Deriving the Coupling Constants Primordial Equation From Varying Lorentzian Manifolds

O Manor

March 23, 2021

Abstract:

By using Lorentz Manifold in Euler-Lagrange equation is a mathematical framework in which fermions can arise as arbitrary variations of the manifold. Additional important result of Lorenz manifolds inside an Euler LaGrange equation is a manifestation of a mathematical Series. That series revolves around prime net variations $N(V)$ and predicts beautifully the value of the fine structure constant by the previous element in the series, i.e. the magnitude of the weak interaction.. The coupling constant equation predicts an intimate relation between bosonic fields and prime numbers, as it is primordial function. A net amount of variation on the manifold result on bosonic field propagation. The next coupling to stand at $\frac{1}{850}$ relative to the strong interaction.

Introduction

Define a Lorentz manifold:

$$\boldsymbol{s} = (\boldsymbol{M}, \boldsymbol{g}) \qquad (1)$$

Use it to assemble a Lagrangian and require it to be stationary:

$$L = (s, s', t) \qquad (2)$$

$$\frac{\partial L}{\partial s} - \frac{\partial L}{\partial s'} * \frac{d}{dt} = 0 \qquad (3)$$

Allow arbitrary variations of the manifold. Ensure it will vanish:

$$\frac{\partial \boldsymbol{L}}{\partial \boldsymbol{s}}\omega \boldsymbol{s} - \frac{\partial \boldsymbol{L}}{\partial \boldsymbol{s}'}\omega \boldsymbol{s}' * \frac{\boldsymbol{d}}{\boldsymbol{dt}} = 0 \qquad (4)$$

$$\omega \boldsymbol{s} = 0 \qquad (\mathbf{5})$$

Turn it to a series of arbitrary variations:

$$\omega \mathbf{s} = \omega \mathbf{s1} + \omega \mathbf{s2} + \omega \mathbf{s}3 \ldots \qquad (6)$$

If there are only four elements in the series, and we require them all to vanish, than we can allocate two pluses and two minuses:

$$\omega \boldsymbol{s1} + \omega \boldsymbol{s3} > 0$$

$$\omega \boldsymbol{s2} + \omega \boldsymbol{s4} < 0$$

If

$$\omega \boldsymbol{s1} + \omega \boldsymbol{s3} + \omega \boldsymbol{s2} + \omega \boldsymbol{s4} \neq 0 \qquad (7)$$

Than the overall series cannot vanish, by that logic we need equal amounts of plus and minuses. The overall amount must be even and summed as zero.

Suppose that we had three distinct elements, two pluses and minus:

$$\omega \boldsymbol{s1} + \omega \boldsymbol{s3} + \omega \boldsymbol{s2} > 0$$

or

$$\omega \boldsymbol{s1} + \omega \boldsymbol{s3} + \omega \boldsymbol{s2} < 0$$

Demanding the series to vanish this will defy the result, and so prove that there could not be three distinct elements in the series, else the overall series will not vanish.

Because of those sceneries, we require the series to have an even amount of variation elements, manifesting as two distinct elements in the series, which differ in sign.

If we allow those sub elements in the series to vary as well, and by the above reasoning, there are only two elements in the series, they are varying in a discrete way, or forming a group.

Let it be only four elements in the series and one of the pluses just changed its nature

$$\boldsymbol{O}: \omega \boldsymbol{s1} \rightarrow \omega \boldsymbol{s2}$$

$$\omega \boldsymbol{s1} + \omega \boldsymbol{s1} + \omega \boldsymbol{s2} + \omega \boldsymbol{s2} = 0 \qquad (8)$$

To:

$$\omega \boldsymbol{s1} + \omega \boldsymbol{s2} + \omega \boldsymbol{s2} + \omega \boldsymbol{s2} \neq 0 \qquad (9)$$

There must be a way to bring it back to where it was, so the overall series can vanish, it takes another map, on the varying element to bring it back to where it was.

$Y\colon\ \omega \boldsymbol{s2} \rightarrow \omega \boldsymbol{s1}$

Therefore, to bring an element to itself given only two varying elements in the series we need two distinct maps, which attach a varying element to itself, by a threefold combination. $\omega\mathbf{s1}(\mathrm{O})\ \omega\mathbf{s2}(\mathrm{Y})\ \omega\mathbf{s1}$ For example.

