



A SIMPLE REVIEW OF KALIMUTHU'S MATHEMATICAL AND PHYSICAL WORKS

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ABSTRACT

Kalimuthu studied topics such as Gödel's incompleteness theorems, concepts for the origin of new fields of mathematics, new conceptual physics, bio physics and the geometry of our Universe, new models of big bang cosmology, the reality of tachyons and quantum gravity. In this simple review, the authors attempt to review the findings of Kalimuthu briefly.

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1. GÖDEL'S INCOMPLETENESS THEOREMS

In 1921, the young Austrian mathematician Kurt Gödel published two theorems which showed simply that mathematics is incomplete. To put in a lay man's language it states that in a formal axiomatic mathematical system we can formulate theorems which are neither true nor false. To narrate in further simpler words, in mathematics we can prove a theorem and its denial. Kalimuthu studied the famous mathematical impossibility the fifth Euclidean postulate and re-confirmed Gödel's theorems. ^[1-5]

2. ON THE ORIGIN OF NEW FIELDS OF SPHERICAL GEOMETRY AND TRIGONOMETRY

There is no end for scientific studies, probes, explorations and search. Let us recall the past history of scientific search and research. The probability theory was born in a gambling centre. The idea for the development of analytical geometry was found by Descartes in his sick bed at the hospital by looking at the spider's web. Einstein just imagined falling from a roof and found the equivalence principle. Sleeping on these scientific histories, the author found two spherical theorems which states as follows:

- In the sphere can draw a triangle whose interior angle sum is equal to 360 degrees.
- In spherical space by considering a circle, it is possible to construct a triangle whose interior angle sum is 540 degrees.

Kalimuthu proved these theorem by applying the fundamental postulates of number theory and classical algebra. ^[6]

These two theorems are not even imaginable. But Albert Einstein used to tell time and again that imagination is more important than knowledge. To interpret this in simple sentences, invention is possible if there is imagination with scientific search. The author of FRACTALS theory had to struggle for more than 40 years for approval and publications. Now this concept is widely applied in physics. Even Lobachevski's non Euclidean math was put into application by Einstein after its 81 years publication. And that is the same case with Riemann. He published his non Euclidean geometry in 1984. But he has to wait patiently 61 years for his application. In 1915, Einstein assumed the fundamentals of Riemannian concepts for the formulation of his general theory of relativity. There are a number of unsolved problems in relativity and cosmology. Further probes and studies may give clues for the development of a new branch of spherical trigonometry.

3. DEVELOPMENT OF NEW BRANCH OF TOPOLOGY

Nowadays, topology is widely used in science and technology. Current studies are focussed on the big bang model of the Universe. Particularly studies and investigations are devoted to the global geometry of our Universe. One of the basic concepts of topology is that the circle and a straight are not equal topologically. The author extended Gödel's incompleteness theorems to topology and EXPERIMENTALLY proved that topologically a

straight line and a circle are equal. The authors understand and agrees that this finding is controversial.^[7] But at the same time Kalimuthu politely hopes that such negative results pave the way for new findings as in the case of Michelson-Morley experiment.

4. ON THE FLATNESS OF THE UNIVERSE

In 1922 the famous Russian mathematician Alexander Friedmann showed by analyzing Einstein's general relativity that the geometry of our Universe has only three possibilities namely open, closed or flat. The recent NASA's WMAP and ESA's Planck probes revealed that the shape of our Universe is flat with a marginal error of 0.04%. Kalimuthu by applying the classical algebra to cosmic triangles found five different proofs, by assuming set theory showed one finding and by delving tensor algebra discovered one result. Besides this, he applied the laws of quadratic equations to Friedmann's equation and established one more finding. Thus Kalimuthu totally published ten different mathematical proofs for the flat Universe.^[8-17]

5. NEW CONCEPTUAL FINDINGS IN PHYSICS AND COSMOLOGY

Kalimuthu has proposed the following concepts in cosmology and physics:

- a) It is possible to generate electricity freely from space.
- b) Preparing Space Bombs from space is possible
- c) Proposed a new model for big bang cosmology
- d) On the possibilities of tachyons
- e) On the reality of quantum gravity
- f) By publishing a controversial paper for the origin of a new mathematical physics.
- g) By analyzing trisection of 60 degrees without using a protractor with Kalimuthu's co-author and his PhD student M. Sivasubramanian.

The above proposals were appeared in national and international peer reviewed journals.^[18-29]

6. CONTRIBUTIONS TO BIOPHYSICS

Both physical and mental healths are inevitable to humanity. Kalimuthu has published a lot of articles for wellness, focus, concentration, bliss and enlightenment. He has explored and revealed the hidden treasures of 32000 years old Lemurian yoga practices. More and more details may be found at www.lemurianyoga.com^[30]

7. DISCUSSION

Kalimuthu's five findings are milestones in the history of pure mathematics. His ten results for the flatness of our Universe is eligible even to get the Nobel prize for physics. Surely his published conceptual ideas will give birth to a new fields of physics and cosmology. But his explorations in bio-physics needs experiments and confirmations by the research community

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