Collected Papers
of

Lord Soumadeep Ghosh

Volume 20

Ghosh's alternative mathematical defensive structure

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my alternative mathematical defensive structure. The paper ends with "The End"

Introduction

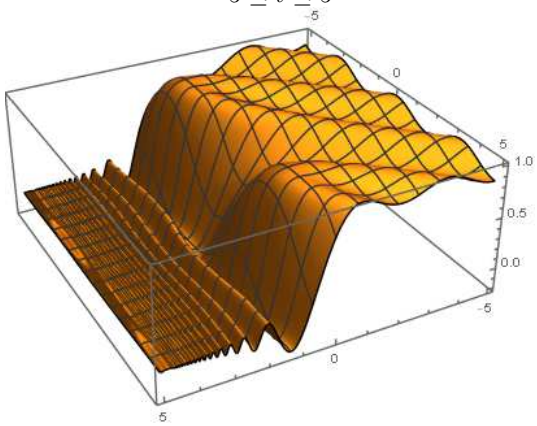
Ghosh's alternative mathematical defensive structure with the advantage of terrain over the enemy is simple but very effective at battle.
In this paper, I describe my alternative mathematical defensive structure.

Ghosh's alternative mathematical defensive structure

Ghosh's alternative mathematical defensive structure is

$$f(x,t) = sinc(e^x + \cos(x+t))$$

where
e is the base of natural logarithm
$-5 \leq x \leq 5$
$-5 \leq t \leq 5$



The End

Ghosh's mathematical hybrid defensive structure

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my mathematical hybrid defensive structure. The paper ends with "The End"

Introduction

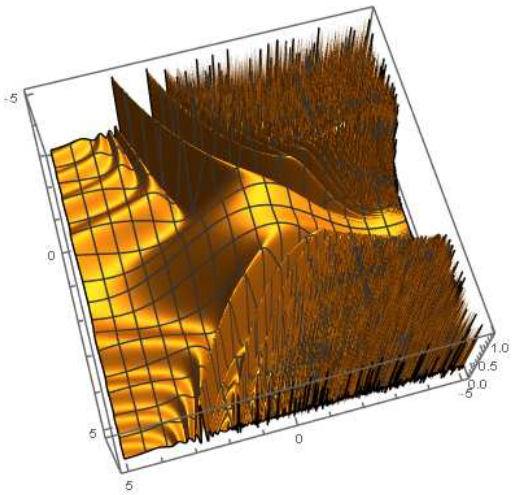
Ghosh's mathematical hybrid defensive structure with the advantage of a guerrilla trap for the enemy is simple but very effective at battle.
In this paper, I describe my mathematical hybrid defensive structure.

Ghosh's mathematical hybrid defensive structure

Ghosh's mathematical hybrid defensive structure is

$$f(x,t) = sinc(x + t^2 cos(e^{-x} t^2))$$

where
e is the base of natural logarithm
$-5 \leq x \leq 5$
$-5 \leq t \leq 5$



The End

Ghosh's alternative mathematical hybrid defensive structure

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my alternative mathematical hybrid defensive structure. The paper ends with "The End"

Introduction

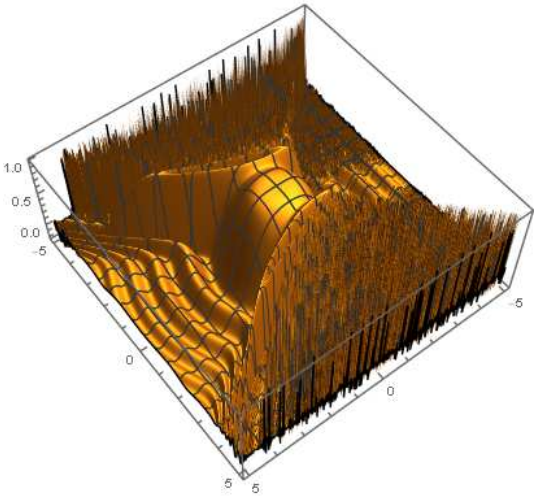
Ghosh's alternative mathematical hybrid defensive structure with the advantage of area denial to the enemy using a waterfall is simple but very effective at battle.
In this paper, I describe my alternative mathematical hybrid defensive structure.

