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Abstracts and the descriptions of works in
Art and Science
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Abstracts and the descriptions of works in Art and Science
submitted to www.IntellectualArchive.com in Jan.-Sep. 2013

ID #: 1006 Natural Sciences / Physics / General Physics

Submitted on: Jan 03, 2013

Author: Michael A. Sherbon

Title: Wolfgang Pauli and the Fine-Structure Constant

Abstract: Wolfgang Pauli was influenced by Carl Jung and the Platonism of Arnold Sommerfeld, who introduced the fine-structure constant. Pauli's vision of a World Clock is related to the symbolic form of the Emerald Tablet of Hermes and Plato's geometric allegory otherwise known as the Cosmological Circle attributed to ancient tradition. With this vision Pauli revealed geometric clues to the mystery of the fine-structure constant that determines the strength of the electromagnetic interaction. A Platonic interpretation of the World Clock and the Cosmological Circle provides an explanation that includes the geometric structure of the pineal gland described by the golden ratio. In his experience of archetypal images Pauli encounters the synchronicity of events that contribute to his quest for physical symmetry relevant to the development of quantum electrodynamics.

Web link: [www.IntellectualArchive.com/getfile.php?file=WKwOsUh7foi&orig_file=Wolfgang Pauli and the Fine-Structure Constant JOSv3.pdf](http://www.IntellectualArchive.com/getfile.php?file=WKwOsUh7foi&orig_file=Wolfgang%20Pauli%20and%20the%20Fine-Structure%20Constant%20JOSv3.pdf)

ID #: 1009 Natural Sciences / Astronomy / General physics

Submitted on: Jan 08, 2013

Author: Alexander Bolonkin

Title: Hypersonic Ground Electric AB Engine

Abstract: At the present time, rocket launch systems, flight passenger-transport and ground passenger systems have reached their peak of development. In the last 30 years there has been no increase in speed or reductions in trip costs and space launch. The space launch and air and ground transportation industry needs revolutionary ideas, which allow a jump in speed and delivery capability, and a dramatic drop in space launch and trip price. This idea (kinetic aviation and space launch) was offered and developed in a series of the author researches [1]-[7], but an important facet of this method – the ground electric hypersonic engine - was insufficiently developed. Rail Gun idea was unfit for low acceleration and long rails. All energy is spent into creating a powerful magnetic field produces a strong flash when the apparatus is disconnected from rails. When the rail length is increased, the efficiency of low speed railgun engine approaches zero. The main idea of the offered ground hypersonic electric engine is segmentation of the acceleration track on small special closed-loop sections (12.5 – 100 m) and a system of special switches which allow return of the magnetic energy to the system transferring it to apparatus movement. This increases the efficiency of hypersonic engine up 0.9, avoids the burning of rails and using the engine for long periods of time. The same idea may be used in a conventional Rail Gun. Author designed and computed the feasibility and practability of this invention which he designed for the purpose of using it as a space launcher for astronauts and space load, as method for hypersonic long distance aviation and as method for supersonic passenger ground rail transportation. The offered system will be significantly cheaper than the currently used MagLev (Magnetic Levitation) systems, because the vehicle employs conventional wings for levitation and the hypersonic engine is very simple. The offered system may be also used for mass launch of projectiles in war.

Web link: [www.IntellectualArchive.com/getfile.php?file=05p2plagrg&orig_file=Article Hypersonic Engine \(3\) for Int 1 8 13.doc](http://www.IntellectualArchive.com/getfile.php?file=05p2plagrg&orig_file=Article%20Hypersonic%20Engine%20(3)%20for%20Int%201%208%2013.doc)

ID #: 1011 Natural Sciences / Astronomy / General physics

Submitted on: Jan 16, 2013

Author: Alexander Bolonkin

Title: Universe (Part 2): Rolling of Space (Volume, Distance), Time, and Matter into a Point

Abstract: Previously [1], this author developed a theory which allows derivation of the unknown relations between main parameters in a given field of nature. Using this theory, the outcomes of the derived formulas to estimate some values of our Universe uncovered both well-known and new unknown relations. That paper [1] which should be considered part 1 of this series offers possibly valid

relations between time, matter, volume, distance, and energy. The net picture derived is that there exists in the Universe ONLY one primary factor - ENERGY. Time, matter, volume, fields are all evidence of the energy and can be transformed one to other, such as the transformation in the famous formula $E = mc^2$.

In this paper, part 2 of that series, the author shows that the parameters of space (volume, distance) and time have limits (maximal values). The volume (distance), time contract (collapse) into a point under the specific density of the energy, matter, pressure, frequency, temperature, intensity of electric, magnetic, acceleration fields. The maximal temperature and force are independent from other conditions.

Web link: www.IntellectualArchive.com/getfile.php?file=UQ1NIkE7MLp&orig_file=Article%20Universe2%20for%20In%201%2016%2013.doc

ID #: 1013 Natural Sciences / Physics / Electromagnetism

Submitted on: Jan 17, 2013

Author: Antoine Acke

Title: Electromagnetism explained by the Theory of Informatons

Abstract: The "theory of informatons" explains the electromagnetic interactions by the hypothesis that "e-information" is the substance of electromagnetic fields. The constituent element of that substance is called an "informaton".

The theory starts from the idea that any material object manifests itself in space by emitting "informatons": granular mass and energy less entities rushing away with the speed of light and carrying information about the position, the velocity and the electrical status of the emitter.

In this article the EM field in a point is characterized as the macroscopic manifestation of the presence of a cloud of informatons near that point; Maxwell's laws are mathematically deduced from the dynamics of the informatons; the EM interactions are explained as the effect of the trend of an electrically charged object to become blind for flows of e-information generated by other charged objects; and photons are identified as informatons carrying a quantum of energy.

Web link: www.IntellectualArchive.com/getfile.php?file=IXIKQF6MrG&orig_file=E.M.%20EXPLAINED%20BY%20THE%20THEORY%20OF%20INFORMATONS.pdf

ID #: 1024 Natural Sciences / Computer Science / Functional programming

Submitted on: Jan 25, 2013

Author: Avinash Bhujbal

Title: Secure Video Streaming Plugin

Abstract: Video sharing sites like YouTube, Metacafe, Dailymotion, Vimeo, etc. provide a platform for media content sharing among its users. Some of these videos are copyright protected and restricted from being downloaded and saved. But users can use various download managers or application programs to download and save these videos. This affects the incoming traffic on these websites reducing their hit rate and consequently reducing their revenue. Adobe Flash Player[1] is the most commonly used player for watching online videos. It uses RTMP (Real Time Messaging Protocol)[2] to stream audio, video and data over the Internet, between a Flash Player and Adobe Flash Media Server. Here, we propose a plug-in that enables the site owner's control over downloading of videos from such website. The plug-in will be installed at the client side with the consent of the user. When the video is being played this plug-in will send unique keys to the media server. The server will continue streaming the video after verifying the keys. Download managers or application programs will not be able to download the videos as they won't be able to create the unique keys that need to be sent to the server

Web link: www.IntellectualArchive.com/getfile.php?file=G6ghgLgOaLi&orig_file=Secure_Video_Streaming_Plugin_Paper.pdf

ID #: 1025 Natural Sciences / Computer Science / Functional programming

Submitted on: Jan 25, 2013

Author: Gaurang Nimbalkar

Title: Security Analysis and Implementation of 3 level security using Grids,OTP and GSM

Abstract: Increasing security has always been an issue since Internet and Web Development came into existence, text based passwords is not enough to counter such problems, which is also an

	<p>anachronistic approach now. Therefore, this demands the need for something more secure along with being more userfriendly.</p> <p>Therefore, we have tried to increase the security by involving a 3-level security approach, involving text based password at Level 1, Image Based Authentication at Level 2, and automated generated one-time password (received through an automated email to the authentic user) at Level 3. And an assiduous effort has been done for thwarting Shoulder attack, Tempest attack, and Brute-force attack at client side , through the use of unique image set in the IBA System.</p> <p>Web link: www.IntellectualArchive.com/getfile.php?file=MMDObIKh8h5&orig_file=Security_Analysis_and_Implementation_of_3_level_security_using_Grids,OTP_and_GSM_new.pdf</p> <p>ID #: 1033 Natural Sciences / Mathematics / Computation</p> <p>Submitted on: Jan 31, 2013</p> <p>Author: Dhananjay P. Mehendale</p> <p>Title: New Algorithms: Linear, Nonlinear, and Integer Programming</p> <p>Abstract: In this paper we propose a new algorithm for linear programming. This new algorithm is based on treating the objective function as a parameter. We form a matrix using coefficients in the system of equations consisting objective equation and equations obtained from inequalities defining constraint by introducing slack/surplus variables. We obtain reduced row echelon form for this matrix containing only one variable, namely, the objective function itself as an unknown parameter. We analyze this matrix in the reduced row echelon form and develop a clear cut method to find the optimal solution. We then proceed to show that this idea naturally extends to deal with nonlinear and integer programming problems. For nonlinear and integer programming problems we use the technique of Grobner bases (since Grobner basis is an equivalent of reduced row echelon form for a system of nonlinear equations) and the methods of solving linear Diophantine equations (since the integer programming problem demands for optimal integer solution) respectively.</p> <p>Web link: www.IntellectualArchive.com/getfile.php?file=f1bXOj4gLSm&orig_file=lpnew-2-modified.pdf</p> <p>ID #: 1035 Literature / Internet articles / Analysis of literature</p> <p>Submitted on: Feb 14, 2013</p> <p>Author: Yuri N. Klimov</p> <p>Title: Rank distribution of frequency and lengths of words in translations into Russian of the elected Japanese verses - The Japanese love lyrics (Manjesu)</p> <p>Abstract: The total of words in the Japanese verses ~ 200 [1] is made 1637, and with frequency - 4236 by a technique [2]. The following dependences are investigated: frequencies of words from a rank, the logarithm of frequency of words from the logarithm of a rank, the logarithm of cumulative frequency of words from the logarithm of a rank, length of a word from a rank, the logarithm of length of a word from a rank, cumulative length of a word from a rank, cumulative length of a word from the logarithm of a rank, the logarithm of cumulative length of a word from the logarithm of a rank, product of frequency of words on a rank from a rank, products of the logarithm of frequency of words on a rank from the logarithm of a rank. For the first time it is shown, that imposing of a linear straight line on a logarithmic curve reveals three non-uniform zones of distribution of cumulative frequencies of words from the logarithm of a rank: I a nuclear zone - from 1 up to 206 ranks with cumulative frequency of a word 2276, II a zone - from 207 up to 1231 ranks with cumulative frequency of a word 1447 and III a zone - from 1232 up to 1638 ranks with cumulative frequency of a word 407, that is the ratio of cumulative frequencies of a word on zones will be equal 1:0,64:0,18, and distributions of cumulative lengths of words from the logarithm of a rank: I a nuclear zone - from 1 up to 237 ranks with cumulative length of a word equal 2298, II a zone - from 238 up to 1177 ranks with cumulative length of a word 5887 and III a zone - from 1178 up to 1638 ranks with cumulative length of a word 1637 and a ratio of cumulative lengths of a word on zones equal 1:2,56:0,71, that more than previous distribution Bradford. The received results practically pull together researches rank distributions of articles on thematic sections of documentary information streams and linguistic synergetic on the basis of distributions Zipf and Bradford. It agrees on G. K. Zipf product of frequencies of words in texts on their rank (in decreasing order frequencies) for all ranks in any text approximately constantly. However our researches have shown, that it corresponds only to the certain site of curve dependence of product of frequency of words on their rank or the logarithm of product of frequency of words on the logarithm of their rank that concerns and to the appropriate lengths of words in the text.</p> <p>Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words,</p>
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- dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, rank
- Web link:** www.IntellectualArchive.com/getfile.php?file=i4bYdD6Bbmb&orig_file=Rank distribution of frequency and lengths of words in Japanese verses. VANJESU_IA_2013-docx.docx
- ID #: 1037 Natural Sciences / Physics / General Physics**
- Submitted on:** Feb 18, 2013
- Author:** Alexander Egoyan, Karlo Moistsrapishvili
- Title:** Equilibrium and Stability of the Upright Human Body
- Abstract:** We propose a new parameterization for describing forward and backward leanings of the straight human body with the feet fixed on the ground. During this motion stability of static equilibrium of the upright human body depends on the basic parameters such as coordinates XCG and YCG of the center of gravity of the body in the upright position and the radius R of the base of support. We introduce two coefficients $k_1 = YCG/R$ and $k_2 = XCG/R$ which are enough to calculate critical values of the angle $\hat{\pm}$ between the vertical axis OY and the axis of the cylinder the body is fitted into. We have calculated critical values $|\hat{\pm}cr|$ and $|\hat{\pm}cr^2|$ when the body becomes unstable during leanings back and forward correspondingly. It is shown that stability of the upright body may be characterized by the angle $\hat{\pm}cr = |\hat{\pm}cr| + |\hat{\pm}cr^2|$ which strongly depends on k_1 and weakly depends on k_2 and $|\hat{\pm}opt|$ the value of $\hat{\pm}$ for the most stable position. Stable equilibrium will be achieved for larger $|\hat{\pm}cr|$ and smaller $|\hat{\pm}opt|$.
- Web link:** www.IntellectualArchive.com/getfile.php?file=Gir40GLQPS3&orig_file=Equilibrium and Stability of the Upright Human Body.pdf
- ID #: 1038 Natural Sciences / Physics / General Physics**
- Submitted on:** Feb 18, 2013
- Author:** Alexander Egoyan, Karlo Moistsrapishvili
- Title:** Equilibrium and Stability of the Upright Human Body
- Abstract:** We propose a new parameterization for describing forward and backward leanings of the straight human body with the feet fixed on the ground. During this motion stability of static equilibrium of the upright human body depends on the basic parameters such as coordinates XCG and YCG of the center of gravity of the body in the upright position and the radius R of the base of support. We introduce two coefficients $k_1 = YCG/R$ and $k_2 = XCG/R$ which are enough to calculate critical values of the angle $\hat{\pm}$ between the vertical axis OY and the axis of the cylinder the body is fitted into. We have calculated critical values $|\hat{\pm}cr|$ and $|\hat{\pm}cr^2|$ when the body becomes unstable during leanings back and forward correspondingly. It is shown that stability of the upright body may be characterized by the angle $\hat{\pm}cr = |\hat{\pm}cr| + |\hat{\pm}cr^2|$ which strongly depends on k_1 and weakly depends on k_2 and $|\hat{\pm}opt|$ the value of $\hat{\pm}$ for the most stable position when the body's center of gravity is exactly above the geometrical center of the base of support. Stable equilibrium will be achieved for larger $|\hat{\pm}cr|$ and smaller $|\hat{\pm}opt|$.
- Web link:** www.IntellectualArchive.com/getfile.php?file=NEchNVKKPVI&orig_file=Equilibrium and Stability of the Upright Human Body.pdf
- ID #: 1039 Natural Sciences / Physics / General Physics**
- Submitted on:** Feb 18, 2013
- Author:** Miroslav Pardy
- Title:** Velocity of sound in the relic photon sea
- Abstract:** We determine the velocity of sound in the blackbody gas of photons and in the gas of relic photons. Derivation is based on the thermodynamic theory of the photon gas and the Einstein relation between energy and mass. The spectral form for the n-dimensional blackbody is derived. The 1D, 2D and 3D blackbody radiation is specified. It is mentioned the possibility of creation of the Mach cone in case that the high energy cosmical particles moves with the speed greater than the velocity of sound in cosmical relic photon sea. Key words: Sound, elasticity, thermodynamics, blackbody, relic photons, Mach's cone.
- Web link:** www.IntellectualArchive.com/getfile.php?file=FSrlgcuXDfD&orig_file=soundinrelic.pdf
- ID #: 1040 Literature / Internet articles / Analysis of literature**

