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Gravity and Electromagnetism

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Abstract

Here is a paper that uses the theory of electromagnetism to model gravity and the universe. The standard magnetic flux, capacitance, conductivity, dielectrics are considered. The mathematics includes the golden mean parabola, Euler's Identity, Matrices, Eigenvectors, and Differential equations.

Keywords: Gravity; Magnetic flux; Capacitance dielectric; Permeability; Mass gap

Introduction

Here we provide a solution to the physical universe that shows that it can be modelled as an electromagnetic flux using well know electrical engineering mathematics. The Then gravity is modelled as an eigen vector. The standard Golden Mean parabola and the derivative equals the function is used once again to help solve the problem of why gravity exists. We begin with magnetism and flux.

Magnetic flux density

$L=\mu_0 N^2A/l$ $0.666=1.15 * n^2 *0.1646/0.8415=\sqrt{3}$

$B=\mu_0 N i/l=1.15*\sqrt{3} *1.3/0.8415=3.05=c=M\rho$

$1/L=B/[\partial E/\partial t]\partial M/\partial t$

$\partial E/\partial t=BL (\partial M/\partial t]$

$2t-1=BL (2)$

$t=5/2=2.5b=T=PERIOD$

$x^3-x-1=2^2-2-1=1=E.$

Conductivity

$R=\rho * l/A$

$1.618=\rho *0.8415/0.1646$

$\rho=0.316$

$\sigma=1/\rho=3.14=\pi=E$

$d=0.8415$

$d/2=0.42=\pi-e$

$\text{Ln } e=1$

$\pi-\text{Ln } e=2.14$

$2* \partial M/\partial t=1 *2=2.$

Universal capacitor resistance

$Q=1/[\omega CRc]$

$1.3=1/[0.8415 *1.48*Rc]$

$Rc=1.619$ cf 1.618.

Euler's identity

$A=E*t=E^2=t^2=1$

$i *\int \sin\theta -\int\cos\theta=A=1=-e^{\pi}$

$i* \cos\pi -\sin\pi=1$

$\theta=\pi=180°$

This is half a cycle.

Area Under cosine=0

Area Under sine=π=E.

Capacitance continued

$C=q/V$

$1.5=q/0.86$

$q=1.3=\partial i/\partial t$ where $t=1$

Now, $C=er=e_0 A/d$

$1.5=0.86 (8.854)(A/d)$

$A/d=\sqrt{3}/8.854$

$d=0.86$ because $\sin\theta=0.86/1$

$A=0.1956 (0.8415)$

$A=0.1646$

$\sqrt{A}=0.4057=t$

$d_0=1/2$

$0.4057/2=0..2028=Y=E$ cf $Y=0.203$ [Dampened Cosine Curve]

$t=s-c$

$t=s-\partial s/\partial t$

Integrate (Time is a Constant with respect to t)

$1=s^2/2-s$

$s^2-s-1=0$

$x^2-x-1=0$

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t=s-c

t=s- ∂s/∂t

Integrate: $t^2/2=s^2/2-s$.

t=1

$t^2/2=s^2/2-s$

$2=s^2-s$

$s^2-s-2=0$

Quadratic: (s-2)(s+1)=0.

s=2, -1

-∂s/∂t=-1

∂s/∂t=1

∂t/∂t=1

∂s/∂t=s

y=y'

The Derivative Equals the Function

$d=v_i t+1/2\ at^2$ (same equation)

$d=s_i+s/2$

d=d/2+d/2

$s_i=d/2$

The initial distance=1/2

∂E/∂t=2t-1

∂E/∂t=2(1/2)-1=0 (Minimum)

F=v

M=R

V=L ∂i/∂t F=V=v

0.86=0.666 ∂i/d∂t

3/2 *0.666=∂i/∂t

1.3=∂i/∂t

1-∂i/∂t=1-1.3=-0.3=-c/10=-∂s/∂t

current i=speed of light c.

s=t-i 0.1334=t-1.3

t=1.16666

E=1/t=1/1.166=0.86

1-∂i/∂t=∂s/∂t

t-i=s

t-c=s

s=t-c

t=s-c

time=distance-speed of light

distance=time-speed of light/10

distance=0.4+0.3=0.7

1/s=1.4285

s=0.85

V=L ∂i/∂t

But $F=G\ M_1M_2/R^2$

$\partial i/\partial t=M_1M_2/R^2$

when M_1 is very large and M_2 is very small,$=1/R^2$.

$\int \partial i/\partial t=i=\int 1/R^2=-1/R$

i=-1/R

$F^2/2=-1/R$

$1/2R^2 * R=-1$

1/2 vM=K.E.=1

Therefore, F=v R=M.

