Collected papers of

Lord Soumadeep Ghosh

Volume 23

The demonization-bail curve and surface

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the demonization-bail curve and surface.
The paper ends with "The End"

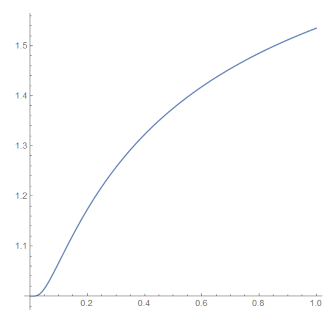
Introduction

In a previous paper, I've described the political phenomemon of demonization of political opponents through 2 methods.
In a previous paper, I've described the mathematics of bail from asymmetric information.
In this paper, I describe the demonization-bail curve and surface.

The demonization-bail curve and surface

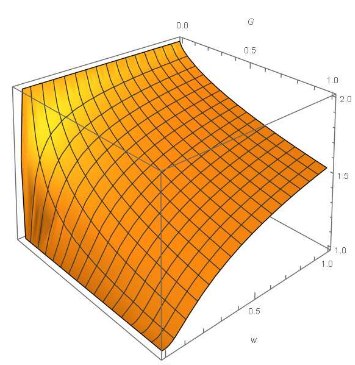
The law allows bail for the demonized pending trial.
For the first method, eliminating the asymmetric information AI gives us the **demonization-bail curve**.

$$B = 2^{e^{\log^2(2)\left(-2^{-\log(c)}\right)}}$$



For the second method, eliminating the asymmetric information AI gives us the **demonization-bail surface**.

$$B = 2^{e^{\log^2(2)\left(-2^{\log(G)-\log(w)}\right)}}$$



The End

Repricing Government of India War Bonds

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe how to reprice Government of India War Bonds.
The paper ends with "The End"

Introduction

In a previous paper, I've described how to price Government of India War Bonds.

In this paper, I describe how to reprice Government of India War Bonds.

Repricing Government of India War Bonds

As before, we price each Government of India War Bond with the **Discounted Cash-flow Method**

$$P_1 = 25 + \frac{25}{1+r} + \frac{100}{(1+r)^2}$$

$$P_2 = 229 + \frac{249}{1+r} + \frac{1000}{(1+r)^2}$$

$$P_3 = 2229 + \frac{2449}{1+r} + \frac{10000}{(1+r)^2}$$

We solve the equation

$$m(P_1 + P_2 + P_3) = 1$$

for the **Stochastic Discount Factor** m
whence

$$m = \frac{(r+1)^2}{2483r^2 + 7689r + 16306}$$

We solve the equation

$$m = r$$

for the real solution

$$m = r = 0.000061332868$$

to 8 significant figures

The End

My proposal for currency reform in India

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my proposal for currency reform in India.
The paper ends with "The End"

Introduction

The time has come for currency reform in India.
In this paper, I describe my proposal for currency reform in India.

My proposal for currency reform in India

My proposal for currency reform in India has 3 postulates:

1. Issuance of bi-metallic coins of denomination INR 5 and INR 10 by the mint.
2. Issuance of notes of denomination INR 1000 by the central bank.
3. Opening the capital account to 2 foreign currencies - the GBP and the RUB.

The End

My second proposal for currency reform in India

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my second proposal for currency reform in India.
The paper ends with "The End"

Introduction

Currency reform is ongoing in India.
In this paper, I describe my second proposal for currency reform in India.

My second proposal for currency reform in India

My second proposal for currency reform in India has 5 postulates to be implemented in steps over a span of 7 years:

1. Opening the capital account to 2 more foreign currencies - the EUR and the USD.
2. Changing the law to accept as legal tender the 5 currencies - the INR, the GBP, the RUB, the EUR and the USD.
3. Opening the capital account to 4 more foreign currencies - the SEK, the CAD, the CNY, and the JPY.
4. Opening the capital account to 3 more foreign currencies - the CHF, the NOK and the KRW.
5. Changing the law to accept as legal tender any and all currencies convertible to INR on the spot market at the end of 7 years.

The End

Understanding Lord Krishna

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the glories of Lord Krishna and how to understand him.
The paper ends with "The End"

Introduction

Lord Krishna is the Supreme Personality of Godhead for he is the God of protection, compassion, tenderness, and love. In this paper, I describe the glories of Lord Krishna and how to understand him.