Submitted on: Feb 20, 2013

Author: **Yuri N. Klimov**

Title: **Rank distribution of frequency and lengths of words in M. Yu. Lermontov's "Mzyri" poem**

Abstract: The total of words in M. Yu. Lermontov's "Mzyri" [1] is made 1854, and with frequency - 3433 by a technique [2]. The following dependences are investigated: frequencies of words from a rank, lengths of words from a rank, cumulative frequency of words from a rank, the logarithm of cumulative frequency of words from a rank, the logarithm of cumulative frequency of words from the logarithm of a rank, product of frequency of words on a rank from a rank, the logarithm of product of cumulative frequency of words on a rank from a rank, the logarithm of product of cumulative frequency of words on a rank from the logarithm of a rank, the logarithm of product of cumulative frequency of words on a rank from the logarithm of a rank, cumulative length of words from a rank and the logarithm of cumulative length of words from a rank. For the first time it is shown, that imposing of a linear straight line on a logarithmic curve reveals three non-uniform zones of distribution of the logarithm of cumulative frequencies of words from the logarithm of a rank: I a nuclear zone - from 1 up to 218 ranks with cumulative frequency of a word 1451, II a zone - from 219 up to 1432 ranks with cumulative frequency of a word 1445 and III a zone - from 1433 up to 1854 ranks with cumulative frequency of a word 422, that is the ratio of cumulative frequencies of a word on zones will be equal 1:0,99:0,29, and distributions of the logarithm of cumulative lengths of words from the logarithm of a rank: I a nuclear zone - from 1 up to 210 ranks with cumulative length of a word equal 2074, II-I a zone - from 211 up to 1353 ranks with cumulative length of a word 7179 and III a zone - from 11354 up to 1854 ranks with cumulative length of a word 1738 and a ratio of cumulative lengths of a word on zones equal 1:3,46:0,84, that more than previous distribution Bradford. The received results practically pull together researches rank distributions of articles on thematic sections of documentary information streams and linguistic synergetic on the basis of distributions Zipf and Bradford. It agrees on G. K. Zipf product of frequencies of words in texts on their rank (in decreasing order frequencies) for all ranks in any text approximately constantly. However our researches have shown, that it meets only to the certain site of curve dependence of product of frequency of words on their rank or the logarithm of product of frequency of words on the logarithm of their rank that concerns and to the appropriate lengths of words in the text. The considered site of dependence of the logarithm of cumulative frequency of words from the logarithm of a rank 6,1399 up to 7,2668 is limited to the linear equation and a polynoms of the second degree. In this case practically specified dependence is described a polynoms of the second and third degree, linear and exponential by the equations. Considered other site of dependence of the logarithm of cumulative length of words from the logarithm of a rank 6,2344 up to 7,0012 is limited to the linear equation, polynoms of the second and third degree. In this case also practically specified dependence is described a polynoms of the second and third degree that conformity of the certain part of a curve of the specified dependences to distribution Zipf proves to be true.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, rank, distribution Zipf, distribution Bradford, non-uniformity of zones of distribution

Web link: [www.IntellectualArchive.com/getfile.php?file=5YwHalAWtLW&orig_file=Rank distribution of frequency and lengths of words in Mzyri_IA_2013_.docx](http://www.IntellectualArchive.com/getfile.php?file=5YwHalAWtLW&orig_file=Rank%20distribution%20of%20frequency%20and%20lengths%20of%20words%20in%20Mzyri_IA_2013_.docx)

ID #: 1041 **Literature / Internet articles / Analysis of literature**

Submitted on: Feb 23, 2013

Author: **Yuri N. Klimov**

Title: **Dependence of lengths of words on frequency of words and quantities of lengths of words in S. A. Esenin's "Pugachev" poem**

Abstract: The Total of words in S. A. Esenin's "Pugachev" poem [1] is made 2492, and with frequency of a word - 4848 by a technique [2]. Dependences of lengths of words, since the greatest size, from frequency of words, quantity of lengths of words, the logarithm of frequency of a word, the logarithm of quantity of lengths of words, cumulative frequency of a word, cumulative quantity of lengths of words, the logarithm of cumulative frequency of words, the logarithm of cumulative quantity of lengths of words, the logarithm of length of words from the logarithm of frequency of words, the logarithm of length of words from the logarithm of quantity of lengths of words, the logarithm of length of words from the logarithm of cumulative frequency of words and the logarithm of length of words from the logarithm of cumulative quantity of lengths of words are investigated. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. 50% of quantity of lengths of words equally 1246 at length of a word ~ 6 letters, and 50%

of frequency of words - 2424 at length of a word ~ 5 letters. It is shown, that the length of a word is directly proportional to the logarithm of length of a word and inversely proportional to its frequency, cumulative frequency of a word, cumulative quantity of lengths of words and logarithms: frequencies of words, to cumulative quantity of lengths of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in sedate dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text.

Logarithms of frequency of words are increased with reduction of length of words from 0 up to 6,1738, the logarithm of quantity of lengths of words - from 0 up to 2,8904, the logarithm of cumulative frequency - from 0 up to 8,4863 and the logarithm of cumulative quantity of words - from 0 up to 7,8208. Thus the logarithm of length of words falls from 2,8332 up to 0. That is curve cumulative frequency and cumulative quantity of words from their length will be imposed against each other till length of a word to equal 12 letters, and then the plug is formed: the curve of the logarithm of cumulative frequency of words will lay above a curve of the logarithm of cumulative quantity of words. Presence of a plug for curve cumulative frequency of words and their logarithms, and also cumulative quantity of lengths of words and their logarithms from the logarithm of length of words is peculiar to all texts and differs for prose and poetry, and also for authors of various products that confirms our earlier carried out researches.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, plug

Web link: www.IntellectualArchive.com/getfile.php?file=68EBrL9Y3iM&orig_file=Dependence%20of%20lengths%20of%20words%20on%20frequency%20of%20words%20and%20quantities%20of%20lengths%20of%20words%20in%20Pugachov_IA_2013_docx.docx

ID #: 1042 **Literature / Internet articles / Analysis of literature**

Submitted on: Feb 28, 2013

Author: Yuri N. Klimov

Title: Rank distribution of frequency and lengths of words in poem S. A. Esenin's "Pugachev"

Abstract: Abstracts: the total of words in S. A. Esenin's poem "Pugachev" [1] is made 2492, and with frequency of a word - 4848 by a technique by a technique [2]. The following dependences are investigated: distributions of frequency and lengths of words, since the greatest value, from a rank, cumulative length of a word and cumulative frequency of words, since the greatest value, from a rank and cumulative length of a word and cumulative frequency of words, since the greatest value, from a rank. It is shown, that right at the beginning the curve of the logarithm of cumulative frequency lays above a curve of the logarithm of cumulative length of words from a rank, and then there is their crossing in a point appropriate to 185 rank, that is is formed lexical crossover. For the first time it is shown, that imposing of a linear straight line on a logarithmic curve reveals three non-uniform zones of distribution of the logarithm of cumulative frequencies of words from the logarithm of a rank: I a nuclear zone - from 1 up to 321 ranks with cumulative frequency of a word 2298, II a zone - from 322 up to 1857 ranks with cumulative frequency of a word 1798 and III a zone - from 1858 up to 2491 ranks with cumulative frequency of a word 634, that is the ratio of cumulative frequencies of a word on zones will be equal 1:0,78:0,28, and distributions of the logarithm of cumulative lengths of words from the logarithm of a rank: I a nuclear zone - from 1 up to 321 ranks with cumulative length of a word equal 3253, II a zone - from 322 up to 1857 ranks with cumulative length of a word 9916 and III a zone - from 1858 up to 2491 ranks with cumulative length of a word 2283 and a ratio of cumulative lengths of a word on zones equal 1:3,05:0,70, that more than previous distribution Bradford. The received results practically pull together researches rank distributions of articles on thematic sections of documentary information streams and linguistic synergetic on the basis of distributions Zipf and Bradford. It agrees on G. K. Zipf product of frequencies of words in texts on their rank (in decreasing order frequencies) for all ranks in any text approximately constantly.