Even though the sub elements in the series are varying, the overall series can vanish.

Now, count all the ways of possible combinations of those elements. We are going to analyze by the integral signs. Since it is a group, there is a natural map, which change an element to itself. One built his analysis firstly on those natural maps.

So:

(1(e)1(e)1)

2(e)2(e)2

(221)

(112)

(211)

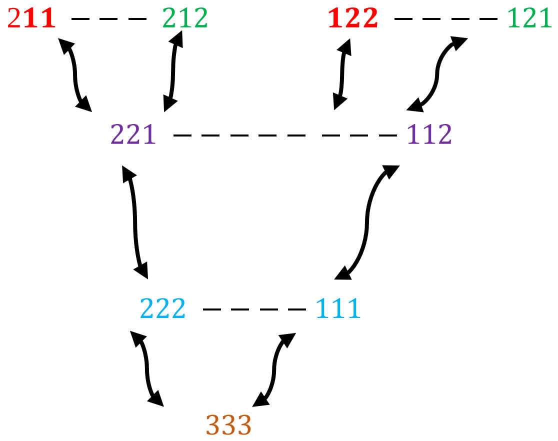
(122)

(212)

(121)

The first two combinations are by the natural maps and one used them to build the other combinations. Overall, there are eight such combinations and additional one arrow combination, which yield (333)

Here is how one built it, starting from those two natural maps. (Arrows to variations, colors to pairings):



Therefore, we have Lorenztion manifold with arbitrary variations, which turn into matter based on that idea.

One does not know whether these are the actually variations, as the mathematics does not entail any details about that. Therefore, the graph could be inaccurate in elements order. The colors meant to elements pairing.

Reader does not have to agree with what one did, but as one will calculate the ratios of all the forces known, one kindly asks the reader to keep reading as some truth seem to obey the reasoning line one is building.

Theorem (1) – nature will not allow a prime amount of variation to appear by itself. Define prime to be (2n+1) variations not divisible by minimal primes {2, 3}.

1.1) Prime amounts appear in pairs.

Theorem (2): Nature will generate force if a prime net amount of arbitrary variation will appear. Net variations will appear when combine two amounts of prime variations.

Two does not appear, as it is an even amount of variations, which vanish.

As the series of prime net variations and the number one. $Define\ N(V)$

$$N\ (V) = \ 2V + 1 \qquad V \geq 0$$

$Count\ all\ the\ prime\ pairs\ of\ \ variations,$

$$(3{,}3)\ \ (3,5)\ \ (3{,}7)\ \ (3{,}11), (3{,}13) \ldots$$

$$(5,3)\ \ (5{,}5)\ \ (5{,}7)\ \ (5{,}11)\ \ (5{,}13)\ \ldots$$

$$(7,3)\ \ (7{,}5)\ \ (7{,}7)\ \ (7{,}11)\ \ (7{,}13)\ \ldots$$

$$\ldots.$$

$$(29,19)(29{,}23), (29,29), (29{,}31) \ldots$$

That is a hard work, but here is the great part. We only need to do it twice to find what nature does repeatedly.

Since we have only two varying elements in the series, we can eliminate almost all the options, as we require obtaining a sum that is divisible by two and then a number divisible by three.

By The following reasoning:

Two as we have only two varying elements. Three as these elements create a certain amount of threefold combinations.

The sums satisfying the condition is $(5{,}13)$ or $(7{,}11)$ and $(29{,}31)$.

Of course, there are more as N (V) has no limit, but as one mentioned, it took two pairs to understand the principle.

Each prime pair should have a net variation element of N(V) proportional $\mathbf{Theorem}\ (\mathbf{3})\ -$

To Total Variations value divided by two. This will be vivid with actual examples:

$\boldsymbol{Analyze\ the}\ (\mathbf{7}, \mathbf{11})\ \boldsymbol{Total\ variations\ pair\ with\ net\ variation}\ (+\mathbf{1})$:

$Total\ variations\ sum\ is\ divisible\ by\ two$:

