

Relativity and Gravity Publication List (Sept. 25, 2023)

Book: R. J. Buenker, **Relativity Contradictions Unveiled: Kinematics, Gravity and Light Refraction**, 550 Ed. C. Roy Keys (Apeiron, Montreal, 2014), pp. 1-232.

Book: R. J. Buenker, **New Synthesis of Elementary Particle Physics: A Theory of Elemental Balance in Physical Transformations**, 1st Edition, 571 (Univ.-Wuppertal Library, Wuppertal, **Item 23**, 2015), pp. 1-304.

Book: R. J. Buenker, **Relativity Theory Based on the Uniform Scaling of Physical Properties**, 1st Edition, 655 (Univ.-Wuppertal Library, Wuppertal, 2022), pp. 1-234.

Book: R. J. Buenker, **New Synthesis of Elementary Particle Physics: A Theory of Elemental Balance in Physical Transformations**, 2nd Edition, 663 (Univ.-Wuppertal Library, Wuppertal, 2023), pp. 1-305.

- 1 R.J. Buenker, **Extension of Schiff's gravitational scaling method to compute the precession of the perihelion of Mercury**, 490 *Apeiron* 15, 509-532 (2008), accepted on 03.08.2008. *First version: 30.04.2003; last update: 09.03.2008.*
- 2 R.J. Buenker, **Huygens' Principle and computation of the light trajectory responsible for the gravitational displacement of star images**, 482 *Apeiron* 15, 338-357 (2008), accepted on 06.05.2008. *First version: 12.06.2003; last update: 17.02.2008.*
- 3 R.J. Buenker, **Time dilation and the concept of an objective rest system**, 511 *Apeiron* 17, 99-125 (2010), accepted on 07.01.2010. *First version: 10.11.2003; last update: 14.01.2009.*
- 4 R.J. Buenker, **The Lorentz transformation and the transverse Doppler effect**, 595 *ITS App. Phys.* 2, 6-14 (2019). *First version: 21.11.2003.*
- 5 R. J. Buenker, **Wavelength measurements on Galileo's ship**, held in reserve. *First version: 06.07.2004; last update: 06.08.2005.*
- 6 R. J. Buenker, **The relativity principle and the kinetic scaling of the units of energy, time and length**, 577 *Apeiron* 20 (4), 1-31 (2018). *First version: 02.08.2004.*
- 7 R. J. Buenker, **Gravitational and kinetic scaling of physical units**, 489 *Apeiron* 15, 382-413 (2008), accepted on 03.08.2008. *First version: 25.08.2004; last update: 04.04.2008.*
- 8 R. J. Buenker, **Fitzgerald-Lorentz contraction and the isotropic propagation of light in free space**, held in reserve. *First version: 23.09.2004; last update: 03.02.2006.*

- 9 R. J. Buenker, **The triplet paradox and the global positioning system-lorentz transformation**, 596 *Int. J. App. Res.* **6(6)**, 161-167 (2020). *First version: 30.04.2005; last update: 28.11.2011.*
- 10 R. J. Buenker, **Comment on “Einstein’s Theorie auf dem optischem Prüfstand,”** held in reserve. *First version: 30.05.2005; last update: 24.06.2005.*
- 11 R. J. Buenker, **Deduction of relativistic length variations based on tests using a cryogenic optical resonator**, 597 *Internat. J. Nanomaterials, Nanotech. and Nanomed.* **6(2)**, 16-20 (2020). *First version: 25.08.2005.*
- 12 R. J. Buenker, **The space-time variables in the Lorentz transformation: who carries out the measurements in relativity theory?,** held in reserve. *First version: 24.11.2005; last update: 08.12.2005.*
- 13 R. J. Buenker, **On the asymmetry in relativistic Doppler shifts caused by time dilation: proposed two-way experiment**, 500 *Apeiron* **16**, 203-224 (2009), accepted on 31.03.2009. *First version: 22.12.2005.*
- 14 R. J. Buenker, **Use of an objective rest system to determine energy and momentum relationships for observers in relative motion**, 578 *J. Sci. Discov.* **4 (1)**, 1-8 (2020). *First version: 30.1 .2005; last update: 27.01.2016.*
- 15 R. J. Buenker, **The transverse Doppler effect and the relativity principle: experimental test of length contraction**, 598 *J. Sci. Discov.* **4 (2)**, 1-10 (2020). *First version: 17.04.2006.*
- 16 R. J. Buenker, **Relativity theory and the principle of the rationality of measurement**, 599 *Int. J. App. Math. & Stat. Sci.* **10 (1)**, 1-12 (2021). *First version: 14.03.2006.*
- 17 R. J. Buenker, **Simultaneity, time dilation and the Lorentz transformation**, 600 *Int. J. App. Math. & Stat. Sci.* **10 (1)**, 1-12 (2021). *First version: 23.05.2006.*
- 18 R. J. Buenker, **The role of acceleration in the relativistic theory of electromagnetism**, held in reserve.. *First version: 19.08.2006.*
- 19 R. J. Buenker, **Mass dilation and the Lewis-Tolman conjecture**, 594 *Int. J. App. Res.* **6(12)**, 141-145 (2020). *First version: 30.08.2006.*
- 20 R. J. Buenker, **The kinetic and gravitational scaling of the units of electricity and magnetism**, 601 *East Africa Scholars J. Eng. Comput. Sci.* **3 (6)**, 103-109 (2020). *First version: 28.09.2006.*
- 21 R. J. Buenker, **Logical principles and the special theory of relativity**, held in reserve. *First version: 24.11.2006.*

