Recently the “Edge” website asked the question, “Which scientific theory is ready for retirement?” Out of many responses, some by very well known scientists, I list 34 below that might provide topics for term papers. Each is accompanied by an essay of variable length. Note that I am not endorsing the viewpoint of the articles. Your paper will need to take a critical viewpoint, and you will need to do further research; the article on its own will not be sufficient for a research paper, even if your paper is based on your objection — or agreement — with it.

David Ceperley Feb. 2014

To find the essays go to

http://www.edge.org/responses/what-scientific-idea-is-ready-for-retirement

and search for the author or the title in your browser. Many of the authors have written books or articles further elaborating their viewpoint (which you should at least consider consulting as one of your sources).

Some of the essays from previous years might also be term paper topics.

Sean Carroll Falsifiability

Hugo Mercier Planck's Cynical View Of Scientific Change

Victoria Stodden Reproducibility

Richard Saul Wurman Certainty. Absolute Truth. Exactitude

Max Tegmark Infinity

Max Tegmark Geometry

Haim Harari The Discovery of the Higgs particle Closes a Chapter in Particle Physics

Freeman Dyson The Collapse Of The Wave-Function

Lee Smolin The Big Bang Was The First Moment Of Time

Lawrence M. Krauss The Laws of Physics Are Predetermined

Samuel Barondes Science Advances By Funerals

Melanie Swan The Scientific Method

Gordon Kane Our World Has Only Three Space Dimensions

Paul Steinhardt Theories of Anything

Peter Woit The "Naturalness" Argument (String Theory)

Rebecca Newberger Goldstein Science Makes Philosophy Obsolete

W. Daniel Hillis Cause and Effect
?
Ed Regis Scientists Ought to Know Everything Scientifically Knowable

Seth Lloyd The Universe

Gregory Benford The Intrinsic Beauty and Elegance Of Mathematics Allows It to Describe Nature.

David Deutsch Quantum Jumps

Marcelo Gleiser Unification

Frank Tipler String Theory

Steve Giddings Spacetime

Bruce Parker Entropy

Paul Saffo The Illusion of Scientific Progress

Amanda Gefter The Universe

Kai Krause The Uncertainty Principle

Eric R. Weinstein M-theory / String Theory is the Only Game in Town

Alan Guth The Universe Began In A State Of Extraodinarily Low Entropy

Martin Rees We'll Never Hit Barriers To Scientific Understanding

Anton Zeilinger There is No Reality in the Quantum World

Andrei Linde Uniformity And Uniqueness Of The Universe

Geoffrey West The Theory of Everything