun, 21 Nov 2004 08:47:04 +0000

Rich Grise wrote:

>Heh. Thanks for this, Guy, but just because I'm addicted to the
>illusion of integrity, I have to report that I'm not a "real" Engineer.
>The closest I could really technically get might be "de facto" engineer,
>with a lower-case 'e', but things like "engineering technologist,"
>"engineering consultant", and so on might sound impressive, but the
>"highest" I've ever "officially" got along those lines has been
>engineering tech.

Time to expose this fraud... <grin>

Folks, I had lunch with Rich one fine day. Don't believe what he say above; he knows more than quite a few who have "engineer" as their job titles.

As for education, consider Michael Faraday, the discoverer of electro-magnetic induction, electromagnetic rotations, the magneto-optical effect, diamagnetism and much else. Faraday had no formal education at all, yet he was the greatest scientific lecturer of his day, who did much to publicize the great advances of nineteenth-century science and technology through his articles, correspondence and the Friday evening discourses which he established at the Royal Institution.

Faraday discovered, in 1831, that a change in a magnetic field can induce a current, he performed a series of experiments that showed clearly that the induced EMF is equal to the rate of change of magnetic flux. Also, generalizing from the patterns formed by iron filings around magnets, he invented the concepts of magnetic and electric field lines. Faraday knew little about mathematics and found this concrete approach to electricity and magnetism much more useful than equations giving the forces between charges or currents. Faraday's concepts of electric and magnetic fields were the groundwork that led Maxwell to write his equations.

Faraday invented the first electrical generator, which consisted of a copper disk rotating between the poles of a magnet. He discovered the correct laws of electrochemistry after proving that earlier theories disagreed with experiments. He studied optical phenomena and found that when light passes through a medium, a magnetic field will rotate the direction of the oscillating electric field. Ignoring scorn from his contemporaries, he attempted unsuccessfully in laboratory experiments to find a link between gravitation and electromagnetism. Such a link was observed seventy years later in a test of Einstein's general theory of relativity when light rays passing near the sun were found to be deflected. He invented the explosion-safe mining lamp and proved that a gas was transformable to the liquid state by liquefying chlorine.

All without a scrap of formal education.