Lord Krishna v/s Krishna Demon

The first step in understanding Lord Krishna is to understand the difference between Lord Krishna and Krishna Demon: Lord Krishna is the protector whereas Krishna Demon is the usurper.
The second step in understanding Lord Krishna is realizing that Lord Krishna protects his devotee Arjuna whereas Krishna Demon trues to usurp his enemy Arjuna.
The third step in understanding Lord Krishna is realizing that this simple metaphysical fact is enough to kill Krishna Demon.
The fourth step in understanding Lord Krishna is realizing that Arjuna kills Krishna Demon through the **parampara**.

Understanding Lord Krishna

The fourth step in understanding Lord Krishna is realizing that after Krishna Demon is killed, only Lord Krishna and Arjuna are left.
The fifth step in understanding Lord Krishna is realizing that since Arjuna is a devotee of Lord Krishna, Arjuna starts the new **parampara**.

The End

Krishnaic recall

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe Krishnaic recall.
The paper ends with "The End"

Introduction

As of this writing, Arjuna has begun the new **parampara**.
Hence, the time has come for the devotees of Lord Krishna to go back to Godhead.
In this paper, I describe Krishnaic recall.

Krishnaic recall

Going back to Godhead is possible for anyone who has performed Krishna's puja.
To go back to Godhead, the devotee of Lord Krishna has to simply chant
"Oh Lord, take me back to Godhead!"

The End

Closed-form solution of the Lanchester equations

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the closed-form solution of the Lanchester equations. The paper ends with "The End"

Introduction

The Lanchester equations are differential equations describing the time dependence of two militaries' strengths A and B as a function of time, with the function depending only on B and A.

In this paper, I describe the closed-form solution of the Lanchester equations.

The Lanchester equations

The Lanchester equations are

$$\frac{\partial A(t)}{\partial t} = -\beta B(t)$$

$$\frac{\partial B(t)}{\partial t} = -\alpha A(t)$$

Closed-form solution of the Lanchester equations

The closed-form solution of the Lanchester equations is

$$A(t) = \frac{1}{2} c_1 e^{-t\sqrt{\alpha}\sqrt{\beta}} \left(e^{2t\sqrt{\alpha}\sqrt{\beta}} + 1\right) - \frac{\sqrt{\beta} c_2 e^{-t\sqrt{\alpha}\sqrt{\beta}} \left(e^{2t\sqrt{\alpha}\sqrt{\beta}} - 1\right)}{2\sqrt{\alpha}}$$

$$B(t) = \frac{1}{2} c_2 e^{-t\sqrt{\alpha}\sqrt{\beta}} \left(e^{2t\sqrt{\alpha}\sqrt{\beta}} + 1\right) - \frac{\sqrt{\alpha} c_1 e^{-t\sqrt{\alpha}\sqrt{\beta}} \left(e^{2t\sqrt{\alpha}\sqrt{\beta}} - 1\right)}{2\sqrt{\beta}}$$

where

c_1 and c_2 are coefficients to be determined from battle data

The End

Closed-form solution of the Guerrilla equations

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the closed-form solution of the Guerrilla equations.
The paper ends with "The End"

Introduction

The Guerrilla equations are differential equations describing the time dependence of two militaries' strengths A and B as a function of time, with a focus on avoiding head-on confrontations with enemy. In this paper, I describe the closed-form solution of the Guerrilla equations.

The Guerrilla equations

The Guerrilla equations are

$$\frac{\partial A(t)}{\partial t} = -bA(t)B(t)$$

$$\frac{\partial B(t)}{\partial t} = -aA(t)B(t)$$

Closed-form solution of the Guerrilla equations

The closed-form solution of the Guerrilla equations is

$$A(t) = \frac{bc_1 e^{bc_1 c_2}}{e^{bc_1 t} - ae^{bc_1 c_2}}$$

$$B(t) = c_1 - \frac{ac_1 e^{bc_1 c_2}}{ae^{bc_1 c_2} - e^{bc_1 t}}$$

where
c_1 and c_2 are coefficients to be determined from battle data

The End

Closed-form solution of the Quadrature equations

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the closed-form solution of the Quadrature equations.
The paper ends with "The End"

Introduction

The Quadrature equations are differential equations describing the time dependence of two militaries' strengths A and B as a function of time, with a focus on squaring the enemy.
In this paper, I describe the closed-form solution of the Quadrature equations.

