## Branislav Vlahovic

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/1899825/publications.pdf

Version: 2024-02-01

144 papers 2,321 citations

394421 19 h-index 233421 45 g-index

146 all docs

146 docs citations

146 times ranked 1493 citing authors

#	Article	IF	Citations
1	Thermal parameters defined with graph theory approach in synthetized diamonds. Thermal Science, 2022, 26, 2177-2186.	1.1	1
2	Fractal Nature Bridge between Neural Networks and Graph Theory Approach within Material Structure Characterization. Fractal and Fractional, 2022, 6, 134.	3.3	0
3	Structural Characterization of Nanocellulose/Fe3O4 Hybrid Nanomaterials. Polymers, 2022, 14, 1819.	4.5	7
4	Hydroxyapatite/TiO2 Nanomaterial with Defined Microstructural and Good Antimicrobial Properties. Antibiotics, 2022, 11, 592.	3.7	8
5	Sintering parameters influence on dielectric properties of modified nano-BaTiO <sub>3</sub> ceramics. Modern Physics Letters B, 2022, 36, .	1.9	1
6	Graph theory applied to microelectronics intergranular relations. Ferroelectrics, 2021, 570, 145-152.	0.6	13
7	Brownian fractal nature coronavirus motion. Modern Physics Letters B, 2021, 35, 2150076.	1.9	8
8	The 3D graph approach for breakdown voltage calculation in BaTiO3 ceramics. International Journal of Modern Physics B, 2021, 35, 2150103.	2.0	6
9	PVDF-HFP/NKBT composite dielectrics: Perovskite particles induce the appearance of an additional dielectric relaxation process in ferroelectric polymer matrix. Polymer Testing, 2021, 96, 107093.	4.8	15
10	Electronic properties and quasi-zero-energy states of graphene quantum dots. Physical Review B, 2021, 103, .	3.2	11
11	Thickness dependent growth of Ge nanoparticles in amorphous Ge/SiO2 multilayers. Vacuum, 2021, 190, 110294.	3.5	2
12	Enhanced detection of volatile organic compounds (VOCs) by caffeine modified carbon nanotube junctions. Nano Structures Nano Objects, 2020, 24, 100578.	3.5	6
13	The Artificial Neural Networks Applied for Microelectronics Intergranular Relations Determination. Integrated Ferroelectrics, 2020, 212, 135-146.	0.7	11
14	Ceramics, materials, microelectronics and graph theory new frontiers. Modern Physics Letters B, 2020, 34, 2150159.	1.9	10
15	Brownian motion and fractal nature. Modern Physics Letters B, 2020, 34, 2040061.	1.9	7
16	The fractal nature as new frontier in microstructural characterization and relativization of scale sizes within space. Modern Physics Letters B, 2020, 34, 2050421.	1.9	7
17	Millimeter wave probe data for irradiated silicon. , 2020, , .		0

Three-body model for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"> <mml:mi>K</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mn>1460</mml:mn><mml:mo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 52 Td (stretchy="false">)</mr

