

## Navier-Stokes Equation: A Solution

Paul T E Cusack\*

BScE, DULE, 23 Park Ave, Saint John, NB E2J 1R2, Canada

### Article Info

\*Corresponding author:

Paul T E Cusack

BScE, DULE

23 Park Ave

Saint John, NB E2J 1R2

Canada

Tel: +1-506-652-6350

E-mail: St-michael@hotmail.com

Received: November 28, 2018

Accepted: December 13, 2018

Published: January 7, 2019

Citation: Cusack PTE. Navier-Stokes Equation: A Solution. *Int J Cosmol Astron Astrophys.* 2019; 1(1): 7-8.  
doi: 10.18689/ijcaa-1000103

Copyright: © 2019 The Author(s). This work is licensed under a Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Published by Madridge Publishers

### Abstract

An expert of the Navier-Stokes Equation requested one solution or example, of a solution to the Navier Stokes Equation. Using Astrotheology variables published in many paper by this author, we provide a solution to Navier-Stokes.

**Keywords:** Navier-Stokes; Astrothoelogy; Reynold's Number; Young's modulus

### Introduction

In this brief paper, we provide a solution to the Navier -Stokes Equation [1-3]. The answer to the variables lie in AT Math (Astrotheology, Cusack's Universe) shown in (Figure 1).

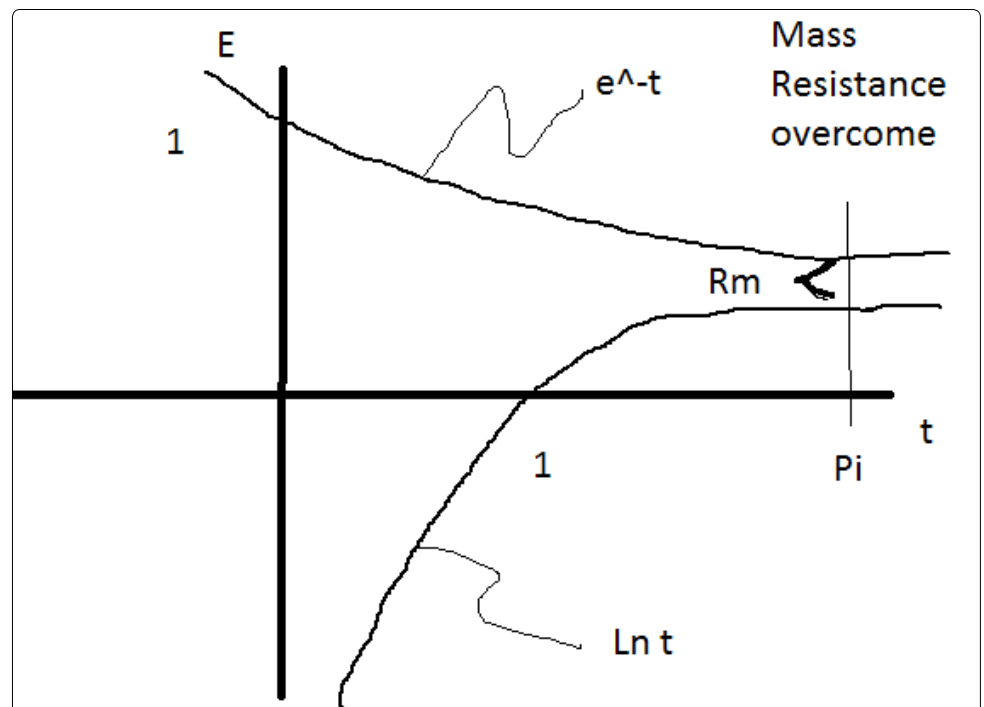


Figure 1. The Mass Ln Fuction

$$\rho(\partial v/\partial t + v \cdot \nabla v) = \nabla P + \nabla T + F$$

$$\rho = 4/\pi = 127.3$$

$$v = a = \sin 45^\circ = \cos 45^\circ = 1/\sqrt{2}$$

$$P = S.F./ \text{Area}$$

$$S.F. = 8/3 = 2.667$$

$$R = 1$$

$\theta = \text{Reynold's Number} = 0.402 \text{ rads} = 23.03 \text{ degrees}$   
 $T = \text{Young's modulus} = (\pi - e) = 0.4233 = \text{cuz}$   
 $F = 0$   
 $127.3(1/\sqrt{2} + 1/\sqrt{2} \times 1/\sqrt{2} \cos(0.402)) = 8/3/(\pi(1)^2) + \nabla(0.4233)$   
 $+ 0$   
 $127.3(116.72) = -0.8489 + \nabla(0.4233) \cos(0.402)$   
 $23.373 = 0.4233(0.9202) \nabla$   
 Let:  
 $\nabla = (\partial/\partial x + \partial/\partial y + \partial/\partial z)$   
 $\partial/\partial x = \partial/\partial y = \partial/\partial z$   
 $\nabla = 1/0.167 = 1/\gamma$  (monatomic gas)  
 $3(\partial/\partial x) = 1/(1/6)$   
 $\partial/\partial x = 2 = dM/dt$   
 $(2+x)^3 = x^3 + 6x^2 + 12x + 8 = 0$   
 $x = -1$   
 $x = 1/2 i(\sqrt{3} + 5i)$   
 Let  $i = -.0618$   
 $= 4.196$   
 $\ln x = 0.868 = \sin 1$   
 $\ln x = \ln 1 / \ln 2.368 = \ln 1 - \ln 2.368$   
 $e^{\ln x} = e^{-\ln 2.368}$   
 $x = e - \sin 1$   
 $= 1/e^{\sin 1}$   
 $= e^{-1/M}$  Where  $M = 118$  Number of elements in the Periodic Table.  
 So  $(2+1) = 3 = \text{Eigen Value, speed of light}$   
 $(2+x) = 2 + 13.03 = 15.03 = \text{Mass Gap} = 1/G$

## Conclusion

This is the solution to the Navier Stokes Equation.

## Acknowledgements

None.

## Conflict of interest

The author declares that there is no conflict of interest.

## References

1. Cusack P. Astro-Theology, Cusacks Universe. *J. Phys. Math.* 2016; 7(2): 8.
2. Steward I. In Pursuit of the Unknown. NY 2012.
3. Cusack P. The Universal Vector. *Ope Acc J. Math Theo Phys.* 2018; 1(5): 186-190. doi: 10.15406/oajmtp.2018.01.00032