The Quadrature equations

The Quadrature equations are

$$\frac{\partial A(t)}{\partial t} = -b\sqrt{A(t)^2 + B(t)^2}$$

$$\frac{\partial B(t)}{\partial t} = -a\sqrt{A(t)^2 + B(t)^2}$$

Closed-form solution of the Quadrature equations

The closed-form solution of the Quadrature equations is

$$A(t) = \frac{b^4 {c_1}^2(-e^{t\sqrt{a^2+b^2} - \frac{c_2\sqrt{a^2+b^2}}{b}}) + e^{-t\sqrt{a^2+b^2} + \frac{c_2\sqrt{a^2+b^2}}{b}} - 2abc_1}{2(a^2+b^2)}$$

$$B(t) = c_1 + \frac{a(b^4 {c_1}^2(-e^{t\sqrt{a^2+b^2} - \frac{c_2\sqrt{a^2+b^2}}{b}}) + e^{-t\sqrt{a^2+b^2} + \frac{c_2\sqrt{a^2+b^2}}{b}} - 2abc_1)}{2b(a^2+b^2)}$$

where
c_1 and c_2 are coefficients to be determined from battle data

The End

Closed-form solution of the Geometric equations

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the closed-form solution of the Geometric equations. The paper ends with "The End"

Introduction

The Geometric equations are differential equations describing the time dependence of two militaries' strengths A and B as a function of time, with a focus on the training of the enemy.
In this paper, I describe the closed-form solution of the Geometric equations.

The Geometric equations

The Geometric equations are

$$\frac{\partial A(t)}{\partial t} = -b\sqrt{A(t)B(t)}$$

$$\frac{\partial B(t)}{\partial t} = -a\sqrt{A(t)B(t)}$$

Closed-form solution of the Geometric equations

The closed-form solution of the Geometric equations is

$$A(t) = \frac{bc_1 \sinh^2(\frac{\sqrt{a}c_2 - \sqrt{a}bt}{2\sqrt{b}})}{a}$$

$$B(t) = c_1 + c_1 \sinh^2(\frac{\sqrt{a}c_2 - \sqrt{a}bt}{2\sqrt{b}})$$

where
c_1 and c_2 are coefficients to be determined from battle data

The End

The ideal learning system

Soumadeep Ghosh

Kolkata, India

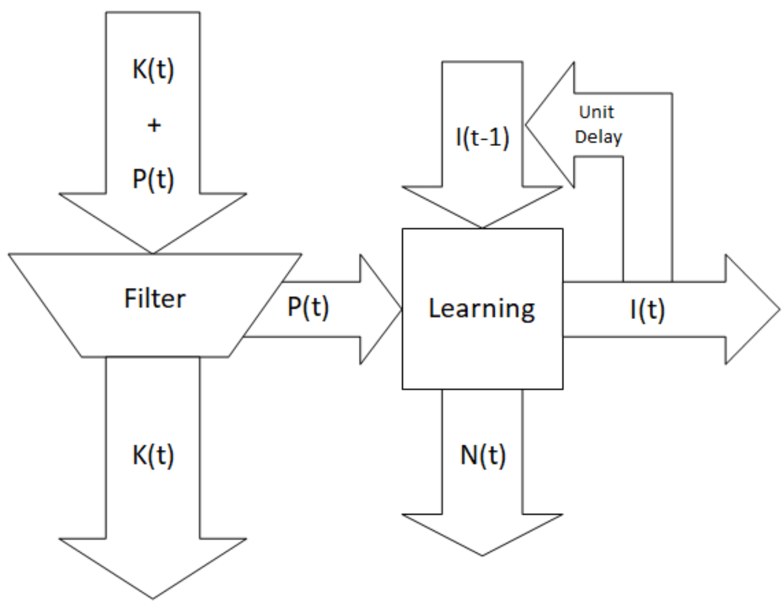
Abstract

In this paper, I describe the ideal learning system.
The paper ends with "The End"

Introduction

The ideal learning system takes knowledge, propaganda, intelligence and noise into account.
In this paper, I describe the ideal learning system.

The ideal learning system



The ideal learning system has as inputs both knowledge and propaganda.
The system filters knowledge into long-term memory and passes propaganda into learning.
Learning receives both propaganda and intelligence from the previous period as input.
Learning produces new intelligence, which both stored in short-term memory and is delayed and fed back to learning, and discards noise.

The End

The solution to a second order differential equation

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the solution to a second order differential equation.
The paper ends with "The End"

Introduction

The second order differential equation

$$a\frac{\partial^2 y(x)}{\partial x^2} + b\frac{\partial y(x)}{\partial x} + cy(x) + d = 0$$

can be solved.
In this paper, I describe the solution to this second order differential equation.

The solution to this second order differential equation

The solution to this second order differential equation is

$$y(x) = c_1 e^{\frac{1}{2}x\left(-\frac{\sqrt{b^2-4ac}}{a}-\frac{b}{a}\right)} + c_2 e^{\frac{1}{2}x\left(\frac{\sqrt{b^2-4ac}}{a}-\frac{b}{a}\right)} - \frac{d}{c}$$

where
c_1 and c_2 are coefficients to be determined from data

The End