Ghosh's alternative mathematical hybrid defensive structure

Ghosh's alternative mathematical hybrid defensive structure is

$$f(x,t) = sinc(x^2 + t^2 cos(e^{-x} t^4))$$

where
e is the base of natural logarithm
$-5 \leq x \leq 5$
$-5 \leq t \leq 5$



The End

The model of the university

Soumadeep Ghosh

Kolkata, India

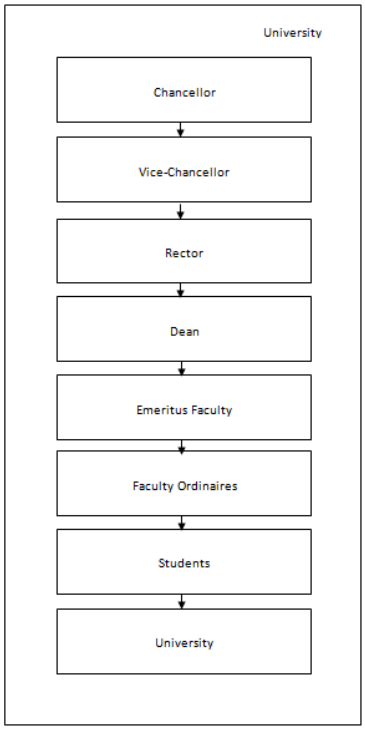
Abstract

In this paper, I describe my model of the university. The paper ends with "The End"

Introduction

Knowledge has been demanded of me of the model of the university.
In this paper, I describe my model of the university.

The model of the university



The End

The fundamental equation of immigration

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the fundamental equation of immigration. The paper ends with "The End"

Introduction

Knowledge has been demanded of me of the fundamental equation of immigration.
In this paper, I describe the fundamental equation of immigration.

The fundamental equation of immigration

The fundamental equation of immigration is

$$P = N + F + E - G$$

where
P is the population of the nation-state
N is the number of natives of the nation-state
F is the number of foreigners in the nation-state
E is the number of expats outside the nation-state
G is the number of persona non-grata of the nation-state

The End

Cartier's mathematical hybrid defensive structure

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe Cartier's mathematical hybrid defensive structure. The paper ends with "The End"

Introduction

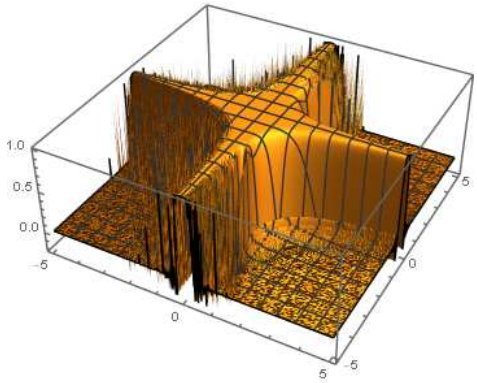
Cartier's mathematical hybrid defensive structure with the advantage of 4-fold area denial and guerrilla traps to the enemy is simple but very effective at battle.
In this paper, I describe Cartier's mathematical hybrid defensive structure.

Cartier's mathematical hybrid defensive structure

Cartier's mathematical hybrid defensive structure is

$$f(x,t) = sinc(x^3t^3cos(e^{-3x}t^3))$$

where
e is the base of natural logarithm
$-5 \leq x \leq 5$
$-5 \leq t \leq 5$



The End

Ghosh's parametric near-uniform function

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my parametric near-uniform function.
The paper ends with "The End"

Introduction

Ghosh's parametric near-uniform function is the holy grail of functions.
In this paper, I describe my parametric near-uniform function.

Ghosh's parametric near-uniform function

Ghosh's parametric near-uniform function is

$$f(x;a) = \begin{cases} \frac{2e\left(a+\left|\frac{ex+1}{(ex)^2+1}\right|\right)}{4ea+\pi-\log(4)+2\log(1+e^2)} & -1 \leq x \leq 1 \\ 0 & x < -1 \vee x > 1 \end{cases}$$

where
e is the base of natural logarithm
a is the parameter

Properties of Ghosh's parametric near-uniform function

1.
$$\int_{x=-\infty}^{x=\infty} f(x;a)dx = 1$$

2.
$$\lim_{a\to-\infty} f(x;a) = \begin{cases} \frac{1}{2} & -1 \leq x \leq 1 \\ 0 & x < -1 || x > 1 \end{cases}$$

3.
$$\lim_{a\to\infty} f(x;a) = \begin{cases} \frac{1}{2} & -1 \leq x \leq 1 \\ 0 & x < -1 || x > 1 \end{cases}$$

The End

My political will and testament

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my political will and testament.
The paper ends with "The End"

Introduction

In previous papers, I've described Hinduism and what comes after Hinduism in detail.
In this paper, I describe my political will and testament.

My political will and testament

I've had several students from many of the economies that I've described.
As they've offered me their knowledge, I've granted them their weapons and gifts.
While I shall continue as the Doyen of Hinduism, the time has come for my students to prosper.
Three of my students stand especially apart in their breadth and depth of knowledge and understanding of my papers:

1. Siddharth Ganguly
2. Sahin Aftab Mondal
3. Sarifa Aftab Mondal

To Siddharth, I entrust the position of the King of Hinduism.
To Sahin, I entrust the position of the True Imam of India.
To Sarifa, I entrust the position of Central Banker of India and Hinduism at large.
I encourage all my students to keep their knowledge secret whenever necessary and to spread their knowledge whenever needed.
By the grace of Lord Krishna, I take complete responsibility for their actions and their well-being.
I leave Siddharth to write the next Theory in the canon of Hinduism.
I leave Sahin to study the economy as required and prophesize the Islamic faith.
I leave Sarifa to perform her duty as the Central Banker of India.