However our researches have shown, that to distribution Zipf there corresponds only the certain site of curve dependence of the logarithm of frequency of words or the logarithm of length of words from the appropriate rank. A site of dependence of the logarithm of cumulative length of words from a rank 430 up to 889 which is limited to the linear equation, polynoms of the second and third degree. In this case practically specified dependence is described by the linear equation, a polynoms of the second and third degree: $y = 0,0013x + 8,385$, $R^2 = 0,9881$; $y = -1E-06x^2 + 0,0018x + 8,3437$, $R^2 = 0,9998$; $y = 1E-09x^3 - 2E-06x^2 + 0,002x + 8,3372$, $R^2 = 1$. Other site of dependence of the logarithm of cumulative frequency of words from a rank 833 up to 1601 which is limited to the linear equation and polynoms of the second and third degree, is described exponential and linear by the equations, a polynoms of the second and third degree: $y = 8,0717e3E-05x$, $R^2 = 0,999$; $y = 0,0003x + 8,0712$,

$R^2 = 0,9992$; $y = -4E-08x^2 + 0,0003x + 8,0673$, $R^2 = 1$; $y = 7E-12x^3 - 5E-08x^2 + 0,0003x + 8,0672$, $R^2 = 1$.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, rank, distribution Zipf, distribution Bradford, non-uniformity of zones of distribution, lexical crossover

Web link: [www.IntellectualArchive.com/getfile.php?file=J452fQSZAfO&orig_file=Rank distribution of frequency and lengths of words in poem S.A.E. Pug._IA_2013docx.docx](http://www.IntellectualArchive.com/getfile.php?file=J452fQSZAfO&orig_file=Rank%20distribution%20of%20frequency%20and%20lengths%20of%20words%20in%20poem%20S.A.E.%20Pug._IA_2013docx.docx)

ID #: 1044 Natural Sciences / Physics / General Physics

Submitted on: Mar 05, 2013

Author: Alejandro A. Torassa

Title: General Equation of Motion

Abstract: In classical mechanics, this paper presents a general equation of motion, which can be applied in any reference frame (rotating or non-rotating) (inertial or non-inertial) without the necessity of introducing fictitious forces.

Web link: www.IntellectualArchive.com/getfile.php?file=B2fiBKWxsmi&orig_file=report3.pdf

ID #: 1046 Literature / Internet articles / Analysis of literature

Submitted on: Mar 08, 2013

Author: Yuri N. Klimov

Title: THE BASIC PROPERTIES OF RUSSIAN AND THE GERMAN TEXT

Abstract: The analysis of the text carried out under the following characteristics: length of a word, frequency of words, quantity of lengths of words, the logarithm of frequency of words, the logarithm of quantity of lengths of words, the logarithm of length of a word, cumulative frequency of words, cumulative quantity of lengths of words, logarithms cumulative frequencies and quantities of lengths of words. It is shown, that average sizes of lengths of words, frequencies and quantities of lengths of words, and also their cumulative sizes differ from each other and are approximated by the various algebraic equations. It is offered "lexical crossover" which is submitted by a point of crossing of two curves and corresponds to the certain rank of the logarithm of cumulative frequency and the logarithm of cumulative length of a word, since the greatest size, and is one of specific estimations of considered texts. Difference of size "lexical crossover" for Russian and German of texts is shown. Are given highly, middle- and low-frequency words revealed for Psaltir and Walther von der Vogelweide's verses.

Key words: length of a word, frequency of a word, quantity of lengths of words, the logarithm of frequency of words, the logarithm of quantity of lengths of words, the logarithm of length of a word, cumulative frequency of words, cumulative quantity of lengths of words, logarithms cumulative frequencies and quantities of lengths of words, lexical crossover

Web link: [www.IntellectualArchive.com/getfile.php?file=rRf5I5aPwfB&orig_file=THE BASIC PROPERTIES OF RUSSIAN AND THE GERMAN TEXT_IA_2013_T.docx](http://www.IntellectualArchive.com/getfile.php?file=rRf5I5aPwfB&orig_file=THE%20BASIC%20PROPERTIES%20OF%20RUSSIAN%20AND%20THE%20GERMAN%20TEXT_IA_2013_T.docx)

ID #: 1047 Natural Sciences / Physics / General Physics

Submitted on: Mar 08, 2013

Author: Alejandro A. Torassa

Title: Universal Reference Frame

Abstract: In classical mechanics, this paper presents the universal reference frame.

Web link: www.IntellectualArchive.com/getfile.php?file=CwvANdJ1SgN&orig_file=report4.pdf

ID #: 1048 Natural Sciences / Mathematics / Combinatorics

Submitted on: Mar 08, 2013

Author: Y Shang
Title: On the hamiltonicity of random bipartite graphs
Abstract: We prove that if $p \gg \ln n/n$, then a.a.s. every subgraph of random bipartite graph $G(n,n,p)$ with minimum degree at least $(1/2+o(1))np$ is Hamiltonian. The range of p and the constant $1/2$ involved are both asymptotically best possible. The result can be viewed as a generalization of the Dirac theorem within the context of bipartite graphs. The proof uses P'osa's rotation and extension method and is closely related to a recent work of Lee and Sudakov.
Web link: www.IntellectualArchive.com/getfile.php?file=WDLeBjKvjo&orig_file=on the hamiltonicity of random bipartite graphs.pdf

ID #: 1049 **Literature / Internet articles / Analysis of literature**
Submitted on: Mar 19, 2013
Author: Yuri N. Klimov
Title: Dependence of frequency of words and quantities of lengths of words from length of words and a rank in S.A. Esenin's poem: "Pugachev"
Abstract: The total of words in S.A. Esenin's "Pugachev" poem [1] is made 2492, and with frequency of a word - 4848 by a technique [2]. Dependences of cumulative frequency of words on cumulative quantity of lengths of words, cumulative frequency and cumulative quantity of lengths of words on length of words, since the greatest, cumulative frequency and cumulative quantity of lengths of words from the logarithm of length of words, since the greatest, the logarithm of cumulative frequency and the logarithm of cumulative quantity of lengths of words from the logarithm of length of words, cumulative frequency from the logarithm of cumulative quantity of lengths of words, cumulative quantity of lengths of words from the logarithm of cumulative frequency of words, the logarithm of cumulative frequency and the logarithm of cumulative length of words from a rank are investigated. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. 50% of quantity of lengths of words equally 1246 at length of a word ~ 6 letters, and 50% of frequency of words - 2424 at length of a word ~ 5 letters. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in sedate dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text.
Logarithms of frequency of words are increased with reduction of length of words from 0 up to 6,1738, the logarithm of quantity of lengths of words - from 0 up to 2,8904, the logarithm of cumulative frequency - from 0 up to 8,4863 and the logarithm of cumulative quantity of words - from 0 up to 7,8208. Thus the logarithm of length of words falls from 2,8332 up to 0. That is curve cumulative frequency and cumulative quantity of words from their length will be imposed against each other till length of a word to equal 12 letters, and then the plug is formed: the curve of the logarithm of cumulative frequency of words will lay above a curve of the logarithm of cumulative quantity of words. Presence of a plug for curve cumulative frequency of words and their logarithms, and also cumulative quantity of lengths of words and their logarithms from the logarithm of length of words is peculiar to all texts and differs for prose and poetry, and also for authors of various products that confirms our earlier carried out researches. It is shown, that right at the beginning the curve of the logarithm of cumulative frequency lays above a curve of the logarithm of cumulative length of words from a rank, and then there is their crossing in a point appropriate to 185 ranks, that is is formed lexical crossover which is specific to each investigated text.
Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, plug, lexical crossover
Web link: www.IntellectualArchive.com/getfile.php?file=Cxr4S9MgtHL&orig_file=Dependence of frequency cD»D³/D² and quantities of lengths of words SAE_Pugachev_IA_2013_.docx

ID #: 1053 **Literature / Internet articles / Analysis of literature**
Submitted on: Mar 21, 2013
Author: Yuri N. Klimov
Title: Dependence of lengths of words on frequency of words and quantities of lengths of words in

Russian chastooshka

Abstract:

The total of lengths of words in Russian chastooshka [1] is made 1643, and with frequency of a word - 3127 by a technique [2]. Dependences of lengths of words, since the greatest size, from frequency of words, quantity of lengths of words, the logarithm of frequency of a word, the logarithm of quantity of lengths of words, cumulative frequency of a word, cumulative quantity of lengths of words, the logarithm of cumulative frequency of words, the logarithm of cumulative quantity of lengths of words, the logarithm of length of words from the logarithm of frequency of words, the logarithm of length of words from the logarithm of quantity of lengths of words, the logarithm of length of words from the logarithm of cumulative frequency of words and the logarithm of length of words from the logarithm of cumulative quantity of lengths of words are investigated. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. 50 % of quantity of lengths of words equally 821,5 at length of a word ~ 6 letters, and 50 % of frequency of words - 1563,5 at length of a word ~ 5 letters. It is shown, that the length of a word is directly proportional to the logarithm of length of a word and inversely proportional& to its frequency, cumulative frequency of a word, cumulative quantity of lengths of words and logarithms: frequencies of words, to cumulative quantity of lengths of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in sedate dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text. The concept of the general length of words of the text - product of length of a word on quantity of lengths of words (PLWQLW) is entered. The point of an excess of curve logarithms of cumulative frequency of words and cumulative quantity of words, since the greatest sizes, from a rank ("lexical crossingover") corresponds to the logarithm of cumulative quantity of lengths of words 7,0466, the logarithm of cumulative frequency of words to 7,0484 and 111 rank. Distribution Bradford on the basis of diagrams of cumulative frequency of words and cumulative quantity of words from a rank has shown presence of three non-uniform zones. So for a curve of logarithms of cumulative frequency of words from a rank the ratio was 1:0,95:0,48. For cumulative quantity of lengths of words from a rank it was higher 1:3,91:0,94, that confirms our previous researches.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, lexical crossingover, distribution Bradford

Web link:

[www.IntellectualArchive.com/getfile.php?file=99atPanFp5j&orig_file=Dependence of lengths of words on frequency of words and quantities of lengths of words in Russian chastooshka.docx](http://www.IntellectualArchive.com/getfile.php?file=99atPanFp5j&orig_file=Dependence%20of%20lengths%20of%20words%20on%20frequency%20of%20words%20and%20quantities%20of%20lengths%20of%20words%20in%20Russian%20chastooshka.docx)

ID #: 1054 Philosophy / Metaphysics / Philosophy of space and time

Submitted on: Mar 26, 2013

Author: Yuri N. Klimov

Title: Yury Ivanovich Shemakin - The Founder of a New Science Systemantics - The Modern Theory of a Universe and a Picture of the World

Abstract: Abstracts: systemantics is the new science studying natural and artificial systems in unity of the form and the contents. The name of this science consists of merge of terms "system" and "semantic". The concept "system" is connected to a picture of the world. The system organization is inherent in a matter. Outside of system she does not exist. The concept "semantic" transfers communication of the form and the contents. It is established it is system-forming a role of knowledge and the information, substance and energy. It is opened semantic ontology system self-organizing of life of the universe. Distinction between natural and artificial systems is established.

