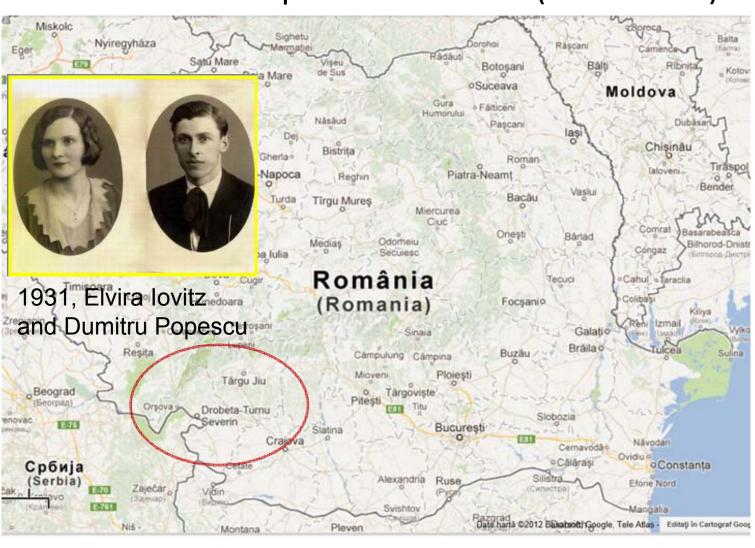
Ioan-lovitz Popescu

80 years of life

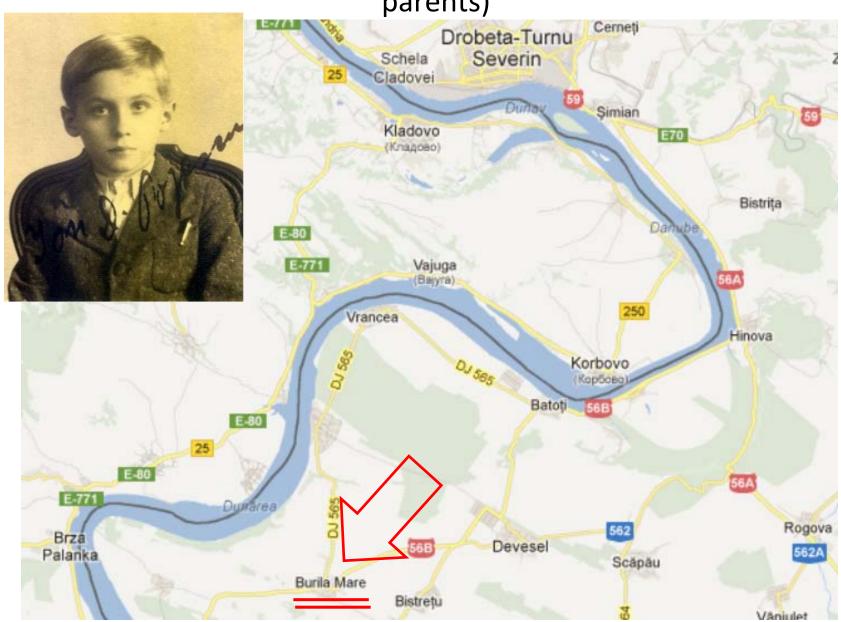
(http://www.iipopescu.com/)



Born on October 1st, 1932, Burila Mare village, Mehedintzi county, Romania, not far from Danube Son of Dumitru Popescu and Elvira (born lovitz)



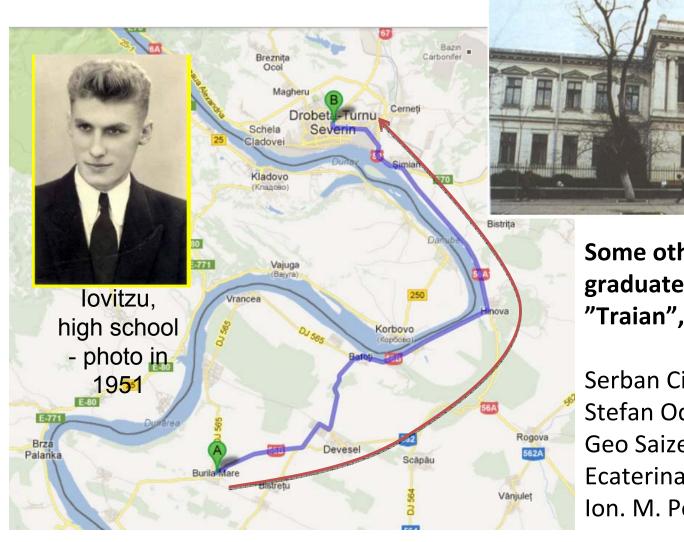
Childhood, between 1932-1944: Burila Mare village (during summer, with grand mother Elena Iovitz) and Drobeta-Turnu Severin (with his parents)



