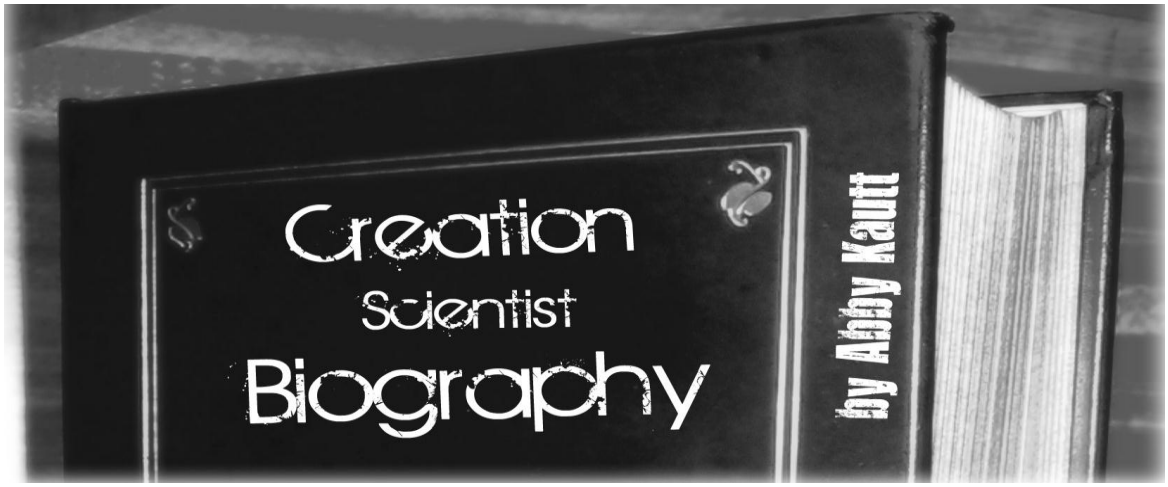

James Clerk Maxwell

James Clerk Maxwell was born in Edinburgh, Scotland on June 13th 1831. He returned to Edinburgh to attend school at the Edinburgh Academy, continuing his education at Edinburgh and Cambridge universities. At the young age of 25 he became Professor of Physics at Marischal College, Aberdeen[1].

From there he moved first to King's College, London, and then, in 1871, to become the first Professor of Experimental Physics at Cambridge where he directed the newly created Cavendish Laboratory[2].

His contributions in the area of physics, particularly electricity and electromagnetism are still considered today as breakthroughs in the scientific community. In some ways we could call James Clerk Maxwell a "Renaissance man" for his adequate understanding of many areas in science. He made progress in the following areas: **Communications** - electromagnetic radiation which is used in radio, television, thermal imaging and microwave technology. **Thermodynamics –** he made some major contributions in this field, as well as the study of kinetic theory of gases which are used today as a model of rarefied gases and plasmas. **Space exploration –** with the discovery of electromagnetic radiation, space scientists today are able to use infra-red telescopes and similar tools to study the farthest reaches of our solar system. Maxwell also theorized about Saturn's rings, how they were made up of individual particles. **Color –** Using colored filters he was able to produce the first real color photograph. The study of color he conducted helped future generations in their tweaking of color photography and film. **Nuclear energy –** Maxwell was able to calculate the speed of electromagnetic waves and light being a form of electromagnetic radiation which has pressure and momentum. His scope was broad, and his knowledge extensive[3].

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[1] http://www.clerkmaxwellfoundation.org/html/who_was_maxwell_.html
[2] Ibid.
[3] http://www.clerkmaxwellfoundation.org/html/maxwell_s_impact_html

As a Physicist, his contributions later led Albert Einstein to say of him: "the most profound and most fruitful that physics has experienced since the time of Newton." His work in this field of science laid the groundwork for future Physicists such as Einstein and his theory of relativity[4].

Some of his written publications include his 1861 book *On Physical Lines of Force*, his *A Treatise on Electricity and Magnetism* (1873) and *Theory of Heat* (1871). He expressed his interest in electricity to Lord Kelvin, who urged Maxwell to read works by Faraday, Ampere, German physicists and his own writings. Maxwell's first paper on the subject was titled: "On Faraday's Lines of Force" (1856). This first paper was followed by at least two more, "On Physical Lines of Force" (1861) and his explanation of the electromagnetic field "On a Dynamical Theory of the Electromagnetic Field" (1865)[5].

His faith in God was strong, being raised in the Scottish Presbyterian church. He was a strong opponent of Darwinism and the theory of evolution when many scientists were capitulating to this explanation of origins. An example of his faith is discovered in this excerpt from what is know as "Maxwell's Prayer" -

"Almighty God, who hast created man in Thine own image, and made him a living soul that he might seek after Thee, and have dominion over Thy creatures, teach us to study the works of Thy hands, that we may subdue the earth to our use, and strengthen our reason for Thy service; and so to receive Thy blessed word, that we may believe on Him who Thou has sent, to give us the knowledge of salvation and the remission of our sins. All which we ask in the name of the same Jesus Christ, our Lord.[6]"

Although I am no scientist, I benefit daily from the hard work of this steady man of God. His life, his work and his faith are a shining example of what Solomon wisely states in the book of Ecclesiastes:

> *"Whatever your hand finds to do, do it with your might; for there is no work or device or knowledge or wisdom in the grave where you are going."* (Ecclesiastes 9:10)

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[4] Garry J. Moes. *Streams of Civilization – Vol. II.* Christian Liberty Press, 1995, p. 197.
[5] http://scienceworld.wolfram.com/biography/Maxwell.html
[6] Garry J. Moes. *Streams of Civilization – Vol. II.* Christian Liberty Press, 1995, p. 197.