Key words: systematic, system, semantics, substance, energy, the information, knowledge, self-organizing, a picture of the world, the universe

Web link: [www.IntellectualArchive.com/getfile.php?file=GhsekMJf4ix&orig_file=Yury Ivanovich Shemakin_IA_2013_.docx](http://www.IntellectualArchive.com/getfile.php?file=GhsekMJf4ix&orig_file=Yury%20Ivanovich%20Shemakin_IA_2013_.docx)

ID #: 1055 Literature / Internet articles / Analysis of literature

Submitted on: Mar 27, 2013

Author: Yuri N. Klimov

Title: Dependence of frequency of words and quantities of lengths of words from their length and a rank in Russian chastooshka

Abstract: The total of lengths of words in Russian chastooshka [1] is made 1643, and with frequency of a word - 3127 by a technique [2]. Dependences of frequency of words are investigated: from length of words, since the greatest, cumulative frequency of words from length of words, since the greatest, the logarithm of cumulative frequency of words from length of words, since the greatest, the logarithm of frequency of words from length of words, since the greatest, quantity(amount) of lengths of words from length of words, since the greatest, the logarithm of quantity of lengths of words from length of words, since the greatest, cumulative quantity of lengths of words from length of words, since the greatest, logarithms of cumulative frequency of words (the top curve) and cumulative quantity of words (the bottom curve) from the logarithm of the general length of words, since the greatest, the logarithm of cumulative frequency of words (the bottom curve) and the logarithm of cumulative quantity of lengths of words (the top curve), since the greatest sizes, from a rank. For experimental data resulted receptions of adequate mathematical dependences to cumulate and represented as logarithms. 50 % of quantity of lengths of words equally 821,5 at length of a word ~ 6 letters, and 50 % of frequency of words - 1563,5 at length of a word ~ 5 letters. It is shown, that the length of a word is directly proportional to the logarithm of length of a word and inversely proportional to its frequency, cumulative frequency of a word, cumulative quantity of lengths of words and logarithms: frequencies of words, to cumulative quantity of lengths of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in sedate dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text. Logarithms of frequency of words are increased with reduction of length of words from 0 up to 5,7494, the logarithm of quantity of lengths of words - from 0 up to 2,7726, the logarithm of cumulative frequency - from 0 up to 8,0478 and the logarithm of cumulative quantity of lengths of words - from 0 up to 7,4043. Thus the logarithm of length of words falls from 2,6391 up to 0. That is curve cumulative frequency and cumulative quantity of words from their length will be imposed against each other till length of a word to equal 11 letters, and then the plug is formed: the curve of the logarithm of cumulative frequency of words will lays above a curve of the logarithm of cumulative quantity of words. Presence of a plug for curve cumulative frequency of words and their logarithms, and also cumulative quantity of lengths of words and their logarithms from the logarithm of length of words is peculiar to all texts and differs for prose and poetry, and also for authors of various products that confirms our earlier carried out researches. The concept of the general length of words of the text - product of cumulative length of words on cumulative quantity of lengths of words is entered. It is shown, that a point of an excess of curve logarithms of cumulative frequency of words and cumulative quantity of words, since the greatest sizes, from a rank ("lexical crossover") corresponds to the logarithm of cumulative quantity of lengths of words 7,0466, the logarithm of cumulative frequency of words to 7,0484 and 111 rank. Distribution Bradford curve cumulative frequency of words and cumulative quantity of words from a rank has shown presence of three non-uniform zones. For a curve of logarithms of cumulative frequency of words from a rank the parity was 1:0,95:0,48, and for cumulative quantity of lengths of words from a rank it was higher 1:3,91:0,94, that confirms our previous researches. In a kind of distinction in a ratio of researched sizes in distribution Bradford it can serve for an estimation of specificity of various texts.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, exponential dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree, a plug, lexical crossover, distribution Bradford

Web link: [www.IntellectualArchive.com/getfile.php?file=IXNxhML5518&orig_file=Dependence of frequency of words and quantities of lengths of words from their length and a rank in Russian chastooshka_IA_2012.docx](http://www.IntellectualArchive.com/getfile.php?file=IXNxhML5518&orig_file=Dependence%20of%20frequency%20of%20words%20and%20quantities%20of%20lengths%20of%20words%20from%20their%20length%20and%20a%20rank%20in%20Russian%20chastooshka_IA_2012.docx)

ID #: 1056 **Natural Sciences / Physics / Mechanics**

Submitted on: Mar 27, 2013

Author: Alejandro A. Torassa

Title: Alternative Classical Mechanics

Abstract: This paper presents an alternative classical mechanics, which can be applied in any reference frame (rotating or non-rotating) (inertial or non-inertial) without the necessity of introducing fictitious forces.

Web link: www.IntellectualArchive.com/getfile.php?file=jmYdipM3MPi&orig_file=report5.pdf

ID #: 1057 **Literature / Internet articles / Analysis of literature**

- Submitted on:** Apr 03, 2013
Author: **Yuri N. Klimov**
Title: **Klimov Yu. N.**
Abstract: Results of research lexical crossigover in originals and in translations into Russian of the English and German classical poetry are given. It is shown, that lexical crossigover is specific for Russian, English and German poetry. It is necessary to count a measure of adequacy of translation the relation of average length of a word to average frequency of words. On the other hand the specified relations speak about affinity of Russian with English and German languages. It is necessary to note, that in enough big foreign poetic texts the point lexical crossigover is not always shown, that is she lays outside the researched rank appropriate to his point (Faust J.W. Goethe and Le Divina Commedia A. Dante).
Key words: lexical crossingover, the English poetry, German poetry, Russian poetry, modeling, the linear equation, exponential the equation, the sedate equation, a polynoms of the second degree, a polynoms of the third degree, relative speed, relative exponential speed, cumulative frequency of words, cumulative length of words, a measure of adequacy of translation, the relation of average length of a word to average frequency
Web link: [www.IntellectualArchive.com/getfile.php?file=1TGONELYw31&orig_file=Lexical crossigover in the English and German poetry_IA_2013.docx.docx](http://www.IntellectualArchive.com/getfile.php?file=1TGONELYw31&orig_file=Lexical%20crossigover%20in%20the%20English%20and%20German%20poetry_IA_2013.docx.docx)
- ID #:** 1059 **Literature / Internet articles / Analysis of literature**
- Submitted on:** Apr 05, 2013
Author: **Yuri N. Klimov**
Title: **Lexical crossigover in German and Italian poetry (in originals and in translations into Russian, English, German Languages)**
Abstract: Results of research lexical crossigover in originals and in translations into Russian of the Italian and German classical poetry (A. Dante La Divina Commedia, J.W. Goethe Faust (Teil 1)) are given. It is shown, that lexical crossigover is specific for Russian, Italian and German poetry. It is necessary to count a measure of adequacy of translation the relation of average length of a word to average frequency of words and lexical crossigover. On the other hand the specified relations speak about affinity of Russian with English and German languages. It is necessary to note, that in enough big foreign poetic texts the point lexical crossigover is not always shown, that is she lays outside the researched rank appropriate to his point, for example in La Divina Commedia A. Dante.
Key words: Faust, Goethe, the Divine comedy, Dante, lexical crossigover, cumulative length of a word, cumulative frequency of a word, quantity of words, a point lexical crossigover, number of a rank lexical crossigover, the relation of average cumulative length of a word to average cumulative frequency, the linear algebraic equation.
Web link: [www.IntellectualArchive.com/getfile.php?file=0NJTZYGpHNP&orig_file=Lexical crossigover in German and Italian poetry_2013_IA_.docx](http://www.IntellectualArchive.com/getfile.php?file=0NJTZYGpHNP&orig_file=Lexical%20crossigover%20in%20German%20and%20Italian%20poetry_2013_IA_.docx)
- ID #:** 1060 **Natural Sciences / Mathematics / Dynamical systems**
- Submitted on:** Apr 06, 2013
Author: **Evgeny A. Mityushov, Fedor D. Misura**
Title: **Calculations of The Shape Trajectories of Vehicles and The Ackermann Principle of Steering**
Abstract: This paper investigates the output of invariant equations connection between the control of a vehicle and the trajectory of its movement. A control function is the angle Ackerman, defined as the difference between the angles of rotation of the front wheels of the car. The relations are illustrated by calculating the radius of the curve of the trajectory of the moving car and the required space for the car to move safely.
Key words: dynamical systems, nonholonomic systems, Ackerman principle of steering, the Ackerman angle, the trajectory of a vehicle, secure position corridor, perfect parking, mobile robots.
Web link: [www.IntellectualArchive.com/getfile.php?file=8TeAhOrABPj&orig_file=Calculations of The Shape Trajectories.pdf](http://www.IntellectualArchive.com/getfile.php?file=8TeAhOrABPj&orig_file=Calculations%20of%20The%20Shape%20Trajectories.pdf)
- ID #:** 1061 **Literature / Internet articles / Analysis of literature**
- Submitted on:** Apr 09, 2013
Author: **Yuri N. Klimov**

- Title:** **Lexical crossingover in Russian and foreign poetry**
Abstract: Are submitted lexical crossingover in Russian, English and German poetry which values are connected to length of texts, by cumulative frequency and cumulative length of words, and also number of a rank.
Key words: lexical crossingover, Russian poetry, English poetry, German poetry, cumulative frequency, cumulative length of words, a point lexical crossingover, number of a rank of a lexical point crossingover, N□conditional lexical crossingover
Web link: www.IntellectualArchive.com/getfile.php?file=6p80GAA5pS6&orig_file=Lexical%20crossingover%20in%20Russian%20and%20foreign%20poetry_IA_2013_docx.docx
- ID #: 1062 Social Sciences / Sociology / Sociology of aging**
Submitted on: Apr 11, 2013
Author: Lukas Pavlek
Title: **Selected research findings about motivation of elderly volunteers in Slovak Republic**
Abstract: The paper presents several outcomes from a qualitative research study on the topic of senior volunteering. The author presents selected findings and conclusions from qualitative data, which was collected from coordinators working with volunteers in various non-profit organizations across Slovak republic and from senior volunteers themselves. Grounded theory according to Strauss and Corbin was the main research design. Semi-standardized interviews were realized and complemented with various other textual data sources. The findings support the thesis that volunteering in a higher age can significantly improve the individual life of seniors, although many barriers and obstacles were identified too. The paper focuses on effects of senior volunteering and mostly on motivation.
Web link: [semi-private registration](#)
- ID #: 1063 Social Sciences / Education / Preschools**
Submitted on: Apr 17, 2013
Author: Elena Likhacheva
Title: **Education of children with difficulties in learning educational program in kindergarten**
Abstract: Currently, some of the children with delayed mental development level are pupils of mass preschools. Implementing education and training of children in preschool institutions, tutor has some difficulties. Teacher training institutions should promote the full realization of the conditions of professional development of kindergarten teachers in the education and upbringing of children.
Web link: www.IntellectualArchive.com/getfile.php?file=C2MJqWNfhA1&orig_file=Likhacheva.docx
- ID #: 1066 Natural Sciences / Chemistry / Pharmacy**
Submitted on: Apr 22, 2013
Author: Andrey A. Safonov, Oleksandr I. Panasenko, Evgeniy G. Knysh, Eugen S. Pruglo
Title: **SYNTHESIS AND BIOLOGICAL PROPERTIES OF S-DERIVATIVES OF 5-HETERYL-4(R-AMINO)-1,2,4-TRIAZOLE-3-THIOLS**
Abstract: Novel derivatives of 5-hetaryl-4-(R-amino)-1,2,4-triazole-thiols were synthesized in search of new biologically active substances. The structures of the compounds are revealed by the elemental analysis, IR spectroscopy, and ^1H NMR spectroscopy. The Quantitative Structure-Activity Relationship of the derived substances was studied.
Web link: www.IntellectualArchive.com/getfile.php?file=s0OldcfKqLB&orig_file=SYNTHESIS%20AND%20BIOLOGICAL%20PROPERTIES.pdf
- ID #: 1067 Natural Sciences / Chemistry / Organic chemistry**
Submitted on: Apr 22, 2013
Author: Roman O. Scherbyna , OleksandrI. Panasenko, Evgeniy G. Knysh, Alla. S. Korzhova.
Title: **THE RESEARCH «RING-CHAIN» TAUTOMERISM OF 2-(1-H-1,2,4-TRIAZOL-5-YLTHIO)ACETALDEHYDES**
Abstract: Due to the complex using of instrumental methods of analysis(GC-MS, IR, ^1H NMR, X-ray) and chemical reactions (condensation, recovery, cyclization) is set a presence of «ring-chain» tautomerism in 2-((3-phenyl-1H-1,2,4-triazol-5-yl)thio)acetaldehyde (1D°). As a result of the research

revealed, that in solid form is dominated a «ring»-form, and in solution - a «chain»-form. Also, in a result of the X-ray research is revealed a crystal structure of 3-phenyl-5,6-dihydrothiazolo[2,3-c][1,2,4]triazol-5-ol.