Adolescence: from Burila to Drobeta

1939-1943: elementary school at Drobeta-Turnu Severin

1943-1951: High School "Traian" at Drobeta - Turnu Severin



Some other personalities who graduated the high school "Traian",

Serban Cioculescu Stefan Odobleja Geo Saizescu Ecaterina Jianu Adronescu Ion. M. Popescu

1951- from Drobeta-Turnu Severin to Bucharest 1951-1955: Student – University of Bucharest, Faculty of Mathematics and Physics, 1952 – option for Physical Sciences

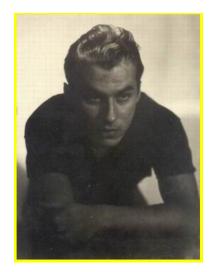




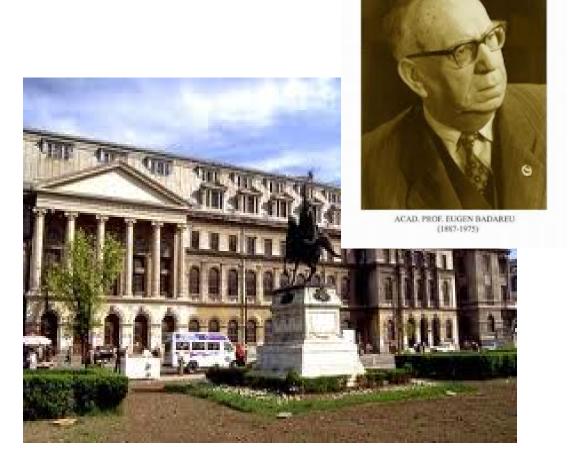
1955: graduation thesis with Radu Grigorovici, subject "Sodium-Vapor Lamp";

Career – University of Bucharest

- 1955 proposition from Eugen Badareu to stay with the University, the Department of Optics and Gas Discharges
- He accepts...



Iovitzu assistant professor



Career: University ...

- 1961- PhD in Physics, supervisor Eugen Badareu "The mechanism of cathodic parts of glow discharges";
- 1962 Faculty of Physics and Faculty of Mathematics emerge as separate institutions from the previous body Faculty of Mathematics and Physics;
- 1972 I.I. Popescu got the Professor degree, discipline Plasma Physics, with the Faculty of Physics, University of Bucharest



1960 – in the laboratory of Faculty: Costantin Popovici, Prof. Eugen Badareu, Iovitzu Popescu

...Career: in research institutes

1960-1972: Head of Plasma
 Physics Laboratory, Institute of Physics, Bucharest (IPB, address: Calea Victoriei 114)



1964 – IPB - Calea Victoriei 114, Popescu, Badareu, Musa

1961 – the group of young researchers at IPB, Calea Victoriei 114
Standing: I.I.Popescu, I.Iova, V.Topa, G.Musa, O.Zamfir Sitting: A.Popescu, D.Popescu, L.Ghita

Family: Denisa Popescu

- 1963 marriage with Denisa-Georgeta Popescu
- They did work together fore more than 40 years...
- 2003, Denisa dies, unexpectedly..., Iovitzu continues his work ...





1963 - wedding



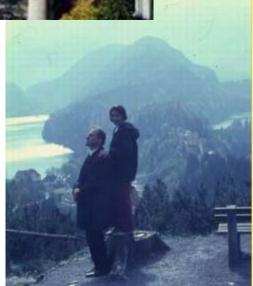




Career: The Humboldtian period

- 1967-1969 –
 Humboldt fellow,
 Kiel University,
 Germany;
- Atomic Spectroscopy;
- Work with Walter Lochte-Holtgreven and Johannes Richter.







Prof. Walter Lochte-Holtgreven

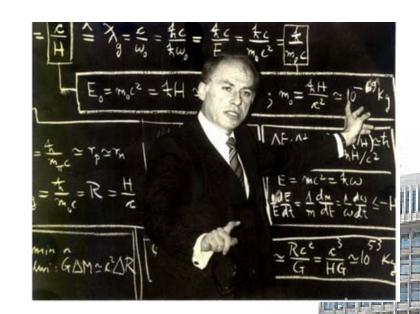
In the Alps-1968

Career: Physics in Magurele

1972-1977 – Dean of Faculty of Physics;

1974 – inauguration of the Physics Campus (Platforma de Fizica) in Magurele;

1977 – Physics in Romania is reorganized – II Popescu is among the founders and is the first Director of the Institute of Physics and Technology of Radiation Devices (IFTAR, 1977-1981);