#	Article	IF	CITATIONS
19	Semi insulating N-gallium nitride (GaN) on sapphire surface reflection dataset obtained at millimeter wave frequencies 107.35–165†GHz. Data in Brief, 2020, 33, 106419.	1.0	o
20	Particle representation for the kaonic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>N</mml:mi><mml:mi>NN<td>ni&gt; &lt;<b>മു</b>ബി:m</td><td>ovez&gt;<mml:m< td=""></mml:m<></td></mml:mi></mml:mrow></mml:math>	ni> < <b>മു</b> ബി:m	ovez> <mml:m< td=""></mml:m<>
21	Formation of isolated Ge nanoparticles in thin continuous Ge/SiO2 multilayers. Vacuum, 2020, 179, 109508.	3.5	3
22	The Nano-Scale Modified BaTiO3 Morphology Influence on Electronic Properties and Ceramics Fractal Nature Frontiers. Applied Sciences (Switzerland), 2020, 10, 3485.	2.5	4
23	Millimeter wave photoresponse of low-dose radiation damaged silicon. Nuclear Instruments & Methods in Physics Research B, 2020, 478, 50-55.	1.4	0
24	Effect of impurities ordering in the electronic spectrum and conductivity of graphene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126401.	2.1	7
25	Limit on the anisotropy of the one-way maximum attainable speed of the electron. Physical Review D, 2020, 101, .	4.7	3
26	Lower Bound for ppK– Quasi-Bound State Energy. Physics of Particles and Nuclei, 2020, 51, 979-987.	0.7	3
27	Neural networks and microelectronics parameters distribution measurements depending on sintering temperature and applied voltage. Modern Physics Letters B, 2020, 34, 2150172.	1.9	13
28	Particle representation for \$NN{ar K}\$ system. SciPost Physics Proceedings, 2020, , .	0.4	3
29	Nanocrystalline Zn2SnO4/SnO2: Crystal structure and humidity influence on complex impedance. Journal of Electroceramics, 2020, 45, 135-147.	2.0	3
30	Effect of isospin averaging for \$ppK^-\$ kaonic cluster. SciPost Physics Proceedings, 2020, , .	0.4	0
31	Electron transfer from the barrier in InAs/GaAs quantum dot-well structure. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113629.	2.7	11
32	nd-Scattering within MGL Approach for Configuration-Space Faddeev Equations. Physics of Particles and Nuclei, 2019, 50, 433-442.	0.7	1
33	Isospin effect in three-body kaonic-like systems. AIP Conference Proceedings, 2019, , .	0.4	1
34	Electronic ceramics fractal microstructure analysis - Minkowski Hull and grain boundaries. Ferroelectrics, 2019, 545, 184-194.	0.6	6
35	Investigation of ZnFe <sub>2</sub> O <sub>4</sub> spinel ferrite nanocrystalline screenâ€printed thick films for application in humidity sensing. International Journal of Applied Ceramic Technology, 2019, 16, 981-993.	2.1	34
36	<i>Nd</i> breakup within isospinless <i>AAB</i> model. Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 105103.	3.6	4

#	Article	IF	CITATIONS
37	Ceramic materials and energy—Extended Coble's model and fractal nature. Journal of the European Ceramic Society, 2019, 39, 3513-3525.	5.7	11
38	Controllable synthesis of Fe3O4-wollastonite adsorbents for efficient heavy metal ions/oxyanions removal. Environmental Science and Pollution Research, 2019, 26, 12379-12398.	5.3	10
39	Simulation and synthesis of silver dendritic nanostructures for surface-enhanced Raman scattering. Materials Express, 2019, 9, 1082-1086.	0.5	1
40	Fractal frontiers in microelectronic ceramic materials. Ceramics International, 2019, 45, 9679-9685.	4.8	21
41	Processing and properties of dense cordierite ceramics obtained through solid-state reaction and pressure-less sintering. Advances in Applied Ceramics, 2019, 118, 241-248.	1.1	10
42	Shungite - a carbon-mineral rock material: Its sinterability and possible applications. Processing and Application of Ceramics, 2019, 13, 89-97.	0.8	10
43	On binding energy of trions in bulk materials. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 787-791.	2.1	9
44	On Mass Polarization Effect in Three-Body Nuclear Systems. Few-Body Systems, 2018, 59, 1.	1.5	6
45	Trions in bulk and monolayer materials: Faddeev equations and hyperspherical harmonics. Nanotechnology, 2018, 29, 124002.	2.6	17
46	Stress Evolution during Ge Nanoparticles Growth in a SiO <sub>2</sub> Matrix. Inorganic Chemistry, 2018, 57, 14939-14952.	4.0	0
47	A time-resolved millimeter wave conductivity (TR-mmWC) apparatus for charge dynamical properties of semiconductors. Review of Scientific Instruments, 2018, 89, 104704.	1.3	7
48	BWO and IMPATT Millimeter Wave Probing of c-Si, and Perovskite. , 2018, , .		0
49	Humidity sensing properties of nanocrystalline pseudobrookite (Fe2TiO5) based thick films. Sensors and Actuators B: Chemical, 2018, 277, 654-664.	7.8	39
50	Self-Ordered Voids Formation in SiO <sub>2</sub> Matrix by Ge Outdiffusion. Journal of Nanomaterials, 2018, 2018, 1-8.	2.7	4
51	High-energy photon polarimeter for astrophysics. Journal of Astronomical Telescopes, Instruments, and Systems, 2018, 4, 1.	1.8	9
52	Structure and photocatalytic properties of sintered TiO2 nanotube arrays. Science of Sintering, 2018, 50, 39-50.	1.4	8
53	S-wave Approach for \$\$varvec{nnp}\$\$ and \$\$varvec{ppn}\$\$ Systems with Phenomenological Correction for Singlet \$\$varvec{NN}\$\$ Potentials. Few-Body Systems, 2017, 58, 1.	1.5	3
54	Preparation of Silver Nanoparticles in Poly(N-vinylpyrrolidone)/Ethanol Solutions. International Journal of Nanoscience, 2017, 16, 1750008.	0.7	6