Dielectric Constant and Permeability

L'C'=ε μ

(0.666)(1.5)=1 1=ε(15%)

ε=1/1.15=0.86

Capitance=1.48

C*M=1.5*2=3=Mρ

Mass Gap

L=1/1.5=0.6666=G.

So the inductance of our universe is G. The energy of the mass with velocity is converted to a Gravitational field. G=0.666 is the result. Gravity is modelled like a magnetic field. Like magnets, matter is attracted to matter. We call it gravity. The Earth has a magnetic field because it has matter or mass. The magnetic field is proportional to g=9.81.

5.972/9.81=0.609=1/1.642

(The Mass of the Earth is closer to 6.060108)

Better still

1/1.618=0.618 0.618*9.806=6.06=2.02*3=Y*c=Ec

But $E=Mc^2$

So $Ec=Mc^3=g/M$

$M^2c^3=g$

(This is why g=9.81m/s)

$g=M^2M\rho^3$

$g=M^2 * (\partial M/\partial t)^3$

g=E * Mc

a=E *M ∂s/∂t

a=E*M v

a/v=1=E*M

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E*M=1=t

$M=t^2$.

Conservation of Momentum

$Mv_1=Mv_2$

v=sin θ

M v_1=M sin 1

∂M/∂t *v1=M 0.8415

2 *v_1=0.8415M

v_1=0.8415/2 *M

=0.4207M

=cuz M

0.8415/cuz=M

M=2

$E=Mc^2$

$\pi=2\ c^2$

c=√(π/2)

c=1.2533=MINIMUM OF THE ENERGY PARABOLA

2t-1=0

t=1/2

P=Mv=2 (0.866)=1.73=√3

K.E.=1/2 Mv^2

1=1/2 M $(0.86)^2$

M=2.666

M=-∂M/∂t+G

And

M=F=26.666

Now,

K.E.=1/2 Mv^2

Pi=1/2 (2) v^2

$v^2=\pi$

v=√π=1.77

Bernoulli: mgh +1/2mv^2+p

0.666b h +1/2 $(1.77)^2$+0

1/h=0.4240=cuz

E/h=cuz Hooke's Law.

limy→0∫xedx=y

limy→0exdy=y

$e^x=y$

$y=y'=e^x$

$y=y'=y''=y'''...=e^x$

lim y==> ∞=e^x

$e^{Infinity}$

x=Ln ∞

y=y'=y''=.....=e^x=∞

The universe is robust [1-4].

Similar Matrices

$B=S^{-1}$ A S

ΩA=√(3/2)

√3/√ 4=[2 0, 0 2]=[√3 v_0 0 √3][|A|=3

det $|A^{-1}|$=1/[det |A|.

$$|\begin{bmatrix}\frac{1}{2} & 0\\ 0 & \frac{1}{2}\end{bmatrix}=\begin{bmatrix}\frac{1}{4}\end{bmatrix}=\frac{1}{4}\begin{bmatrix}2 & 0\\ 0 & 2\end{bmatrix}=\begin{bmatrix}\frac{1}{2} & 0\\ 0 & \frac{1}{2}\end{bmatrix}=$$

|D|=1/4

So, eigenvalues $\begin{bmatrix}\lambda-2 & 0\\ 0 & \lambda-2\end{bmatrix}\lambda d = x$

x^2-x+ 1/4=4

Quadratic (Note the √(-1)=0.618)

√3=|A|, 0.7360=√0.858=√Ω A.

Mass Gap

E x t x s=E/t

t Ets/E=√3/√4

t^2s=√ 3/2

$(t^2s)^2=(\sqrt{3}/\sqrt{4})^2$

t^4s^2=3/E

Et^4s^2=c

But $E=Mc^2$

M=1/[E t^4s^2]=1/{√3 * t^2 s]=1.5 MASS GAP

Aside: E x t x s]/E/t=t^2s=(0.4083)(0.866)=0.1444=0.856

C. G. E.=Cusack Gravitational Equation

1/G=M ρ/E ρ+ ∂M/∂t

The mass and energy density is wrt time, not space.