$18/2\ =\ 9$

$And\ than\ by\ three$

$9/3 = 3$

We know that we have net variations of (+1) so it can be extracted to yield:

$$F(1) = 8\ + (1)$$

However, even amounts of variations vanish so we can ignore the element 8 and write:

$$F(1) = (1)$$

$\boldsymbol{Analyze\ the\ next\ pair\ of\ Total\ Variation}\ (\mathbf{29}\ , \mathbf{31})\ \boldsymbol{with\ net\ variation}: (+\mathbf{3})$

$$29\ +\ 31\ =\ 60$$

$$60/2\ =\ 30$$

In addition, three divisible. We know we have three net variations so extract:

$$27 +\ 3$$

$\boldsymbol{Now\ that\ is\ all}\ you\ need\ to\ complete\ the\ series\ and\ calculate\ the\ \boldsymbol{next\ element}$:

$$27\ =\ 24 + (3)$$

$$(8 * 3) = 24$$

$Obtain$:

$$[8+1]:[27+3] = \ [8+1]:[24+(3)]+3 \qquad (10)$$

$$[8+1]:[27+3] = \ [8+1]:[(\mathbf{8}*\mathbf{3})+(\mathbf{3})]+3 \qquad (11)$$

So if the idea to be accurate $Next\ element\ V = 2\ and\ N(V) = \ (+5)$.

We take this element, multiply by the even sum of the previous element,

Add extra invariant (**3**), and we know we need add the extracted $N(V)$.

$$[(\mathbf{24}*\mathbf{5})+(\mathbf{3})]+\mathbf{5} \ = \ \mathbf{128}. \qquad (\mathbf{12})$$

Stunning. Next in line:

$$[(120*7)+(3)]+7 \ = \ 850 \qquad (13)$$

$$[(840*11)+(3)]+11 = \ 9254 \qquad (14)$$

Nature is than the **Interplay between total Manifold variations to Net variations**.

To calculte the magnitude of an element R:

$$F_{V=0} = 8+(1) \qquad (15.0)$$

$$F_R\# = \left(8*\prod_{V=1}^{V=R} N(V)_V + (3)\right) + N(V)_V = 30:128:850:9254.. \qquad (15.1)$$

$$N(V)_V = 2\left(V+\frac{1}{2}\right); \ V \geq 0$$

$$N(V)_V \ \in \ \mathbb{P} \bigoplus (+1)\,; \ \mathbb{P} \rightarrow Set\ of\ Primes$$

$$N(V)_V \ = P_{max}\,; P_{max} \ \in [0,\mathbb{R}] \bigoplus (+1)$$

$$\mathcal{P}_{V=0} \ = 8+(1) \qquad (0)$$

$$\mathcal{P}_R\,\# = \left(8*\prod_{V=1}^{V=R} \mathcal{P}_V + (\mathcal{M})\right) + \mathcal{P}_V = 30:128:850:9254.. \quad (1)$$

Overview of reasoning:

Axiom– prime amount of arbitrary variations pair to each other

Their overall sum must be dividable by two and three

Two distinct elements, which create threefold combinations

Define generated force as prime net variation in which we associate N(V) elementt

$\frac{\text{total variations}}{2} \propto$ to N(V) element by the relative size of total pairing

Net variations function cannot contain an even, as it will vanish

We searched for the first two prime pairs and derived $8 + (1)$ and $27 + (3)$

We saw that nature multiply the even sum by the next element of N (V)

We found the invariant (3) element.

We obtained a number to which we add the extracted net variation

We calculated the next element to be exactly 128 and the two next elements:

$$8 + (1): \big(24 + (3)\big) + 3: \big(120 + (3)\big) + 5: \big(840 + (3)\big) + 7 \ldots \qquad (16)$$

$$(1): (30): (128): (850): (9254) \ldots \qquad (17)$$

Predictions and conclusions

There are infinite variety of "bosons", one to each prime number of N(V).

The clusters of total variations grow much more rapidly than the net variations.

The larger the cluster, the weaker the force.

The magnitude of each boson manifested an in infinite series of ratios

$1: 30: 128: 850: 9254 \ldots$ by the expressions (15):

$$F_{V=0} = 8 + (1) \qquad (15.0)$$

$$F_R\# = \left(8 * \prod_{V=1}^{V=R} N(V)_V + (3)\right) + N(V)_V = 30: 128: 850: 9254.. \qquad (15.1)$$

References

O. Manor. "The 8- Theory – The Theory of Everything" In: (2021)

O. Manor. "Deriving Quarks from Lorentz Manifolds" In: (2021)