Web link: [www.IntellectualArchive.com/getfile.php?file=idxAivLJggZ&orig_file=THE RESEARCH «RING-CHAIN» TAUTOMERISM OF 2-\(1-H-1,2,4-TRIAZOL-5-YLTHIO\)ACETALDEHYDES.pdf](http://www.IntellectualArchive.com/getfile.php?file=idxAivLJggZ&orig_file=THE%20RESEARCH%20%22RING-CHAIN%22%20TAUTOMERISM%20OF%202-(1-H-1,2,4-TRIAZOL-5-YLTHIO)ACETALDEHYDES.pdf)

ID #: 1070 Natural Sciences / Physics / General Physics

Submitted on: Apr 28, 2013

Author: Bolonkin Alexander

Title: Energy Transfers from Airborne Wind Turbine: Review and Comparison of Airborne Turbines.

Abstract: Ground based, wind energy extraction systems have reached their maximum capability. The limitations of current designs are wind instability and high cost of installations. The wind energy industry is in need of revolutionary ideas to increase the capabilities of wind systems. This article suggests a revolutionary innovation which produces a dramatic increase in power per unit at a lower cost per unit of energy extracted and is independent of prevailing weather. The main innovation consists of large free-flying air rotors positioned at high altitude for power and stable air stream, and two types (mechanical and electrical) of an energy cable transmission system between the air rotor and a ground system. The air rotor system flies at high altitude up to 10 km. Stability and control systems is provided which also enable changing altitude.

This article includes the theory of airborne wind systems and provides the analysis of four examples having a high unit power output (up to 50 MW). The proposed examples provide the following main advantages: 1) Large power production capacity per unit - up to ten - hundred times more than conventional ground-based small rotor designs; 2) The rotor operates at high altitude of 0.5 - 10 km where the wind flow is strong and steady; 3) Installation cost per unit energy is low and 4) The installation is environmentally friendly (no propeller noise).

Author also provides a brief review of other main wind systems/turbines describing their advantages and disadvantages.

Keywords: wind energy, cable energy transmission, electric airborne transmission, utilization of wind energy at high altitude, air rotor, airborne wind turbines, windmills, Bolonkin.

Web link: [www.IntellectualArchive.com/getfile.php?file=XuwiCiDhXKA&orig_file=Article Transfer energy from air borne turbine for Storiges 4.28.13.docx](http://www.IntellectualArchive.com/getfile.php?file=XuwiCiDhXKA&orig_file=Article%20Transfer%20energy%20from%20air%20borne%20turbine%20for%20Storiges%204.28.13.docx)

ID #: 1071 Natural Sciences / Other / Trans-Disciplinarian

Submitted on: Apr 30, 2013

Author: Lusseau Petit, Fang Chen

Title: Nonlinear Control with Applications to Wind Energy System

Abstract: This paper presents an overall solution consisting of a wind plant with a Smart Storage Modular System (SSMS). The SSMS consists in a Short Time Storage Module (STSM based on a flywheel with induction motor) and a Medium/Long Time Storage Module (MLTSM based on a Vanadium Redox flow Battery). The aim of this paper is to provide a nonlinear sensorless control solution for the induction motor (IM) within the inertial storage system based on flywheel. To this related one, computer simulations and laboratory tests are accomplished.

Web link: [semi-private registration](#)

ID #: 1073 Philosophy / Other / Cosmology

Submitted on: May 02, 2013

Author: R. Gashur

Title:

Abstract: This article makes an assumption that might completely change our conception of space (physical) vacuum. If we exist in the Conexisting (con from Latin with «!») reality with its formative gravitational field « space, then based on the evidence «proved principle of symmetry, it would be logical to make an assumption about Antieexisting reality with its formative inertial field « space. Its acceptance would be hampered by two conventional absolutizations:

1. Determinacy and single determinacy;
2. Decorated substance.

If the Universe has an arrow of evolution from indetermined functionality to determined substance, all falls into place, the Universe takes shape in two linked to each other realities with oppositions of

Self-assertion and Self-denial which for overall functionality is quite executable. Only in such way all challenges and paradoxes of Space are resolved including perpetual motion in void space (which does not exist) of giant astronomic substances.

Web link: [www.IntellectualArchive.com/getfile.php?file=YegLcSaYFQ8&orig_file=Space Vacuum.pdf](http://www.IntellectualArchive.com/getfile.php?file=YegLcSaYFQ8&orig_file=Space%20Vacuum.pdf)

ID #: 1074 Natural Sciences / Physics / General Physics

Submitted on: May 06, 2013

Author: Alexander Bolonkin

Title: **Underground Explosion Nuclear Energy**

Abstract: Author offers the new method for obtaining very cheap electric energy, liquid fuel, thermal energy, fresh water and cheap nuclear fuel. He uses deuterium underground thermonuclear explosions. He shows the installation for getting of energy (creating the underground cavity by nuclear explosive) is on the order of a thousand times cheaper than surface steel boiler designs offered by Russian scientists and more safe because in case of any damage the radiation is in the deep underground cavity. The offered system will also produce a lot of fresh water for arid regions. Author developed the theory of underground explosions, artificial earthquake, computed projects and investigates the problems of nuclear security.

Web link: [www.IntellectualArchive.com/getfile.php?file=TOe6vifJr1D&orig_file=Article Exploration of Underground Explosion Nuclear Energy2 for Storage 3 8 13.doc](http://www.IntellectualArchive.com/getfile.php?file=TOe6vifJr1D&orig_file=Article%20Exploration%20of%20Underground%20Explosion%20Nuclear%20Energy2%20for%20Storage%203%208%2013.doc)

ID #: 1076 Natural Sciences / Physics / Particle physics

Submitted on: May 16, 2013

Author: Ervin Goldfain

Title:

Abstract: The Standard Model of particle physics (SM) is a theoretical framework that integrates our current knowledge of the subatomic world and its fundamental interactions. A key program built in the structure of the SM is the Renormalization Group (RG), whose function is to preserve self-consistency and describe how parameters of the theory evolve with the energy scale. Despite being overwhelmingly supported by experimental data, the SM has many puzzling aspects, such as the large number of parameters, a triplication of chiral families and the existence of three gauge interactions. In contrast with the majority of mainstream proposals advanced over the years, the basic premise of our study is that a satisfactory resolution of challenges confronting the SM requires further advancing the RG program. In particular, understanding the nonlinear dynamics of RG equations and the unavoidable transition from smooth to fractal dimensionality of space-time are critically important for the success of this endeavor. Here we show how the onset of fractal space-time near or above the electroweak scale is likely to settle at least some of these challenges.

Web link: [www.IntellectualArchive.com/getfile.php?file=WktnURRTWDe&orig_file=Scale Invariance in Continuous Dimension and the Physics of the Standard Model.pdf](http://www.IntellectualArchive.com/getfile.php?file=WktnURRTWDe&orig_file=Scale%20Invariance%20in%20Continuous%20Dimension%20and%20the%20Physics%20of%20the%20Standard%20Model.pdf)

ID #: 1077 Social Sciences / Sociology / Sociology of aging

Submitted on: May 17, 2013

Author: Lukas Pavalek

Title: **Population ageing in Slovak Republic – the current status, characteristics and future prospects**

Abstract: Population ageing is a social problem whose consequences will soon have a significant impact on various areas of human life, and hence on social security. The ageing population is one of many factors that significantly affect the changes in social conditions of people's lives. It is a process that affects the emergence of new social risks and crises. This causes the need to identify the consequences of these changes and appropriate measures to respond to them. This identification is not possible without a thorough understanding of genesis and probable developments of the ageing process. The following paper briefly describes the demographic aging of the population in Slovakia and important context associated with this phenomenon.

Web link: [www.IntellectualArchive.com/getfile.php?file=g1HsIY1exjs&orig_file=Population ageing in Slovak Republic.docx](http://www.IntellectualArchive.com/getfile.php?file=g1HsIY1exjs&orig_file=Population%20ageing%20in%20Slovak%20Republic.docx)

ID #: 1078 Natural Sciences / Mathematics / Calculus / Analysis

Submitted on: May 18, 2013

Author: Yaremko O.E.
Title: The Cauchy problem and Hadamard's example
Abstract: We prove the existence and uniqueness of solutions of the Cauchy problem for the Laplace equation in the circle. Integral representation for the solution of the Cauchy problem was found.
Web link: [www.IntellectualArchive.com/getfile.php?file=0qdbFgj7G82&orig_file=Hadamard problem.pdf](http://www.IntellectualArchive.com/getfile.php?file=0qdbFgj7G82&orig_file=Hadamard%20problem.pdf)

ID #: 1082 **Literature / Internet articles / Analysis of literature**
Submitted on: Jun 03, 2013
Author: Yuri N. Klimov
Title: The comparative analysis of properties lexical Н□rossingover A.S. Pushkin, A.A. Ahmatova's, I.A. Brodsky and B.L. Pasternak's poetic products
Abstract: The specified products investigated on the following quantitative to positions: cumulative quantity of lexemes (CQL), cumulative frequency of words (CFW, cumulative quantity of word forms, CQWF), since the greatest size, cumulative length of words (CLW), since the greatest size, the relation of factor bCLW (average length of words) to factor bCFW (average frequency of a word = average quantity of word forms) in the linear equation $y=\bar{N}...+b$, the relation $\bar{D}^{\circ}CLW$ to factor $\bar{D}^{\circ}CFW$ in the sedate equation $y=\bar{D}^{\circ}N...+b$, for a point lexical Н□rossingover: size of cumulative frequencies (cumulative quantity of word forms) and lengths of words, their natural logarithms and values of a rank lexical crossingover researched products. Similarity and distinction of poetic products on quantitative is shown characteristics and submission to law Bradford with non-uniform distribution of ranks of considered products on three zones.
Key words: A.S. Pushkin, I.A. Brodsky, A.A. Ahmatova, B.L. Pasternak, a lexeme, cumulative quantity of lexemes, cumulative frequency of words, cumulative quantity of word forms, cumulative length of words, the relation of factor of average length of words to factor average frequencies of words or average quantity of word forms, a point lexical Н□rossingover, cumulative frequency, cumulative quantity of word forms, lengths of words, natural logarithms, a rank lexical Н□rossingover, distribution Bradford, non-uniformity of zones in distribution Bradford
Web link: [www.IntellectualArchive.com/getfile.php?file=OtOfZZtKkvV&orig_file=The comparative analysis of properties lexical Н□rossingover_IA_2013_.docx](http://www.IntellectualArchive.com/getfile.php?file=OtOfZZtKkvV&orig_file=The%20comparative%20analysis%20of%20properties%20lexical%20Н□rossingover_IA_2013_.docx)

ID #: 1083 **Natural Sciences / Physics / Nuclear physics**
Submitted on: Jun 04, 2013
Author: Boris A. Andrianov
Title: Natural low energy nuclear fusion reaction
Abstract: Hypothesis is put forward explaining a superpower flash, a shock wave and instant evaporation of the most part of Chelyabinsk meteor by the emergence of conditions for a low energy fusion exothermic reaction between Mg and Si nuclei contained in olivine and pyroxene, which were found in the meteorite. The possible initiators of that reaction are considered. They are supposed as common for the known experiments of similar type.
Web link: www.IntellectualArchive.com/getfile.php?file=6iO39VHNler&orig_file=Andrianov-1.pdf

ID #: 1084 **Natural Sciences / Physics / General Physics**
Submitted on: Jun 06, 2013
Author: Alexander Bolonkin
Title: Electron Wind Generator
Abstract: Author offers a new method of getting electric energy from wind. A special injector injects electrons into the atmosphere. Wind picks up the electrons and moves them in the direction of wind which is also against the direction of electric field. At some distance from injector a unique grid acquires the electrons, thus charging and producing electricity. This method does not require, as does other wind energy devices, strong columns, wind turbines, or electric generators. This proposed wind installation is cheap. The area of wind braking may be large and produces a great deal of energy. Although this electronic wind installations may be in a city, the population will not see them.
Web link: [www.IntellectualArchive.com/getfile.php?file=MKwjnMSxWgQ&orig_file=Article Electron wind generator 6 13 aster Shmuel.docx](http://www.IntellectualArchive.com/getfile.php?file=MKwjnMSxWgQ&orig_file=Article%20Electron%20wind%20generator%206%2013%20aster%20Shmuel.docx)