So, $\partial^2E/\partial t^2$=dE/dt/dM/dt+1/∂M.∂t

$(\partial E/\partial t)^2$=[∂E/∂t +1]/∂M/∂t

x^2 ∂M/.∂t -x-1=0

∂M/∂t=2

[∂M/∂t]/2=1

$E=Mc^2$

Mass=T. E=P.E.+K. E..+18=2(3^2)

$(0.618)^3$=0.2303

$1/(0.618^3)=4.236=cuz*10$

$cuz=\pi-e.$

Eigenvalues and Eigenvectors

Eigenvalue of the

$$C\cdot U\cdot E=\det\begin{bmatrix}2-\lambda & 0\\ 0 & 2-\lambda\end{bmatrix}$$

$4-4\lambda+\lambda^2=0$

$x^2-4x-4=0$

$(x-2)(x-2)=0$

$x=2=\lambda$

A=[2 0, 0 2]

$|A|=4=E\rho$

$$\det\begin{bmatrix}G & 0\\ 0 & G\end{bmatrix}=G^2=4$$

$\partial^2E/\partial t^2=E\rho$

$\partial E^2/\partial t^2-E-E\rho=0=\text{Ln } t$

t=1 or x=1 radian

Now, going back: [2 0, 0 2][x y]=[λ [x y]

[G 0, 0 G] [t E]=G [t E]

Multiply by the diagonal of the unit cube $\sqrt{3}/G==1.73/2=0.86$

0.86 [2 0 0, 0 2 0, 0 0 2] [1 1 1]]=G [t s E]

$\sqrt{3}=2t$

$t=\sqrt{3}/2=0.86$

$s=\sqrt{3}/2=0.86$

$E=\sqrt{3}/2=0.86$

$\partial^2E/\partial t^2-E=\text{Ln } t$

2-1=Ln t

$e^2/e^1=t$

$t=e^t$

Ln t=t

$\text{Ln } t=e^t$

Derivative

$1/t=e^t$

So

Ln t=1/t Or the derivative=the function

y=y'

$M=mgh+1/2\,mv^2$

$1=gh+1/2v^2$

If v=a

$1/2a^2+2a-2=0$

(a-1)(a-1)=0

a=1

M=P.E.+K. E.

$M=mgh+1/2mv^2$

v=1=a

But a=E=2G

g=1/2

$2=2(1/2)(1)+1/2(2)(1^2)$ 2=1+1.

G=2

$\partial^2E/\partial t^2=2=\partial M/\partial t$

$\int\partial^2E/\partial t^2=M$

$\partial E/\partial t=M$

$\int\partial E/\partial t=\int M$

$E=M^2/2$

$E=1/2\,bM^2$

$1/2M^2=Mc^2$

$1/2M=c^2$

$M=2c^2=18$=P.E. +K.E.

1-0.1415=0.8575=0.

y''+y'+y=0

$\partial^2E/\partial t^2+y'+E=\text{Ln } t$

y'=Ln t

y=1/t

E=1/t

$d_2E/dt_2(\text{Ln } t)$^2/2

$dE_2/dt_2=y''$.

So,

$(\text{Ln } t)^2/2+\text{Ln } t+1/t=0$

When a=v, this is

$1/2\,a^2+a+v=0$

$a^2+2a+2v=0$

$(y'')^2+2y''=2y'=0$

$G^2/2+2G+2(E')=0$

$2(2G-1)=-G^2/2+2G$

$4G-2=G^2/2+2G$

$8G-4-4G=G^2$

$4G-4=G^2$

$G^2-4G+4=0$

(G -2)(G-2)=0

(G -2)^2=0

$G=2=\partial^2E/\partial t^2$.

Second Order Liners Equations

$ay''+by'+cy=0$

$\partial^2E/\partial t^2$- (1) E=Ln t

by'=Ln t 0=Ln t

t=1

$ar^2+br+ c=0$

$(1)r^2=0r+ (-1)=0$

$r^2=1$

$r=\pm1$

(1)(1)=0(1)=(-1)=0

0=0 true

The Material Universe Exists Where the Gravity Eigenvector.

Eigenvector=1/1.5=0.667 i.e.

$1/(3/2)\ G=E/(M\rho\ \partial M\partial t)$

$\partial^2E/\partial t^2=E/[M\ \rho/(\partial M/\partial t)]$

where $E=x^2-x-1$

Why does E=1?

$2x-1=\int x^2-x-1$

$2x-1=x^3/3-x^2/2-x-1-C$

C=-1 @ x=0

E=(-1)^2-(-1)-1

E=1

E=x^2-x-1=∫ E

E=E'

$x^2-1=x^3/3-1.5x^2-x-1=3/2$

$x^3-2.5x^2-x-0=1.5$

$x^3-2.5x^2-x-1.5=0$

$x=3=M\ \rho=c$

x=t

This is the solution to our physical universe.

Conclusion

We see that the physical universe can be thought of as an electrical flux and gravity as an eigenvector.

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