1981- in front of blackboard



Tower building and Physics Campus in Magurele

1981

Career: the American period, Dallas at Texas

- From 1970 to present...
- Collaboration with Professor Carl B. Collins (Director of Center for Quantum Electronics, University of Texas at Dallas) and life long friendship with him

Multiphoton Spectroscopy

Induced Commo Emmision



Iovitzu, Dallas, Texas, 1972



Denisa and Carl, 1973



wntown

Career: Rector and Academician loan-lovitz Popescu

- May 1981-Oct. 1989 Rector of Bucharest University
- 1974 Corresponding member of the Romanian Academy;
- 1990- full member of the Romanian Academy; 1990-1992, President of the Physical Sciences Section;
- Continues as active member of the Romanian Academy;





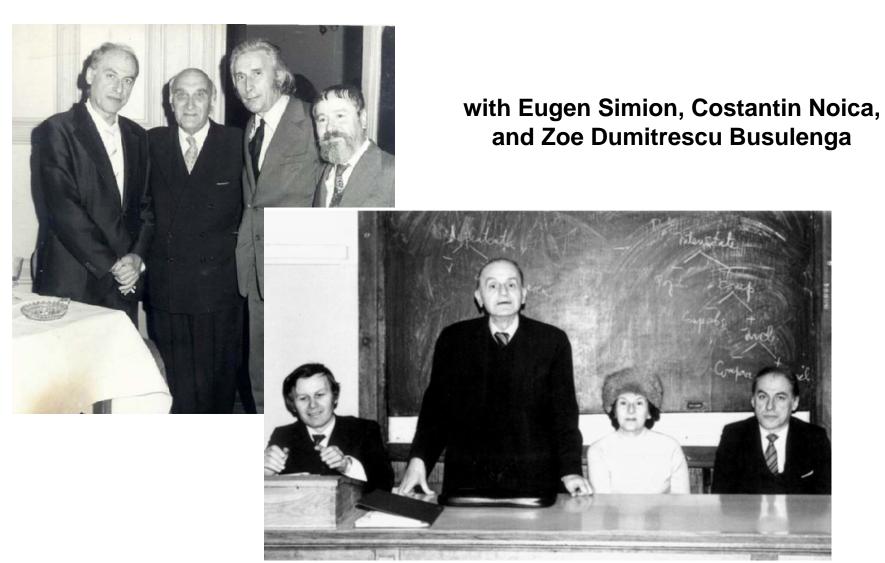
1983, Craiova (at the National Conference "Progrese in Fizica")



with Marin Ivascu, Victor Mercea, Ion M. Popescu, and Voicu Grecu

...other photos

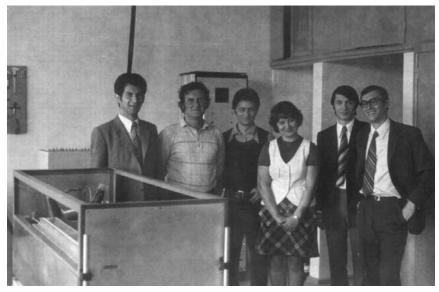
...with Valeriu Novacu, Liviu Sofonea, and Ionescu-Pallas





...with Faculty colleagues: Victor Gheorghe, Stelian Turbatu





...with his research group at IFTAR

Physicist Ioan-Iovitzu Popescu

Gas discharge and plasma physics (more than 10 books, over 70 papers, 1958-2008),

Introduction of the optogalvanic effect as a new principle for laser spectroscopy by thermionic detection, (with Eugen Badareu, Denisa Popescu, Johannes Richter, Carl B. Collins, C. Stanciulescu).

First experimental evidence of stable ion clusters with icosahedron and dodecahedron symmetry in ionized dense gases (with Rüdiger von der Heide, 1969)

Laser spectroscopy (18 articles, 1964-1991)

First experimental evidence of multiphoton spectra of free atoms and molecules with tunable dye lasers (with Dr. Denisa Popescu and Prof. C.B. Collins, 1973-74);

State-selective laser photolysis of molecules and laser production of highly excited Rydberg states;

Introduction and Development of Excited-State Spectroscopy, Rydberg Spectroscopy, Multiphoton Ionization Spectroscopy and Photolytic Spectroscopy

Pioneering work in gamma ray lasers (19 articles, 1979-2009)

First experimental evidence of induced gamma emission of a long-lived Hafnium-178 isomer showing a highly efficient X-rays to gamma-rays conversion

Physicist Ioan-Iovitz Popescu: Gas Discharges and Plasma Physics

- 1955, Graduation with Radu Grigorovici "Sodium-vapor lamp"; -1961, PhD degree with Eugen Badareu "The mechanism of cathodic parts of glow discharges"
- -83 papers and books within the topic;
- 1968 he studied the mobility of ions in high pressure gases and proved (with Rüdiger von der Heide) that ionic clusters (with as large as 33 atoms) are formed which can be seen as one of the first reports on "nano" field.