- ID #: 1085 Natural Sciences / Mathematics / Algebra**
- Submitted on:** Jun 07, 2013
- Author:** Andrei Klimenkov
- Title:** **Solution of incomplete cubic equation through development of its geometric model**
- Abstract:** We present a method of solution of an incomplete cubic equation of type $x^3+px+q=0$ with real values of the coefficients $p>0$ and $q<0$ through development of its geometric model in the space with dimensionality equal to the degree of this equation, i.e. in the three-dimensional space, and we expand this method to the whole range of incomplete cubic equations with real values of the coefficients.
- Web link:** www.IntellectualArchive.com/getfile.php?file=O7XKARqagXc&orig_file=Incomplete%20cubic%20equation.pdf
- ID #: 1087 Natural Sciences / Physics / General Physics**
- Submitted on:** Jun 16, 2013
- Author:** Antoine Acke
- Title:** **Information as the Substance of gravitational Fields**
- Abstract:** Gravito-electromagnetism (GEM) describes the gravitational phenomena by introducing a gravitational field that can be viewed as a combination of two fields: a force field and an induction field. It is assumed that this composite field - that serves as a mediator for the gravitational interactions - is isomorphic with the electromagnetic field.
In this article it is shown that the GEM-description of gravitation can perfectly be explained by the hypothesis that "information carried by informatons" is the substance of gravitational fields. The starting point is that any material object manifests itself in space by emitting informatons: granular mass and energy less entities running away with the speed of light and carrying information about the position and the velocity of their emitter. It is shown that the cloud of informatons emitted by a material object constitutes its gravitational field.
- Web link:** www.IntellectualArchive.com/getfile.php?file=VgZlvjOwqlA&orig_file=INFORMATION%20AS%20THE%20SUBSTANCE%20OF%20GRAVITATIONAL%20FIELDS.pdf
- ID #: 1088 Natural Sciences / Physics / Astrophysics**
- Submitted on:** Jun 21, 2013
- Author:** J.C. Hodge
- Title:** **Pioneer Anomaly predictions confirmed**
- Abstract:** Hodge (2006a) suggested that photons traveling between galaxies could loose energy caused by a ro field. Hodge (2006b) applied the galaxy redshift equation to the PA. The PA is a well established unexplained blueshift in the radio signal from the Pioneer 10 (P10) and Pioneer 11 (P11) spacecrafts. The predicted observations made are:
(1) The data before the flyby encounters were insufficient to detect the PA (Turyshev and Toth 2009).
(2) "Although the Earth direction is marginally preferred by the solution (see Table III), the Sun, the Earth, and the spin axis directions cannot be distinguished."
(3) "The data favor a temporally decaying anomalous acceleration with an over 10% improvement in the residuals compared to a constant acceleration model."
- The STOE is a self-consistent model that was devised based on observations including galaxy redshift. The STOE made predictions for a different observable characteristic of the PA that are being confirmed.
- Web link:** www.IntellectualArchive.com/getfile.php?file=4MXVZfblekw&orig_file=mse32.pdf
- ID #: 1089 Natural Sciences / Physics / General Physics**
- Submitted on:** Jun 23, 2013
- Author:** Alexander Bolonkin
- Title:** **Electron Hydro Electric Generator**
- Abstract:** Author offers a new method of getting electric energy from moving water. A special injector injects electrons into water. Water stream picks up the electrons and moves them in the direction of stream which is against the direction of electric field. At some distance from injector a unique grid acquires

- the electrons, thus charging and producing electricity. This method does not require, as does other water energy devices, strong dams, water turbines, or electric generators. The proposed water installation is very cheap. The area of water braking may be large and produces a great deal of energy. This electron water installation may be in river or ocean stream (as Gulf Stream).
- Web link:** www.IntellectualArchive.com/getfile.php?file=jajgOjLmgOT&orig_file=Article Electron Hydro Generator for Storage 6 19 13.docx
- ID #: 1090 Natural Sciences / Physics / General Physics**
- Submitted on:** Jun 23, 2013
- Author:** Alexander Bolonkin
- Title:** Electron Super Speed Hydro Propulsion
- Abstract:** High speed submarines and in particular torpedoes need new propulsion systems which allow the submarine to reach high speeds by cheaper and more efficient methods. Author offers a new propulsion system using electrons for acceleration of the water and having a high efficiency. As this system does not use a water propeller, it does not have the cavitation limitations of conventional water propeller systems. Offered engine can produce a thrust from a zero speed up to high speed. It can work in any liquid planet atmosphere. The system can use apparatus surface for thrust and braking. For energy the system uses high voltage electricity which is not a problem if you have an appropriate electrostatic generator connected with any suitable engine.
- Web link:** www.IntellectualArchive.com/getfile.php?file=wTQJ7hQinYL&orig_file=Article Electron Hydro Propulsion for Storage 6.23.13.docx
- ID #: 1093 Social Sciences / Law / Constitutional and administrative law**
- Submitted on:** Jun 30, 2013
- Author:** John C. Hodge
- Title:** Growth challenge of the United States
- Abstract:** The image of fallen civilizations is disturbing. The United States is too big and powerful for its current organization structure to manage. The morality of survival is applied to this growth crisis. The United States must re-organize or collapse as many other civilizations have done. A new constitution that starts from the original concepts of the founding fathers is required. The human species is at such a level that a new constitution may also serve as a model for a world government.
- Web link:** www.IntellectualArchive.com/getfile.php?file=leR6wlL3rJf&orig_file=msegrow.pdf
- ID #: 1097 Literature / Internet articles / Analysis of literature**
- Submitted on:** Jul 08, 2013
- Author:** Yuri N. Klimov
- Title:** Quantitative the lexical analysis of Russian wreath of sonnets and translations of 15 sonnets from French, the Italian and Portuguese languages
- Abstract:** similarity and distinction of a wreath of sonnets and 15 translation sonnets on Russian from French, the Italian and Portuguese languages on the following parameters is shown: cumulative quantity of lemmas; cumulative quantity of word forms; Cumulative length of words; 50 % of cumulative length of words; the relation of average length of words to average frequency of word forms on the linear equation $N_f = D \cdot N + b$; the relation of initial length of words to initial frequency of word forms on the sedate equation $N_f = D \cdot N - b$; the relation of relative speed of cumulative length of words to relative speed of cumulative word forms; definition of a point lexical crossingover at equality of cumulative lengths of words and word forms of the investigated verses; definition of number (rank) of a point lexical crossingover, i.e. his place of sequence of cumulative lengths of words and word forms of each poet on the basis of crossing cumulative curve lengths of words and word forms, since the greatest size; cumulative length of words; comparison of distributions Bradford of lexicon of Russian wreath of sonnets and translations of 15 sonnets from French, the Italian and Portuguese languages. Keywords: a wreath of sonnets, translation sonnets, cumulative quantity of lemmas, cumulative quantity of word forms, cumulative length of words, 50 % of cumulative length of words, the relation of average length of words to average frequency of word forms on the linear equation $N_f = D \cdot N + b$, the relation of initial length of words to initial frequency of word forms on the sedate equation $N_f = D \cdot N - b$, the relation of relative speed of cumulative length of words to relative speed of cumulative word forms, definition of a point lexical crossingover at equality of cumulative lengths of words and word forms of the investigated verses, definition of number (rank) of a point lexical crossingover cumulative length of words, distributions Bradford

- Web link:** [www.IntellectualArchive.com/getfile.php?file=bLmJcGJqYKk&orig_file=Quantitative the analysis of Russian wreath of sonnets and translations of 15 sonnets _IA_.docx](http://www.IntellectualArchive.com/getfile.php?file=bLmJcGJqYKk&orig_file=Quantitative%20the%20analysis%20of%20Russian%20wreath%20of%20sonnets%20and%20translations%20of%2015%20sonnets%20_IA_.docx)
- ID #: 1098 Natural Sciences / Physics / Mathematical Physics**
- Submitted on:** Jul 08, 2013
- Author:** Alexander A. Ermolitski
- Title:** Crystal spheres and a geometric concept of the world
- Abstract:** A geometric concept of the world (W) is considered where the manifold W is identified with a locally trivial fibre bundle pr: W -> U of so-called "crystal spheres" over a manifold U called the "universal time". For every point p belonging to U, $M^n = pr^{-1}(p)$ is a n-dimensional crystal sphere and close crystal spheres are called the "parallel universes". There exists a geometric black hole on the smooth manifold M^n . Tensor fields, fibre bundles, operators (physical structures and equations) can be deformed towards the black hole into continuous and sectionally smooth those, further, they can be retracted together with the black hole into a small black ball to initiate the Big Bang.
- Web link:** www.IntellectualArchive.com/getfile.php?file=RBm76ItMmL8&orig_file=World.pdf
- ID #: 1099 Literature / Internet articles / Analysis of literature**
- Submitted on:** Jul 11, 2013
- Author:** Yuri N. Klimov
- Title:** Comparison quantitative characteristics of Russian and English poetry under two versions AntConc Anthony L. (version 3.2.4w and 3.3.5)
- Abstract:** Abstracts: Two versions AntConc (version 3.2.4w and 3.3.5) are considered. Keywords: versions AntConc, cumulative quantity of lemmas, cumulative quantity of word forms, cumulative length of the relation of average length of words to average frequency of word forms, the relation of initial length of words to initial frequency of word form, the relation of relative speed of cumulative length of words to relative speed of cumulative word forms, definition of a point lexical crossingover at equality of cumulative lengths of words and word forms of the investigated verses, definition of number (rank) of a point lexical crossingover cumulative length of words
- Web link:** [www.IntellectualArchive.com/getfile.php?file=eijAcKHITNL&orig_file=Comparison quantitative characteristics of Russian and English poetry under two versions AntConc Anthony L _IA_.docx.docx](http://www.IntellectualArchive.com/getfile.php?file=eijAcKHITNL&orig_file=Comparison%20quantitative%20characteristics%20of%20Russian%20and%20English%20poetry%20under%20two%20versions%20AntConc%20Anthony%20L%20_IA_.docx.docx)
- ID #: 1100 Natural Sciences / Physics / General Physics**
- Submitted on:** Jul 12, 2013
- Author:** Alexander Bolonkin
- Title:** Electric Theory of Tornado. Protection from Tornado
- Abstract:** The author develops a new theory of tornado stability. He shows that it is the high electric voltage between clouds and ground surface which produces the intensive electron/ion flow which creates the air stream which sucks off (pumping) air from the inside tornado channel and makes the tornado stable. If we want to destroy tornado stability we must decrease the electric intensity into the tornado channel. The simplest method is using conductive wire to connect the top funnel of tornado with ground. For this method, the top end of wire must have a large conductive area (air balloon or wing dirigible with conductive layer), the lower end of wire must have good contact with wet ground. The row from these conductive wires having step 150 ~ 200 m and altitude 200 ~ 300 m can protect villages, towns and important installations such as the nuclear electric station and military bases from tornado.
- Web link:** [www.IntellectualArchive.com/getfile.php?file=fpOfnue4R7K&orig_file=Article Electric Theory of Tornado2 for Storage 7.9.13.docx](http://www.IntellectualArchive.com/getfile.php?file=fpOfnue4R7K&orig_file=Article%20Electric%20Theory%20of%20Tornado2%20for%20Storage%207.9.13.docx)
- ID #: 1112 Literature / Internet articles / Analysis of literature**
- Submitted on:** Jul 25, 2013
- Author:** Yuri N. Klimov
- Title:** Computer quantitative lexicology Russian poetry of the beginning of XX century: similarity and distinction

Abstract: The concept lexical crossigover as against this concept at Yu. Linnik (1994) who will refer to now computer quantitative lexical crossingover is specified. Results on computer quantitative lexicology Russian poetry of the beginning of XX century are submitted: similarity and distinction under the following characteristics: cumulative quantity of lemmas; cumulative frequency of words; cumulative length of words; the relation of average length of words to average frequency of words on the linear equation $N_f = D \cdot N_{\text{avg}} + b$; the relation of initial length of words to initial frequency of words on the sedate equation $N_f = D \cdot N_{\text{initial}} + b$; the relation of relative speed of cumulative length of words to relative speed of cumulative frequency of words; definition of a point computer quantitative lexical crossigover at equality of cumulative lengths and frequencies of words of the investigated verses; definition of a serial number of a point computer quantitative lexical crossigover, i.e. his places in sequence of cumulative lengths and frequencies of words of verses of each poet on the basis of crossing cumulative curve cumulative lengths and words; comparison of distributions Bradford for researched poets.