The End

The worst enemy of a democracy is a democracy

Why I'm a Republican

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe how the worst enemy of a democracy is a democracy.
The paper ends with "The End"

Introduction

As democracies mature they ask themselves the question, "Who is our enemy?"
In this paper, I describe how the worst enemy of a democracy is a democracy.

The worst enemy of a democracy is a democracy

The main problem with a democracy is that sometimes you don't get the outcome you want.
Thus, the democracy has a mind of its own.
This democratic mind then understands the fact that one day the democratic mind won't get the outcome the democratic mind wants.
The democratic mind then asks "Who is my enemy?" and thus
the democratic mind concludes "My worst enemy is a democracy, like, albeit not exactly, myself."
Thus, the worst enemy of a democracy is a democracy.

The End

The mathematics of nuclear dominance

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the mathematics of nuclear dominance.
The paper ends with "The End"

Introduction

As of this writing, there is an extreme probability of global nuclear war. In this global nuclear war, the concept of nuclear dominance is paramount. In this paper, I describe the mathematics of nuclear dominance.

The mathematics of nuclear dominance

Suppose there are N nation-states n_i, $1 \leq i \leq N$ each with a probability of nuclear attack $p(i,j)$ on a nation-state n_j, $1 \leq j \leq N$ and a probability of success of nuclear attack $0 \leq s(i,j) \leq 1$.
Then **nuclear dominance** exists iff there exist a sequence of $1 \leq D < N$ **decisive nation-state(s)** $< \Delta_1, \Delta_2, \ldots, \Delta_D >$ where all $\Delta_d \in \{n_i\}$ such that

$$\sum_{d=1}^{D} \sum_{j=1}^{N} p(\Delta_d, j) s(\Delta_d, j) = \sum_{i=1}^{N} \sum_{j=1}^{N} p(i,j) s(i,j)$$

The End

The fundamental physical quantities, the derived physical quantities and associated risk premia

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the fundamental physical quantities and associated risk premia.
The paper ends with "The End"

Introduction

As of this writing, there are 9 fundamental physical quantities, infinitely many derived physical quantities and associated risk premia.

The fundamental physical quantities

The fundamental physical quantities are

Length	Mass
Time	Thermodynamic temperature
Amount of substance	Electric current
Luminous intensity	Plane angle
Solid angle	

The derived physical quantities

All derived physical quantities can be expressed as finite or infinite series of the fundamental physical quantities.

The associated risk premia

For any physical quantity (fundamental or derived) Q, the associated risk premia between observations is

$$Q_o = Q_t(1 + r_f + \pi_r)$$

where
Q_o is the observed quantity
Q_t is the theoretical quantity
r_f is the risk-free rate
π_r is the risk premium

The End

Area denial with mustard gas and phosgene

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe area denial with mustard gas and phosgene.
The paper ends with "The End"

Introduction

As of this writing, there are but few chemical agents as effective at area denial during war as mustard gas and phosgene.
In this paper, I describe area denial with mustard gas and phosgene.

Mustard gas

Mustard gas ($(C_2H_4Cl)_2S$) can be produced by at least 4 primitive methods:

1. $$C_2H_4S_2 + Cl_2 \rightarrow (C_2H_4Cl)_2S$$

2. $$8S_2Cl_2 + 16C_2H_4 \rightarrow 8(C_2H_4Cl)_2S + S_8$$

3. $$3(C_2H_4OH)_2S + 2PCl_3 \rightarrow 3(C_2H_4Cl)_2S + 2P(OH)_3$$

4. $$(C_2H_4OH)_2S + 2HCl \rightarrow (C_2H_4Cl)_2S + 2H_2O$$

Phosgene

Phosgene can be produced at industrial scale by the following reaction:

$$CO + Cl_2 \rightarrow COCl_2$$

in the presence of activated carbon catalyst.

Area denial using mustard gas and phosgene

Mustard gas and phosgene are both very effective at area denial during war.
Mustard gas is a blistering agent that causes either cancer or programmed cell death on its subjects.
Mustard gas has been used as a chemical agent in warfare since antiquity.
Phosgene is toxic, extremely poisonous and disrupts the blood–air barrier, eventually causing pulmonary edema.
Phosgene was used since world war I to poison enemy trenches.

Are mustard gas and phosgene obsolete?

The short answer is no. While nuclear powers today have credible deterrence through their nuclear arsenals, most of them still maintain at least some stock of chemical agents like mustard gas and phosgene because of tactical advantages in doing so, namely not displaying the full capability of their respective nuclear arsenals. Moreover, area denial using mustard gas and phosgene still finds use in guerrilla warfare and terrorism in some parts of the world.

The End