First experimental evidence of nano-clustering (1968)

Z. Physik 220, 337-348 (1969)

Beweglichkeit von Einfach- und Cluster-Ionen in Argon bei hohen Drucken

Iovitzu Popescu* und Rüdiger von der Heide Institut für Experimentalphysik der Universität Kiel

Eingegangen am 21. November 1968

The Mobility of Simple and Cluster Ions in Argon at High Pressures

A time-of-flight technique is used for the measurement of positive ion mobilities in argon in the 1-100 atm pressure range at 300 °K. The ions are produced by photo-ionization of gas atoms in the drift region with ultraviolet light from a spark discharge.

A mobility is found which varies continuously with the reduced electric field E/p_0 and which exhibits two saturation values at 1.55 ± 0.01 cm²/volt sec (for $E/p_0 \gtrsim 2$ volt/cm torr) and at 0.818 ± 0.003 (for $E/p_0 \lesssim 0.17$). The former value is in excellent agreement with the zero-field mobility obtained by Beaty for Ar⁺. The last value is interpreted in terms of the Langevin theory and connected with the formation of the Ar⁺₃₃ labile cluster. This has the Ar⁺ ion as nucleus and is surrounded by two complete shells of 12 and 20 argon atoms respectively. A mean value of the cluster radius is estimated as 6.24 Å.

Physicist Ioan-Iovitz Popescu: Multiphoton Spectroscopy, Laser Spectroscopies

1973-First experimental evidence of multiphoton spectra

- Laser spectroscopy, multiphoton spectroscopy with tunable dye lasers (with Denisa Popescu, CB Collins);
- Spectroscopy of excited Rydberg states
- Photolitic spectroscopy of simple molecules.

PHYSICAL REVIEW A

VOLUME 9, NUMBER 3

MARCH 1974

Multiphoton excitation and ionization of atomic cesium with a tunable dye laser*

D. Popescu

Institute of Physics of Bucharest, Bucharest, Romania

C. B. Collins and B. W. Johnson
The University of Texas at Dallas, Dallas, Texas 75230

Iovitzu Popescu

University of Bucharest, Bucharest, Romania (Received 16 April 1973)

The two-photon excitation and three-photon ionization of atomic cesium is investigated over the 6550-6950-Å wavelength region with a tunable-dye-laser source having a 0.06-0.08-Å linewidth and a space-charge ionization detector sensitive to a few ions per second. An online data-acquisition computer provides significant signal-to-noise recovery. The resulting dispersion curve for photoionization is interpreted in terms of the two-photon transitions from the ground $6^2S_{1/2}$ level to resonant n^2D and n^2S intermediate states, and represents, to the authors' knowledge, the first such two-photon absorption spectrum of Cs. Transitions from n=9 to 13 have been recorded for the $6^2S_{1/2}-n^2D_{5/2,3/2}$ series and from n=11 to 14 for the $6^2S_{1/2}-n^2S_{1/2}$ series.

Nomination to Nobel prize of Denisa Popescu:

The seminal paper was "Multiphoton Excitation and Ionization of Atomic Cesium with a Tunable Dye Laser," by D. Popescu, C. B. Collins, B. W. Johnson, and Iovitzu Popescu, Phys. Rev. A9, 1182-1187 (1974) in which the first multiphoton spectrum of an atom was reported. In particular unequivocal line spectra of the two photon Rydberg series of cesium was shown and identified. A copy is attached.

Physicist Ioan-Iovitz Popescu: Induced Gamma Emission by X-ray pumping

Proposal of X-ray pumping of a gamma ray laser

Amplification of Gamma Radiation from X-Ray Excited

Nuclear States *

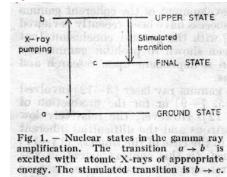
S. Olariu, [†] I. Iovitzu Popescu Central Institute of Physics, Bucharest, Magurele, Romania

C. B. Collins

Center for Quantum Electronics, University of Texas at Dallas, Box 688, Richardson, Texas 75080, USA

Abstract

In this paper we discuss the possibility of the excitation of nuclear electromagnetic transitions by the absorption of X-ray quanta produced in appropriate inner-shell atomic transitions, and the relevance of this process for the amplification of the gamma radiation from the excited nuclear states. It is concluded that the X-ray pumping technique might provide a useful approach for the development of a gamma ray laser.