#	Article	IF	Citations
55	Time-dependent nonlinear finite element modeling of the elastic and plastic deformation in SiGe heterostructured nanomaterials. Journal of Applied Physics, 2017, 121, 025104.	2.5	1
56	Electrospun Polymer Nanofibers Decorated with Noble Metal Nanoparticles for Chemical Sensing. Nanoscale Research Letters, 2017, 12, 451.	5.7	56
57	Metallic Nanostructures for Multispectral Filters. Journal of Nanoscience and Nanotechnology, 2017, 17, 573-576.	0.9	0
58	Nanosensing Backed by the Uncertainty Principle. Journal of Nanotechnology, 2016, 2016, 1-8.	3.4	3
59	Hyperon binding energy inî 6He andî 7He. EPJ Web of Conferences, 2016, 113, 07008.	0.3	1
60	Înnbound state with three-body potential. EPJ Web of Conferences, 2016, 113, 08006.	0.3	4
61	Underlying causes of the magnetic behavior in surface patterned NiFe2O4 thin films. MRS Communications, 2016, 6, 397-401.	1.8	1
62	Electronic and optical properties of a double quantum dot molecule with Kane's dispersion law. Journal of Physics: Conference Series, 2016, 702, 012010.	0.4	0
63	Single electron tunneling in double and triple quantum wells. International Journal of Modern Physics B, 2016, 30, 1642011.	2.0	3
64	Three-body calculations for (i />the (i>KCsup> $\hat{a}$ ' <i>ppSystem within potential models. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 065104.</i>	3.6	14
65	Charge symmetry breaking effect for <sup>3</sup> H and <sup>3</sup> He within s-wave approach. International Journal of Modern Physics E, 2016, 25, 1650042.	1.0	5
66	A Review on Preparation and Applications of Silver-Containing Nanofibers. Nanoscale Research Letters, $2016,11,80.$	5.7	92
67	Electronic States and Absorption of Light in a Lemniscate Shaped Quantum Dot Molecule. , 2016, , 33-44.		0
68	Detecting somatic mutations in genomic sequences by means of Kolmogorov–Arnold analysis. Royal Society Open Science, 2015, 2, 150143.	2.4	5
69	Uniformity of cosmic microwave background as a non-inflationary geometrical effect. Modern Physics Letters A, 2015, 30, 1530026.	1.2	0
70	Highly Selective and Sensitive Biochemical Detector. NATO Science for Peace and Security Series C: Environmental Security, 2015, , 137-150.	0.2	1
71	Localized-Delocalized States and Tunneling in Double Quantum Dots: Effect of Symmetry Violation. Quantum Matter, 2015, 4, 358-366.	0.2	3
72	Electronic Structure of Quantum Dots and Rings. Reviews in Theoretical Science, 2015, 3, 155-176.	0.5	1