Key words: I. Severjanin, M. Lohvitskaja, Z. Gippius, V. Majakovsky, N. Aseev, K. Balmont, V. Bryusov, M. Voloshin, N. Gumilev, N. Klyuyev, M. Kuzmin, A. Ahmatova, quantitative lexicology, Russian poetry started XX century, cumulative quantity of lemmas, cumulative frequency of words, cumulative length of words, the relation of average length of words to average frequency of words from the linear equation, the relation of initial length of words to initial frequency of words on the sedate equation, the relation of relative speed of cumulative length of words to relative speed of cumulative frequency of words, points computer quantitative lexical crossigover a serial number of a point computer quantitative lexical crossigover, comparison of distributions Bradford for verses of poets, computer quantitative lexical crossigover, distribution Bradford, non-uniformity of zones in distribution Bradford

Web link: [www.IntellectualArchive.com/getfile.php?file=gGduxOoxS7S&orig_file=Computer quantitative lexicology Russian poetry of the beginning of XX century_IA_.docx](http://www.IntellectualArchive.com/getfile.php?file=gGduxOoxS7S&orig_file=Computer%20quantitative%20lexicology%20Russian%20poetry%20of%20the%20beginning%20of%20XX%20century_IA_.docx)

ID #: 1113 **Philosophy / Metaphysics / Philosophy of space and time**

Submitted on: Jul 25, 2013

Author: Igor Semenyuk

Title: South Korean Philosophy – Historical Paradigm and Factors of Transformation Society

Abstract: The history of South Korea describes the development of the southern part of the Korean Peninsula from 1945 to the present day. History of South Korea starts with the Soviet - American agreement in late summer 1945 on the division of spheres of influence in the peninsula. Under this contract, part of South Korea of the 38 parallel passed under the jurisdiction of the United States, Northern part - to the jurisdiction of the Soviet Union. Since that time two periods: democratic and authoritarian have been alternating in the history of South Korea.

Web link: [www.IntellectualArchive.com/getfile.php?file=L2YublbO8Ws&orig_file=SOUTH KOREAN PHILOSOPHY --- Semenyuk IV.doc](http://www.IntellectualArchive.com/getfile.php?file=L2YublbO8Ws&orig_file=SOUTH%20KOREAN%20PHILOSOPHY---Semenyuk%20IV.doc)

ID #: 1118 **Natural Sciences / Physics / Condensed Matter Physics**

Submitted on: Aug 09, 2013

Author: Arthur Zakinaryan

Title: Drops deformation and magnetic permeability of a ferrofluid emulsion

Abstract: In the paper the novel soft magnetic composite system is investigated. A ferrofluid emulsion studied demonstrates the strong magnetic properties which are atypical for commonly known emulsions. Interaction of ferrofluid emulsions with a magnetic field is considered. Structural transformations in these media, such as deformation of emulsion microdroplets and emulsion inversion, are studied. The changes in the relative permeability of emulsion associated with structural transformations are investigated. The theory of the observed phenomena is developed, and the feasibility of effectively controlling the magnetic properties of ferrofluid emulsions by applying a magnetic field is demonstrated.

Web link: www.IntellectualArchive.com/getfile.php?file=PnbZHTEgxZO&orig_file=Ferrofluid_emulsion.pdf

ID #: 1122 **Natural Sciences / Physics / Particle physics**

Submitted on: Aug 10, 2013

Author: Ervin Goldfain

Title: **Evidence for Fractional Neutrinos in Cosmological Observations?**
Abstract: Correlations of temperature fluctuations in the Cosmic Microwave Background are a signature of the effective number of neutrino flavors present in the era of recombination (Neff). The Standard Model of particle physics (SM) constrains Neff to be precisely three and all observations to-date are indeed compatible with this number. However, recent cosmological data consistently hint that Neff is somewhat larger than three. These findings may be the first tentative evidence for exotic matter with non-integer number of quanta per state, as first postulated by the author in 2006.
Web link: [www.IntellectualArchive.com/getfile.php?file=1nlgIK4O0ml&orig_file=Fractional Neutrinos.pdf](http://www.IntellectualArchive.com/getfile.php?file=1nlgIK4O0ml&orig_file=Fractional%20Neutrinos.pdf)

ID #: 1123 **Natural Sciences / Physics / Relativity**
Submitted on: Aug 10, 2013
Author: **Edward KapuÅ·cik**
Title: **On Fatal error in tachyonic physics**
Abstract: A fatal error in the famous paper on tachyons by Gerald Feinberg is pointed out. The correct expressions for energy and momentum of tachyons are derived.
Web link: www.IntellectualArchive.com/getfile.php?file=3XNtUjAhcWK&orig_file=Fatal.pdf

ID #: 1124 **Natural Sciences / Physics / Particle physics**
Submitted on: Aug 17, 2013
Author: **Ervin Goldfain**
Title: **Derivation of the Fine Structure Constant from Fractional Electrodynamics**
Abstract: We suggest how the fine structure constant may be retrieved from applying fractional calculus to the short-distance regime of quantum electrodynamics.
Web link: [www.IntellectualArchive.com/getfile.php?file=jiJLpiVJUN6&orig_file=Derivation of the Fine Structure Constant from Fractional Electrodynamics.pdf](http://www.IntellectualArchive.com/getfile.php?file=jiJLpiVJUN6&orig_file=Derivation%20of%20the%20Fine%20Structure%20Constant%20from%20Fractional%20Electrodynamics.pdf)

ID #: 1125 **Natural Sciences / Physics / Gravitation Theory (Relativity)**
Submitted on: Aug 19, 2013
Author: **Ervin Goldfain**
Title: **Fractal Spacetime as Tentative Solution for the Cosmological and Coincidence Problems**
Abstract: Recent years have hinted that the concept of fractal spacetime may play a role in both the "would-be" physics beyond the Standard Model and the large-scale structure of the Universe. Here we explore a scenario where classical spacetime equipped with minimal fractality appears to provide a natural solution for two major challenges of relativistic cosmology, the cosmological constant and coincidence problems.
Web link: [www.IntellectualArchive.com/getfile.php?file=1oJ1u7I4Abj&orig_file=Fractal SpaceTime as Tentative Solution for the Cosmological and Coincidence Problems.pdf](http://www.IntellectualArchive.com/getfile.php?file=1oJ1u7I4Abj&orig_file=Fractal%20SpaceTime%20as%20Tentative%20Solution%20for%20the%20Cosmological%20and%20Coincidence%20Problems.pdf)

ID #: 1127 **Natural Sciences / Physics / General Physics**
Submitted on: Sep 01, 2013
Author: **Miroslav Pardy**
Title: **Photon superluminal flow in the de Laval nozzle**
Abstract: We determine the velocity of the photon outflow from the blackbody in the de Laval nozzle. Derivation is based on the Saint-Venant-Wantzel equation for the thermodynamics of the blackbody photon gas and on the Einstein relation between energy and mass. The application of derived results in photon rockets for the interplanetary, interstellar and intergalactic missions is not excluded.
Web link: www.IntellectualArchive.com/getfile.php?file=AivOKlwB7Ke&orig_file=laval.pdf

ID #: 1130 **Natural Sciences / Physics / Particle physics**

Submitted on: Sep 04, 2013
Author: **Ervin Goldfain**
Title: **A Bifurcation Model of the Quantum Field**
Abstract: The entire structure of the Standard Model may be retrieved from the universal route to chaos via period-doubling bifurcations.
Web link: [www.IntellectualArchive.com/getfile.php?file=iDHz23oiwKj&orig_file=A Bifurcation Model of the Quantum Field.pdf](http://www.IntellectualArchive.com/getfile.php?file=iDHz23oiwKj&orig_file=A%20Bifurcation%20Model%20of%20the%20Quantum%20Field.pdf)

ID #: 1131 **Literature / Internet articles / Analysis of literature**
Submitted on: Sep 06, 2013
Author: **Yuri N. Klimov**
Title: **Definition coordinates and values h - points of texts of Old Russian manuscripts and translations into a modern Russian literary language**
Abstract: The investigated texts of Old Russian manuscripts differ on volumes of the dictionary and the text, coordinates h - points which can be equal or various words on cumulative frequency and a rank. The approximate and exact riches of the investigated Old Russian texts under formula Popescu - Döltmannâ€™s are calculated. It is shown, that the investigated texts on riches did not differ almost from each other. The mistake has made 1.58 â€“ 7.61 %. The riches of texts of translations under specified formula Popescu - Döltmannâ€™s which were close to texts of Old Russian manuscripts are marked.
Key words: texts, Old Russian manuscripts, volume of the dictionary, volume of the text, h - a point, coordinates h - points, riches of texts, formula Popescu â€“ Döltmannâ€™s, riches of texts of translations, cumulative frequency of words, a rank
Web link: [www.IntellectualArchive.com/getfile.php?file=4QtNiKeJhu2&orig_file=Definition coordinates and values h.-point text of old russian manuscripts_IA.docx](http://www.IntellectualArchive.com/getfile.php?file=4QtNiKeJhu2&orig_file=Definition%20coordinates%20and%20values%20h.-point%20text%20of%20old%20russian%20manuscripts_IA.docx)

ID #: 1132 **Social Sciences / Economics / Microeconomics**
Submitted on: Sep 08, 2013
Author: **Andrushko Andriy**
Title: **Decision making on functional integration: the analytical approach**
Abstract: Conventional scientific practice normally emphasizes benefits of functional integration but pays little attention to potential problems that may arise when organizations try to integrate their functions. The paper suggests that managers, before doing any steps towards functional integration, must develop specific criteria and indices to thoroughly estimate the current environmental situation and the necessity for integration, as well as possible outcomes of that integration. The analytical technique that may help managers thoroughly evaluate prerequisites and consequences of functional integration for better decision making is presented in the article.
Web link: www.IntellectualArchive.com/getfile.php?file=3vhYvDLuRGo&orig_file=Article.doc

ID #: 1133 **Natural Sciences / Astronomy / General physics**
Submitted on: Sep 09, 2013
Author: **John C. Hodge**
Title: **Comments on ``The Pioneer Anomaly: an inconvenient reality or NASA's 12 year misconception**
Abstract: Paul ten Boom (arXiv:1307.0537[physics.gen-ph]) suggested the recent publications of the thermal recoil force causing the Pioneer Anomaly (PA) are questionable. {it{Only one}} model presented to date is consistent with {it{all}} 12 PA characteristics (Hodge <http://arxiv.org/abs/astro-ph/0612567>). This proposed model supports a reductive philosophy. Paul ten Boom did not discuss this model but did conclude the PA should remain an open issue. All other proposed models are inconsistent with some PA data. The PA is a case where conservatism should yield to observation and a reductive model that explains the observation.
Web link: www.IntellectualArchive.com/getfile.php?file=NihMLgYUfOp&orig_file=mse36.pdf

ID #: 1134 **Social Sciences / Economics / Development**

Submitted on: Sep 11, 2013

Author: Antonova Mariya Andreevna

Title: Regional sustainability of the North-Western Federal District

Abstract: The paper assesses economic, social and environmental sustainability of the regions situated in the North-Western Federal District, and presents the integral sustainability index calculated for period from 2000 to 2010. Basing on the assessment obtained, the author makes a conclusion about heterogeneity of regional development, identifies the areas of sustainability and presents the dynamics of index changes.