2008: US-DARPA confirmation of the longlived isomer Hafnium triggering



DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
3701 NORTH FAIRFAX DRIVE
ARLINGTON, VA 22203-1714

29 February 2008

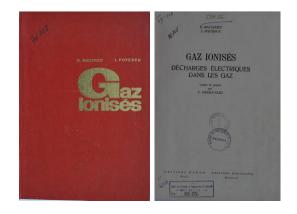
Ioan-Iovitz Popescu Str. Fizicienilor, Nr.6, Bloc M4, Et.1, Apt.6

One of the difficulties in analyzing the data turned out to be the strongest proof of pror triggering to date. In considering all of the coincidences with the 213.4 keV and 93.2 keV transitions, it is very clear that the levels from which these transitions are fed, are populated by other than higher Ground State Band transitions when the synchrotron be is turned on. These levels are then fed by transitions from above the 1147.4 keV (4 second isomer) level. This is the strongest proof yet that triggering occurs, it is prompt and the path is different from the natural decay path. Triggered decays do not pass through the four second isomer state that leads to the Ground State Band in the natural isomeric decay.

^{*}Published in Revue Roumaine de Physique 27, 559 (1982)

[†]Present address: Silviu Olariu, Institute of Physics and Nuclear Engineering, Department of Fundamental Experimental Physics, 76900 Magurele, P.O. Box MG-6, Bucharest, Romania; e-mail: olariu@ifin.nipne.ro

Selection: Books on Physics co-authored by Ioan-Iovitz Popescu





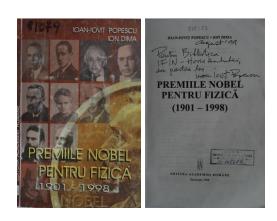




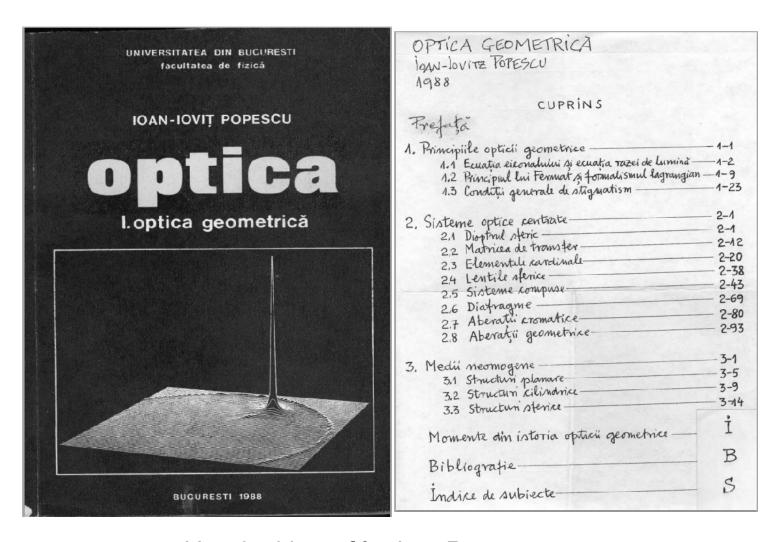
1973 - 1975







Iovitzu's lectures on OPTICS, holograph, University of Bucharest (1988)



Handwriting of Iovitzu Popescu

Ioan-lovitz Popescu: serving the scientific community

- Over 4000 ROUMANIAN PHYSICISTS DATABASE created by Acad.
 Prof. Dr. Ioan-Iovitz POPESCU;
 - tens of generations of students;
 - more that 45 PhD theses (I am one of his PhD students),
 (http://www.iipopescu.com/):
 - 16. Gheorghe DINESCU, 1987, Bucharest Univ., Contributions to the Study of Plasma Flowing Processes by Electrical Measurements and Spectral Investigation at Visible and Ultraviolet Wavelength Ranges;
- SCIENTOMETRY: he created and succeeded to impose value criteria for the scientific activity of physicists (see http://www.iipopescu.com/Jorankingb.htm) that have been used for years for classification and promotion in the Romanian Universities and Research Institutions.