#	Article	IF	CITATIONS
73	Computational modeling of electrophotonics nanomaterials: Tunneling in double quantum dots. , 2014, , .		0
74	High-intensity positron microprobe at the Thomas Jefferson National Accelerator Facility. Journal of Applied Physics, 2014, 115, 234907.	2.5	7
75	Neutron–Deuteron Scattering Observables at E lab Â=Â14.1 MeV. Few-Body Systems, 2014, 55, 1033-1034.	1.5	O
76	Raman Responses in Mechanically Activated <scp><scp>BaTiO</scp></scp> <sub>3</sub> . Journal of the American Ceramic Society, 2014, 97, 601-608.	3.8	19
77	A cluster calculation for 6He spectrum. Physics of Atomic Nuclei, 2014, 77, 384-388.	0.4	2
78	Electron Tunneling in Chaotic InAs/GaAs Quantum Ring. Quantum Matter, 2014, 3, 549-555.	0.2	1
79	An α-cluster model for Î> 9 Be spectroscopy. Physics of Atomic Nuclei, 2013, 76, 355-364.	0.4	3
80	Theory of confined states of positronium in spherical and circular quantum dots with Kane's dispersion law. Nanoscale Research Letters, 2013, 8, 311.	5.7	2
81	Dual effects of single-walled carbon nanotubes coupled with near-infrared radiation on Bacillus anthracis spores: inactivates spores and stimulates the germination of surviving spores. Journal of Biological Engineering, 2013, 7, 19.	4.7	16
82	Electron Localization, Tunneling and Energy Spectrum for Systems of Double Quantum Dots. Materials Research Society Symposia Proceedings, 2013, 1551, 129-134.	0.1	0
83	Electron tunneling in double quantum dots and rings. Journal of Physics: Conference Series, 2012, 393, 012012.	0.4	2
84	Electron Localization in Double Concentric Quantum Ring. Journal of Computational and Theoretical Nanoscience, 2012, 9, 1023-1028.	0.4	0
85	<i>C</i> – <i>V</i> Data and Geometry Parameters of Self-Assembled InAs/GaAs Quantum Rings. Journal of Computational and Theoretical Nanoscience, 2012, 9, 669-672.	0.4	2
86	Quantum Mechanics of Semiconductor Quantum Dots and Rings. , 2012, , .		3
87	Configuration-space Faddeev calculation for proton-deuteron observables at energy E[sub lab] = 3 N , 2011, , .	MeV.	0
88	Single-Walled Carbon Nanotubes Coupled with Near-Infrared Laser for Inactivation of Bacterial Cells. Journal of Nanoscience and Nanotechnology, 2011, 11, 4708-4716.	0.9	10
89	9 Be Low-Lying Spectrum Within a Three-Cluster Model. Few-Body Systems, 2011, 50, 255-257.	1.5	7
90	Configuration-Space Faddeev Calculation for Proton–Deuteron Elastic Scattering Observables. Few-Body Systems, 2011, 50, 267-269.	1.5	1

