A proof of Riemann Hypothesis.

Riemann Zeta-Function

$$\xi\ (s) = \sum_{n=1} \frac{1}{n^s} = \prod \frac{1}{1-p^s} \qquad (s = a + bi)$$

Riemann Hypothesis: all the Non-trivial zero-point of Zeta-Function $Re(s) = {}^{1}/_{2}$.

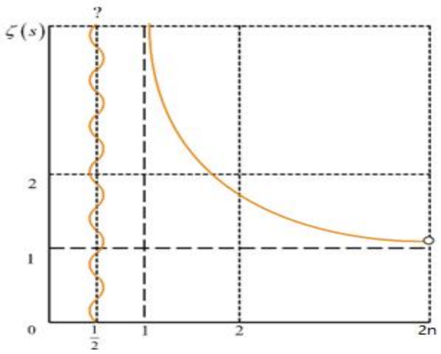

Figure.3. **Riemann Hypothesis:** all the non-trivial Zero points of Riemann zeta-function are on the 1/2 axis.

We can get figure.3

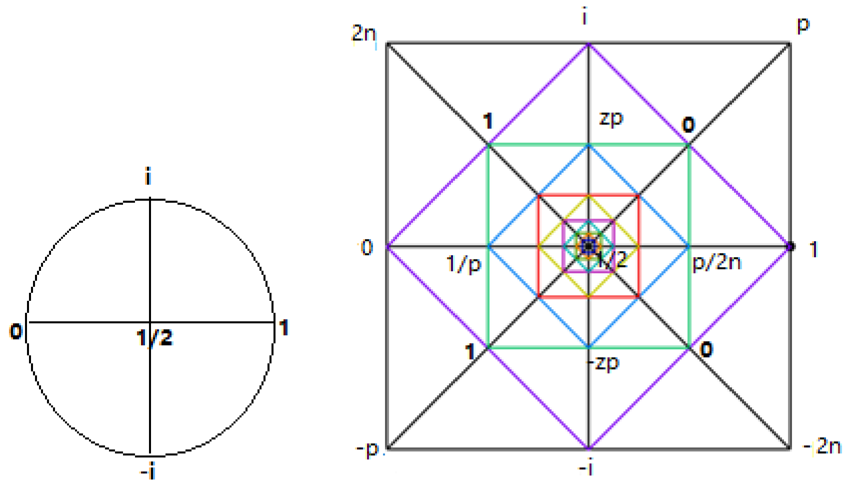

Fig.4. N-domain analytic continuation with $\frac{p}{2n} - \frac{1}{p}$ **in** $L^{1/2}_{(0\ 1/2\ 1)}$ **space**

We have

$$\mathbf{1/2 = 1/2 \quad 0 = 1/2\text{-}1/2 \quad 1 = 1/2 + 1/2 \quad i^2 = -1}$$

$$\mathbf{1/2 = (1/2 + 1/2 \bullet i)(1/2 - 1/2 \bullet i)}$$

$$\mathbf{i^0 = 1 \qquad i^1 = i \quad i^2 = -1 \quad i^3 = -i \quad i^4 = 1}$$

So we can constructure a space with a 1/2 Fixed Point, we call it $L^{1/2}_{(0\ 1/2\ 1)}$

We also have

$$\frac{\mathbf{1}}{\boldsymbol{p}} \to \mathbf{0}$$

$$\frac{\boldsymbol{p}}{\boldsymbol{n}} \to \mathbf{1}$$

$$\boldsymbol{zp} = \frac{\mathbf{1}}{\mathbf{2}} + \frac{\mathbf{1}}{\mathbf{2}}\left(\frac{\boldsymbol{p}}{\boldsymbol{n}} - \frac{\mathbf{1}}{\boldsymbol{p}}\right)\boldsymbol{i}$$

$$-\boldsymbol{zp} = \frac{\mathbf{1}}{\mathbf{2}} - \frac{\mathbf{1}}{\mathbf{2}}\left(\frac{\boldsymbol{p}}{\boldsymbol{n}} - \frac{\mathbf{1}}{\boldsymbol{p}}\right)\boldsymbol{i}$$

$$\boldsymbol{i}^{\mathbf{2}\boldsymbol{n}} = \pm\mathbf{1} \quad \boldsymbol{i}^{\boldsymbol{n}} = (\boldsymbol{i} \quad -\mathbf{1} \quad -\boldsymbol{i} \quad \mathbf{1})$$

$$\boldsymbol{i}^{\boldsymbol{p}} = \pm\boldsymbol{i}$$

$$\mathbf{1} + \begin{bmatrix} 2n & i & p \\ 0 & 1/2 & 1 \\ -p & -i & -2n \end{bmatrix} \begin{bmatrix} 1/2 & \ldots\ldots & \frac{1}{2^n}[1+(p/n-1/p)i] \\ \ldots\ldots & 1/2 & \ldots\ldots \\ \frac{1}{2^n}[1-(p/n-1/p)i] & \ldots\ldots & 1/2 \end{bmatrix} = 0$$

The tr(A)=1/2*n

This is the proof of Hilbert–Pólya conjecture. This is mean that all the non-trivial Zero points of Riemann zeta-function are on the 1/2 axis just show as Fig.3. So we give a proof of Riemann Hypothesis.

In fact, we have

$$1 + \frac{e^{ip\pi} - e^{i2N\pi}}{\sum \frac{1}{2^N} = 2} = 0$$

$N \sim (0\ ,\ 1\ ,\ 2\ ,\ 3\ ,\ 4\ ,\ \ldots\ldots\ldots)$ all the natural numbers.

$p \sim (3\ ,\ 5\ ,\ 7\ ,\ \ldots\ldots\ldots)$ all the odd prime numbers.

This equation gives a structure of all N and p with a 1/2 fixed point.