It would have been enough to finish highly laudative, but... Professor loan lovitz Popescu has a leisure: *Linguistics*

Selection from his site: www.iipopescu.com

Vita et Opera: Physics, Plasmas & Lasers Leisure: Linguistics

Papers in Linguistics (over 40)

2009

- •15. Popescu, I.-I., Kelih, E., Best, K.-H., Altmann, G. (2009). Diversification of the case Glottometrics 18, 32-39
- •16. Popescu, I.-I., Altmann, G. (2009). A modified text indicator. In: Kelih, E., Levickij, V., Altmann, G. (eds.), Methods of text analysis: 208-229. Černivci, ČNU.
- •17. Martináková, Z., Mačutek, J., Popescu, I.-I., Altmann, G. (2009). Ord´s criterion for musical texts. Glottotheory 2, 86-98.
- •18. Popescu, I.-I., Altmann, G., Grzybek, P., Jayaram, B.D., Köhler, R., Krupa, V., Mačutek J., Pustet, R., Uhlířová, L., Vidya, M.N. (2009). Word frequency studies
 Berlin-New York: Mouton de Gruyter, XI + 278 pp.
- •19. Popescu, I.-I., Mačutek, J., Altmann, G. (2009). Aspects of word frequencies Lüdenscheid: RAM-Verlag. IV + 198 pp.
- •20. Tuzzi, A., Popescu, I.-I., Altmann, G. (2009). Parts-of-speech diversification in Italian texts. Glottometrics 19, 42-48.
- •21. Tuzzi, A., Popescu, I.-I., Altmann, G. (2009). Zipf's Laws in Italian Texts . Journal of Quantitative Linguistics 16(4), 354-367...

2010

- 23. Popescu, I.-I., Altmann, G., Köhler, R. (2010). Zipf's law—another view, Quality and Quantity, 44(4), 713-731
- •24. Tuzzi, A., Popescu, I.-I., Altmann, G. (2010). The golden section in textsETC Empirical Text and Culture Research 4, 30-41
- •25. Nemcová, E., Popescu, I.-I., Altmann, G. (2010). Word associations in French. In: Berndt, A., Böcker, J. (eds.), Sprachlehrforschung: Theorie und Empirie: 223-237. Frankfurt: Lang
- •26. Tuzzi, A., Popescu, I.-I., Altmann, G. (2010). Quantitative analysis of Italian texts Lüdenscheid: RAM-Verlag, IV + 161 pp.
- •27. Popescu, I.-I., Mačutek, R., Kelih, E., Čech, R., Best, K.-H., Altmann, G. (2010). Vectors and codes of text, Lüdenscheid: RAM-Verlag, II + 162 pp.
- •28. Popescu, I.-I., Mačutek, J., Altmann, G. (2010). Word forms, style and typology. Glottotheory 3(1), 89-96
- •29. Overbeck, A., Tuzzi, A., Popescu, I.-I., Altmann, G. (2010). Analysis of Italian word classes. Glottometrics 20, 12-28
- •30. Popescu, I.-I., Čech, R., Altmann, G. (2010), Structural conservatism and innovation in texts, Glottotheory 3(2), 43-64

2011

- 31. Popescu, I.-I., Čech, R., Altmann, G. (2011). The Lambda-structure of texts, Lüdenscheid: RAM-Verlag, II + 181 pp.
- •32. Popescu, I.-I., Čech, R., Altmann, G. (2011), On stratification in poetry. Glottometrics, 21, 54-59.
- •33. Čech, R., Popescu, I.-I., Altmann, G. (2011), Euphony in Slovak lyric poetry Glottometrics 22, 5-16
- •34. Čech, R., Popescu, I.-I., Altmann, G. (2011), Word length in Slovak poetry Glottometrics 22, 44-56
- •35. Popescu, I.-I., Čech, R., Altmann, G. (2011), Vocabulary richness in Slovak poetry, Glottometrics 22, 62-72

2012

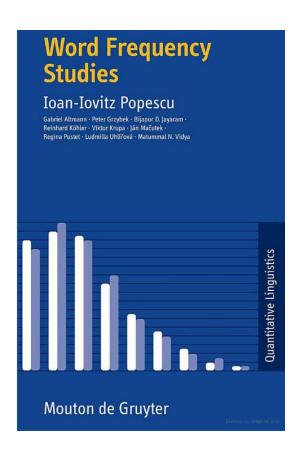
- •36. Popescu, I.-I., Čech, R., Altmann, G. (2012), Some Geometric Properties of Slovak Poetry, Journal of Quantitative Linguistics, 19(2), 121-131
- •37. Popescu, I.I., Čech, R., Altmann G. (2012) Some characterizations of Slovak poetry. In Naumann, S., Grzybek, P., Vulanović, R., Altmann, G. (Eds.), Synergetic Linguistics. Text and Language as Dynamic Systems. Wien: Praesens, 187-196.
- 38. Naumann, S., Popescu, I.-I., Altmann, G. (2012). Aspects of nominal style. Glottometrics 23, 23-55

Books in Linguistics

These books can be freely accessed at http://www.nipne.ro/community/library/popescu.php