#	Article	IF	CITATIONS
91	Erbium doped fiber ring laser for optical wavelength conversion. Optik, 2011, 122, 340-344.	2.9	0
92	Electron transfer between weakly coupled concentric quantum rings. Physica E: Low-Dimensional Systems and Nanostructures, 2011, 43, 1669-1676.	2.7	17
93	Disappearance of quantum chaos in coupled chaotic quantum dots. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 620-623.	2.1	4
94	Electron position: jumping in double concentric quantum rings. Materials Research Society Symposia Proceedings, 2011, 1370, 137.	0.1	0
95	Electronic and level statistics properties of Si/SiO2 quantum dots. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 1979-1983.	2.7	13
96	Faddeev calculations for the \$\hat{b}\$9Be spectrum. EPJ Web of Conferences, 2010, 3, 07004.	0.3	2
97	LIGHT PROPAGATING IN METAL SUB-WAVELENGTH-HOLE ARRAYS. Nano, 2010, 05, 295-300.  Measurements of the Electric Form Factor of the Neutron up to mml:math	1.0	1
98	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"> <mml:msup><mml:mi>Q</mml:mi>&lt;<mml:mn>2</mml:mn></mml:msup> <mml:mo>=</mml:mo> the Reaction <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:msup><mml:mn></mml:mn><mml:mn>3</mml:mn></mml:msup><mml:msup><mml:mover <="" accent="true." td=""><td><mml:mn 7.8</mml:mn </td><td>&gt;3.4</td></mml:mover></mml:msup></mml:msup></mml:math>	<mml:mn 7.8</mml:mn 	>3.4
99	Physical Review Letters, 2010, 105, 262302.  A WAVELENGTH CONVERSION BASED ON CROSS-GAIN MODULATION OF A SEMICONDUCTOR OPTICAL AMPLIFIER FIBER RING LOOP. Journal of Nonlinear Optical Physics and Materials, 2009, 18, 309-318.	1.8	1
100	InGaAs/GaAs quantum dots within an effective approach. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 1358-1363.	2.7	12
101	Spectroscopy of the $\hat{I}_{P}$ 7 He nucleus in a three-cluster model. Physics of Atomic Nuclei, 2009, 72, 580-587.	0.4	2
102	Effective approach for strained InAs/GaAs quantum structures. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 715-723.	2.7	4
103	QUBIT ENTANGLEMENT FROM A BIPARTITE ATOMIC SYSTEM UNDER STRONG ATOM-VACUUM-FIELD COUPLING IN A CARBON NANOTUBE. , 2007, , .		0
104	Compton-Scattering Cross Section on the Proton at High Momentum Transfer. Physical Review Letters, 2007, 98, 152001.	7.8	41
105	Numerical modeling of experimentally fabricated InAs/GaAs quantum rings. Molecular Simulation, 2007, 33, 589-592.	2.0	2
106	Evolution of nanoparticles in gold-implanted glass. Vacuum, 2007, 82, 130-133.	3.5	3
107	Atomic entanglement in carbon nanotubes. Materials Science and Engineering C, 2007, 27, 1117-1120.	7.3	O
108	A study of neutron-deuteron scattering in configuration space. Nuclear Physics A, 2007, 790, 699c-702c.	1.5	0

#	Article	IF	Citations
109	Low-lying resonances of 9 $\hat{p}$ Be: Faddeev calculation with Pad $\hat{A}$ ©-approximants. Nuclear Physics A, 2007, 790, 695c-698c.	1.5	2
110	Two-jet inclusive cross-sections in heavy-ion collisions in the perturbative QCD. Nuclear Physics A, 2007, 784, 407-425.	1.5	0
111	Optical absorption by atomically doped carbon nanotubes under strong atom–field coupling. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 105-108.	2.7	O
112	Modeling oflnAsâ^•GaAsquantum ring capacitance spectroscopy in the nonparabolic approximation. Physical Review B, 2006, 73, .	3.2	32
113	Single-electron levels of InAs/GaAs quantum dot: Comparison with capacitance spectroscopy. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 31, 99-102.	2.7	9
114	Electron spectral properties of the InAs/GaAs quantum ring. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 33, 349-354.	2.7	35
115	Non-parabolic model for InAs/GaAs quantum dot capacitance spectroscopy. Solid State Communications, 2006, 140, 483-486.	1.9	9
116	Indium phosphide nanocrystals formed in silica by sequential ion implantation. Surface and Coatings Technology, 2005, 196, 123-129.	4.8	1
117	The origin of photon absorption below and above surface plasmon resonance of gold colloids confined in dielectric media. Surface and Coatings Technology, 2005, 196, 89-95.	4.8	3
118	Production of silicon quantum dots for photovoltaic applications by picosecond pulsed laser ablation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 116, 273-277.	3.5	24
119	0+states of the 12C nucleus: the Faddeev calculation in configuration space. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, 1207-1224.	3.6	19
120	A new prediction for the binding energy of the $7\hat{b}$ He hypernucleus. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, 389-400.	3.6	9
121	Electron states of semiconductor quantum ring with geometry and size variations. Molecular Simulation, 2005, 31, 779-785.	2.0	14
122	Cluster calculation for9ÂBe hypernucleus. Journal of Physics G: Nuclear and Particle Physics, 2004, 30, 513-518.	3.6	13
123	Generalization of the Numerov method for solution ofNdbreakup problem in configuration space. Physical Review C, 2004, 69, .	2.9	24
124	Measurement of the Generalized Polarizabilities of the Proton in Virtual Compton Scattering atQ2=0.92and1.76  GeV2. Physical Review Letters, 2004, 93, 122001.	7.8	33
125	Energy dependent effective mass model of InAs/GaAs quantum ring. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 1121-1130.	2.0	31
126	Nucleon-Deuteron Breakup Scattering in Configuration Space. Few-Body Systems, 2003, -1, 1-1.	1.5	0