ID #: 1136 **Literature / Internet articles / Analysis of literature**

Submitted on: Sep 16, 2013

Author: Yuri N. Klimov

Title: About a h-point of the hand-written word forms, standardized word forms and lexemes in Old Russian texts "Legends on Đœđomaevâ's fight "

Abstract: *Romanian word forms in the 1950-1960s. The fight*.
on the basis of definition h - points under formula Popescu-Döltmann (1-F(h)) for hand-written word forms the greatest value had the following editions "Legends on Död'maevâ€™s fight" on riches of the dictionary: the reduced Widespread edition - D Đ Đ' Q.XVII.70 at practical equality of other editions; on size of riches of the dictionary of standardized word forms: compilation on the basis of the Widespread edition - D Đ Đ' O.IV.46, the Basic edition - D Đ Đ' O.IV.22, the reduced Widespread edition - D Đ Đ' Q.XVII.70 and Annalistic edition - ĐđĐĐ± ĐžĐ' Đ' 251; on size of riches of the dictionary of lexemes: the Basic edition - D Đ Đ' O.IV.22, compilation on the basis of the Widespread edition - D Đ Đ' O.IV.46, edition Synopsys - D Đ Đ' ĐšĐ%Đ' Đ%Đ±. 336 and the reduced Basic edition - D Đ Đ' Đœđ, N.... Q.509. Distinction between the submitted editions on the word forms, standardized word forms and lexemes is shown.

Key words: a-h-point, the formula 1-F(h) Popescu-Döltmann, rank-frequency distribution, the word forms, standardized word forms, lexemes, Old Russian texts, "The Legend on DœD°maevâ€™s fight", riches of the dictionary of hand-written word forms, riches of the dictionary of standardized word forms, riches of the dictionary of lexemes.

Web link: www.IntellectualArchive.com/getfile.php?file=M5HxUbjhlf7&orig_file=Mamaevs_Fight_IA_2013.docx

ID #: 1137 Natural Sciences / Physics / Particle physics

Submitted on: Sep 26, 2013

Author: Ervin Goldfain

Title: Quantum Field Theory as Manifestation of Fractal Geometry

Abstract: We discuss two theoretical arguments strongly suggesting that the continuum limit of Quantum Field Theory (QFT) leads to fractal geometry. The first argument stems from the Path Integral formulation of QFT, whereas the second one is an inevitable consequence of the Renormalization Group (RG)

Web link: www.IntellectualArchive.com/getfile.php?file=R7seApIjgXI&orig_file=Quantum Field Theory as Manifestation of Fractal Geometry.pdf

ID #: 1138 Natural Sciences / Other / economy

Submitted on: Sep 27, 2013

Author: Pavel Zakharchenko

RESORT-RECREATION COMPLEXES IN SYSTEM OF HEALTH ECONOMICS ON UKRAINE

Abstract: RESORT-RECREATION COMPLEXES IN SYSTEM OF HEALTH ECONOMICS ON UKRAINE

Pavel Zakharchenko

In today's global economy, resort complexes are one of the most profitable and dynamic development sectors of the economy. Many countries have in their face constantly growing source of foreign exchange earnings. Due to attracting millions of tourists are actively developing the infrastructure areas, creating additional workplaces. According to the World Tourism Organization (UNWTO), on the stake of resorts and related industries to him now there are 8.3%

workplaces of the world, 9.3% international investments, 12% export and 3.6% world gross internal product. Tourists expend 10.2% all facilities, which are outlaid world consumer. An average tourist, visiting Europe, brought a local economy a profit in size of \$790, and for the countries of Eastern Europe and European republics of the former Soviet Union this index was \$370. Considering the state of the resort-recreational potential of the Ukraine, it should be noted availability of favorable climatic conditions and varied recreational and balneological resources. This is a prerequisite for the formation of a highly developed, competitive recreational complex. However, the existing resource potential is used not sufficiently, and the state and impact of recreation development, not only lags behind the leading countries of the world, but does not meet the requirements of the modern consumer. Domestic industry resorts forms less than 1% of GDP, while in economic developed countries this index arrives at 6 - 8%. The sphere of tourism and resorts does not play a considerable role in economic development of Ukraine and producing a positive international image. The current situation is explained by non-competitiveness of the majority of Ukrainian resort-recreation complexes, which all in a greater degree shows up on a background the processes of globalization and liberalization. Today, for placing of tourists in Ukraine

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ID #: 1139 **Social Sciences / History / World history**

Submitted on: Sep 28, 2013

Author: Alexander Bolonkin

Title: Human Immortality and Electronic civilization

Abstract: Immortality is the most cherished dream and the biggest wish of any person. In book the author shows that the problem of immortality can be solved only by changing the biological human into an artificial form. Such an immortal person made of chips and super-solid material (the E-man, as was called in earlier author articles and book) will have incredible advantages in comparison to conventional people. An E-man will need no food, no dwelling, no air, no sleep, no rest, and no ecologically pure environment. His brain will work from radio-isotopic batteries (which will work for decades) and muscles that will work on small nuclear engines. Such a being will be able to travel into space and walk on the sea floor with no aqualungs. He will change his face and figure. He will have super-human strength and communicate easily over long distances to gain vast amounts of knowledge in seconds (by re-writing his brain). His mental abilities and capacities will increase millions of times. It will be possible for such a person to travel huge distances at the speed of light. The information of one person like this could be transported to other planets with a laser beam and then placed in a new body.

This is the popular book about the development of new technologies in 21st century and future of human race. Author shows that a human soul is only the information in a person head. He offers new unique method for re-writing the main brain information in chips without any damage of human brain. This is the scientific prediction of the non-biological (electronic) civilization and immortality of human being. Such a prognosis is predicated upon a new law, discovered by the author, for the development of complex systems. According to this law, every self-copying system tends to be more complex than the previous system, provided that all external conditions remain the same. The consequences are disastrous: humanity will be replaced by a new civilization created by intellectual robots (which the author refers to as "E-humans" and "E-beings"). These creatures, whose intellectual and mechanical abilities will far exceed those of man, will require neither food nor oxygen to sustain their existence. They will be devoid of emotion. Capable of developing science, technology and their own intellectual abilities thousands of times faster than humans can, they will, in essence, be eternal.

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ID #: 1141 **Social Sciences / History / Public history**

Submitted on: Sep 28, 2013

Author: Alexander Bolonkin

Title: Memoirs of Soviet Political Prisoner

Abstract: Short Biography of Dr. Alexander Bolonkin

A. Bolonkin was born in (Russia). When he was young, he had National and World records in aviation modelling and was awarded with gold and silver medals. He graduated with awards from Aviation Collage, Faculty of Aviation Engines, (B.S.)(USSR); Kazan Aviation Institute, Faculty of

Aircraft Design, (M.S.); Kiev University, Faculty of Mathematics, (M.S.); Moscow Aviation Institute, Rocket Department, dissertation "Optimal Trajectories of Multistate Rockets" (Ph.D., Dr.Sci.); Leningrad Politechnic University, Aerospace Engineering Department, dissertation "New Methods of Optimization and their Applications" (Post-Doctoral Degree in the former USSR).

He worked in Soviet aviation, rocket and Space industries and lectured in main Soviet University about 15 years. In particular, in Kiev Aircraft State Design Bureau headed by O. Antonov, Bolonkin took part in design of aircraft AN-8 through AN-225 (Engineer-Senior Engineer-Chairman of Department); in Rocket engine Construction Bureau headed by Academician V.P.Glushko, Bolonkin was Chairman of Reliability Department and took part in design of rocket engines for main strategic rockets of the USSR; in TsAGI (central Aero-Hydrodynamic Research Institute) A. Bolonkin was a scientific researcher.

He lectured as a professor and worked as a Project Director in Moscow Aviation Institute, Moscow Aviation Technological Institute, Bauman Highest Technical University, Technological Institute, He contacted with Construction Bureaus of Tupolev, Yakovlev, Mikoyan, Ilushin, Sykhou, with all main aviation, rocket and space research and design Centers of the USSR. He had many awards in the Soviet Union.

In 1972 professor Bolonkin was arrested the Soviet Secret Police (KGB) because he read forbidden political literature about freedom and democracy and listen in "Voice of America". More 15 years KGB tortures him into special prisons, concentration camps, and exile in Siberia. This period his life is described in this book.

In 1988, Alexander Bolonkin arrived as a political refugee in the USA and became American citizen in 1994. He worked as a mathematician in Sherson Lehman Hutton (American Express), N.Y., (Research, computation, programming, Optimal portfolio of securities), a Senior Researcher in Courant Institute of Mathematical Sciences of New York University; two years as a Senior Research Associate in Wright Laboratory, Flight Dynamic Directorate (Dayton, Ohio), (it is the main Laboratory of the USA Air Force with over 20,000 scientists); as a professor in New Jersey Institute of Technology, Computer and Information Department. He worked as an expert of Association Engineers and Scientists in N.Y.C. (Estimation of new ideas, projects, patents. Consulting).

He worked two years as a Senior Research Associate in the NASA (Dryden Flight Research Center) in California, Edwards and two years as Senior Researcher in Eglin USA Air Force Base (Florida).

Now Dr. Bolonkin lectures in New Jersey Institute of Technology.

For last four years alone, A. Bolonkin published more 35 scientific articles and books in the USA and a lot of articles in Russia-American press about scientific problems. He took part in three World Space Congress (1992, 1994, 1996), in World Aviation Congress (Los-Angeles, 1998, 1999) and more tens National Scientific Conferences in the USA. In particular, he published monograph "Development of Soviet pocket engines for Strategic Missiles", Delphic Ass., USA, 1991, 133 p., and large Chapter "Aviation, motor, and Space Designs" in book "Development Technology in the Soviet Union", pp.32-80, Delphic Ass., USA, 1990; book «Non-Rocket Space Launch and Flight», by A. Bolonkin, Elsevier, 2006, 488 ps.; chapters: Space Towers, Cable Anti-Gravitator, Electrostatic Levitation and Artificial Gravity in collection «Macro Engineering: A Challenge for the Future», edited by V. Badesky, R.B. Cathcart and R.D. Schuiling, Springer, 2006; book «New Concepts, Ideas, Innovations in Aerospace and Technology», by A. Bolonkin, Nova, 2007; book "Human Immortality and Electronic Civilization", Lulu, 3-rd Edition, «Macro-Projects: Environment and Technologies», NOVA, 2008 and others.

Alexander Bolonkin is the author of more 170 scientific articles and books and 17 inventions.

B. Kruglyak, Ph.D.

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ID #: 1143 **Literature / Internet articles / Analysis of literature**

Submitted on: Sep 30, 2013

Author: Yuri N. Klimov

Title: About relative speeds of rate of hand-written word forms, standardized word forms and lexemes in Old Russian texts and under formula Popescu-Altman

Abstract: Abstracts: relative speeds of frequency of hand-written word forms, standardized word forms and lexemes, since the greatest size, and also under formula Popescu-Altman 1-F(h) are determined. It is shown, that relative speeds of frequency of hand-written word forms, standardized word forms and lexemes under formula Popescu-Altman 1-F(h) are higher, than their relative speeds. High relative speeds on coordinates of a h-point possessed "Legends on Mamaev's fight" LMF [2] and [4]; for hand-written word forms - the reduced Basic edition - ДДД' DoeD, N.... Q.509; for standardized word forms - the Widespread edition - ДДД' Q.IV.354 and for lexemes - Cyprian's edition - ДДД 32.14.8. High relative speeds of the designed value of a h-point

Web link:

word forms LMF [2] possessed; for word forms - Cyprianâ€™s edition - Đ’Đ□Đ□ 32.14.8; for standardized word forms and lexemes - the reduced Basic edition - Đ Đ□Đ' ĐœĐ, Ň.... Q.509. Key words: h-Ñ,Đ%Ñ‡Đ°Đ°, formula Popescu-Altmann, word forms, standardized word forms, lexemes, Old Russian texts, "Legends on Mamaevâ€™s fight", relative speeds,
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