- 18. Popescu, I.-I., Altmann, G., Grzybek, P., Jayaram, B.D., Köhler, R., Krupa, V., Mačutek J., Pustet, R., Uhlířová, L., Vidya, M.N. (2009). Word frequency studies. Berlin-New York: Mouton de Gruyter, XI + 278 pp.
- 19. Popescu, I.-I., Mačutek, J., Altmann, G. (2009). <u>Aspects of word frequencies</u> Lüdenscheid: RAM–Verlag. IV + 198 pp.
- **26. Tuzzi, A., Popescu, I.-I., Altmann, G.** (2010). <u>Quantitative analysis of Italian texts</u> Lüdenscheid: RAM–Verlag, IV + 161 pp.
- 27. Popescu, I.-I., Mačutek, R., Kelih, E., Čech, R., Best, K.-H., Altmann, G. (2010). Vectors and codes of text, Lüdenscheid: RAM-Verlag, II + 162 pp.
- **31. Popescu, I.-I., Čech, R., Altmann, G.** (2011). <u>The Lambda-structure of texts</u>, Lüdenscheid: RAM–Verlag, II + 181 pp.

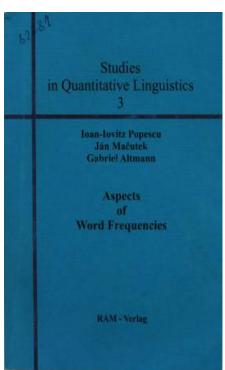
World Frequency Studies

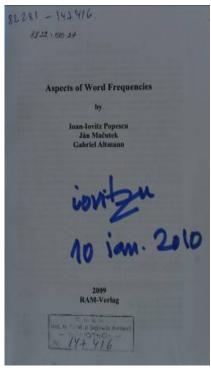


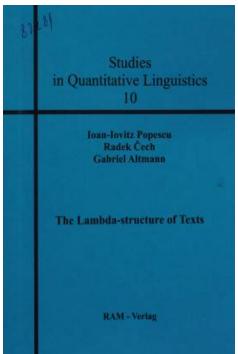
Word frequency plays a prominent role in many scientific and applicational fields. The book presents innovative methods in research and new results important for language and text characterization. Based on a general theory, surprising interrelations are shown between word frequency and other linguistic properties. Interrelations between previously known methods and new characteristics such as the h-point and other measures developed in the book are investigated. Furthermore, new statistical tests are introduced

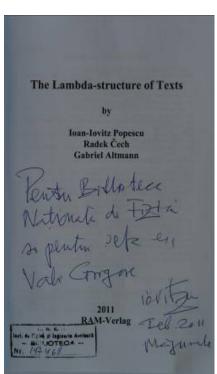
de Gruyter, 2009 - 278 pages

Studies in Quantitative Linguistics









2009 2011

Total papers, citations: Physics and Linguistics

About 200 papers and published books

Iovitzu's Scholar Google (SG) citations, September 2012 Most citations have been taken from Scholar Google with the search words II Popescu, OR Iovitz (http://www.iipopescu.com/CITSH.htm)

Total citations: about 2400

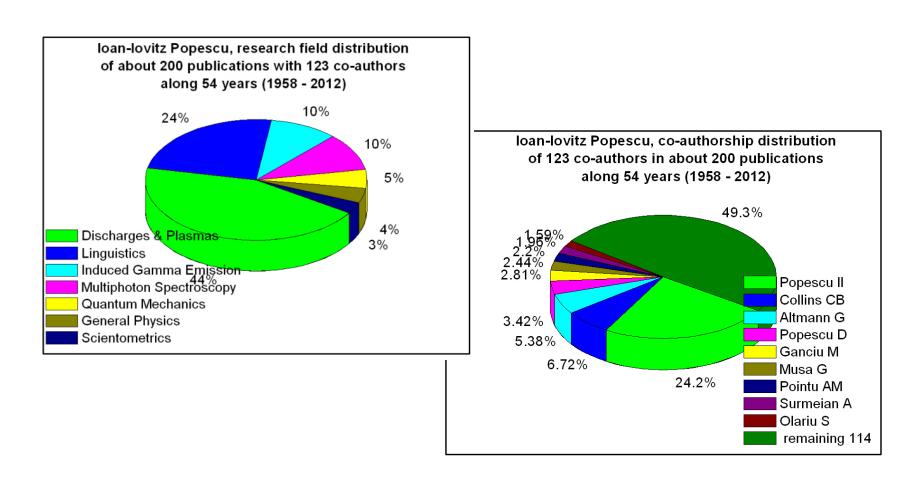
Total articles with at least 1 citation: 158

About 15 citations/paper

Works of Prof. Ioan-Iovitz POPESCU are cited by Nobel prize laureates:

A. L. Schawlow
N. Bloembergen
M. Prokhorov
W. E. Lamb jr.
C. N. Yang

Research field distribution and co-authorship distribution



Prizes and Awards

- 1961: Physics Prize, awarded by Ministry of Education;
- 1966: Prize for Physics "Constantin Miculescu" awarded by Romanian Academy;
- 1997: Honorary Citizen of Mehedintzi County;
- 1998: Doctor Honoris Causa of the Craiova University;
- 2000: National Order "Serviciul Credincios", in Grad de Comandor, awarded by President of Romania;
- 2002: Diploma "Meritul Academic" of Romanian Academy and "Diploma of Excellence" of Ministry of Education and Research;
- 2009: Prize "Opera Omnia" of CNCSIS, for life achievements in his scientific activity;
- 2009: "Diploma of Excellence" of Drobeta Turnu Severin City
- 2010 "Medal of Honor" of Institute of Atomic Physics;
- 2012, June 21: Award from National Grand Lodge of Romania :
 - The Grigore Moisil award for Exact Sciences was awarded to Ioan-Iovitz POPESCU, Member of the Romanian Academy, for the book "Lambda Structure of Texts" published in the series "Studies in Quantitative Linguistics Nr.10", 2011, RAM-Verlag" Lüdenscheid, Germany.
- 2012: "Diploma of Excellence" of Ministry of Education and Research.

The Awards Gala of the National Grand Lodge of Romania, June 21, 2012

The National Grand Lodge of Romania has a very well established path and a clear strategy through foregrounding value, through the support awarded to intelligence. Today we have celebrated and rewarded intelligence in its mature state. (The Grand Master of National Grand Lodge of Romania, Grand Master Radu Balanescu)



The Grigore Moisil award for Exact Sciences was awarded to Ioan Iovitz POPESCU, Member of the Romanian Academy, for the book "Lambda – Structure of Texts" published in the series "Studies in Quantitative Linguistics", 10, 2011, RAM-Verlag, Lüdenscheid, Germany.

Discourse of Acad. Ioan-Iovitz Popescu at the Awards Gala of the National Grand Lodge of Romania

Your Excellencies,

The President of the Romanian Academy, Ionel Haiduc, and The Grand Master of National Grand Lodge of Romania, Radu Balanescu, Distinguished Colleagues and Guests,

Wandering enough throughout this world, somewhere, sometimes, by God's Grace, everything it may happen!

For instance now, at my 80 (I can't believe it!), under this majestic cupola of the Romanian Athenaeum, I want to hearty thank you all, also on behalf of my friends professors Gabriel Altmann and Radek Čech, for the highest appreciation I ever got so far, the "Romanian Nobel".

Once again, warmest thanks,

(Acad. Ioan-Iovitz Popescu, June 21, 2012)

What is doing these days Professor lovitz Popescu?

15 feb 2012 – selection from a message

Dears...

From yesterday, the book "Quantitative analysis of poetry", with Gabriel Altmann, Doina Tatar, and Mihaiela Lupea, is with the Editors from Mouton de Gruyter.

... lovitzu

Quantitative analysis of poetry by

Ioan-Iovitz Popescu, Mihaiela Lupea, Doina Tatar, Gabriel Altmann

Introduction: Poetry can be analyzed from an infinite number of viewpoints, just as any text and the whole of the human behaviour. Every viewpoint is interesting for some scientific discipline and the number of viewpoints increases with the advancement of science. Our aim is very restricted, nevertheless it opens up an infinite domain of new problems. And every problem can be solved in dif-ferent ways. Hence there is a way without end, wherever one begins and in whatever direction one goes.

In the present volume we shall concentrate on some methods used in the study of poetic texts and apply them to some already quantified textual prop-erties.

14 Aug 2012, work on Word length: aspects and languages

Now, I am working on the attached manuscript (version 80, it means I have revised it 80 times). I analyze the regularities in the length of words, from 61 texts in 28 languages. The length of words is measured by the number of syllables: the texts are transformed in a succession of numbers. Thus, we may discover regularities dependent on language, genre, author, etc. The published work will be freely offered to the scientific community, as I have done with all my publications (please find them at http://www.iipopescu.com/).

This is my fishing of a 80 year long life years. And I conclude that there is no happiness higher than God making you to become able to give!

There are three kinds of scientists. The first kind..., usually checks up the science and keep it in his mind only as a nice reminiscence of his youth. The second kind are those that cannot get rid of research... And the third kind consists of those very rare old persons who are able in high age even to change the scientific discipline because they cannot quench their craving for plunging in other unknown worlds. This third, very extreme group is the club of Ioan-lovitz Popescu who since five years turns a second scientific discipline, namely linguistics, upside-down.

Gabriel Altmann

(Foreword to Romanian Reports in Physics, Volume 64, Supplement, 2012)

CONCLUSIONS



Happy Birthday, Dear Professor!