#	Article	IF	CITATIONS
127	The 4He tetramer ground state in the Faddeev-Yakubovsky differential equations formalism. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 501-508.	1.5	12
128	Micro Raman Spectroscopy of Silicon Nanocrystals Produced by Picosecond Pulsed Laser Ablation. Materials Research Society Symposia Proceedings, 2002, 738, 1221.	0.1	0
129	CW Argon-ion Laser Crystallization of a-Si:H Thin Films. Materials Research Society Symposia Proceedings, 2001, 664, 691.	0.1	2
130	Quantitative analysis of a-Silâ^'xCx:H thin films by vibrational spectroscopy and nuclear methods. Vacuum, 2001, 61, 303-308.	3.5	18
131	Precision Measurement of the Spin-Dependent Asymmetry in the Threshold Region of3Hâ†'e(eâ†',e′). Physical Review Letters, 2001, 87, 242501.	7.8	22
132	Dynamics of the16O(e,e′p)Reaction at High Missing Energies. Physical Review Letters, 2001, 86, 5670-5674.	7.8	18
133	Dynamical Relativistic Effects in Quasielastic1p-Shell Proton Knockout fromO16. Physical Review Letters, 2000, 84, 3265-3269.	7.8	66
134	Transverse AsymmetryAT′from the Quasielastic3He→(e→,e′)Process and the Neutron Magnetic Form Fact Physical Review Letters, 2000, 85, 2900-2904.	<sup>or</sup> 7.8	144
135	GEp/GMpRatio by Polarization Transfer ine→p→ep→. Physical Review Letters, 2000, 84, 1398-1402.	7.8	665
136	Fabrication and testing of a microstrip particle detector based on highly oriented diamond films. Diamond and Related Materials, 2000, 9, 1008-1012.	3.9	15
137	Measurement of the neutral weak form factors of the proton. Physical Review Letters, 1999, 82, 1096-1100.	7.8	123
138	Measurements of the Deuteron Elastic Structure FunctionA(Q2)for0.7â%Q2â%6.0(GeV/c)2at Jefferson Laboratory. Physical Review Letters, 1999, 82, 1374-1378.	7.8	90
139	Implications of the space-star anomaly in nd breakup. Nuclear Physics A, 1998, 631, 692-696.	1.5	10
140	Analyzing power measurements for the dâ†'+dâ†'d+p+n breakup reaction at 12 MeV. Physical Review C, 1997, 56, 38-49.	2.9	2
141	Is there evidence for charge symmetry breaking in the states?. Journal of Physics G: Nuclear and Particle Physics, 1996, 22, L65-L70.	3.6	3
142	Effect of Coulomb interaction in quasifree scattering and quasifree reactions in three body breakup processes. Physical Review C, 1994, 49, 2643-2649.	2.9	0
143	Some electrical and photovoltaic properties of poly-Si/SnO2 heterojunction. Vacuum, 1990, 40, 209-211.	3.5	4
144	Interpolation Methods Applied on Biomolecules and Condensed Matter Brownian Motion. Journal of Circuits, Systems and Computers, 0, , .	1.5	2