- 22 R. J. Buenker, **Simultaneity and the constancy of the speed of light: Normalization of space-time vectors in the Lorentz transformation**, 492 *Apeiron* **16**, 96-146 (2009), accepted for publication on 30.11.2008. *First version: 26.05.2007; last update: 05.22.2008.*
- 23 R. J. Buenker, **Kinetic energy and the relativistic symmetry principle**, 602 *Int. J. App. Math. & Stat, Sci.* **9 (3)**, 5-14 (2020). *First version: 05.07.2007.*
- 24 R. J. Buenker, 567 **The relativistic velocity transformation and the principle of simultaneity**, *Apeiron* **20(2)**, 84-102 (2015).
- 25 R. J. Buenker, **Hamiltonian matrix representations for the determination of approximate wave functions for molecular resonances**, 606 *J. App. Fundamental Sci.* **5 (1)**, 6-17 (2019).. *First version: 02.27.2008.*
- 26 R. J. Buenker, 481 **The global positioning system and the Lorentz transformation**, *Apeiron* **15**, 254-269 (2008), accepted on 11.04.2008. *First version: 23.12.20.*
- 27 R. J. Buenker, Y. Li, H.-P. Liebermann and M. Honigmann, **Use of Gauss-Hermite quadrature to approximate the asymptotic behavior of vibronic resonance wave functions**, 518 *Khim. Fys.* **30 (11)**, 32-39 (2011), accepted on 10.03.2011. *First version: 18.09.2008.*
- 28 R. J. Buenker, **The sign of the Doppler shift in ultracentrifuge experiments**, 534 *Apeiron* **19**, 218-237 (2012), accepted on 01.03.2012. *First version: 28.11.2009.*
- 29 R. J. Buenker, **Reconciling Einstein's postulates with the objectivity of measurement: the reciprocal Lorentz transformation**, 579 *Int. J. App. Res.* **6(5)**, 220-225 (2020). *First version: 24.12.2009.*
- 30 R. J. Buenker, **Complex coordinate scaling and the Schrödinger equation**, 543 *Khim. Fys.* **33 (2)**, 1-8 (2014), accepted on 15.01.2013. *First version: 15.01.2010.*
- 31 R. J. Buenker, 586 **The universal time dilation law: objective variant of the Lorentz transformation**, *BAOJ Physics*, **3:23**, 1-6 (2017). *First version: 21.01.2011.*
- 32 R. J. Buenker, **On the relationship between relativistic length variations and time dilation**, 604 *East Africa Scholars J. Eng. Comput. Sci.* **3 (4)**, 51-53 (2020). *First version: 15.03.2011.*
- 33 R. J. Buenker, **AMENDED THEORY Contradiction between Fitz-Gerald-Lorentz length contraction and time dilation: A GPS-compatible Lorentz transformation**, 574 *J. Biosensors & Bioelectronics* **7**, 1-4 (2016). *First version: 21.03.2011.*

- 34 R. J. Buenker, **Changes in the relativistic theory of electromagnetism prescribed by experience with the global positioning system**, 603 *Int. J. App. Res.* **7(1)**, 188-193 (2021).. *First version: 31.03.2011.*
- 35 R. J. Buenker, **Five proofs of isotropic length expansion accompanying relativistic time dilation**, 566 *Open Sci. J. Mod. Phys.* **2 (6)**, 122-129 (2015), *First version: 18.05.2011.*
- 36 R. J. Buenker, **On the equality of relative velocities between two objects for observers in different rest frames**, 554 *Apeiron* **20**,73-83 (2016). *First version: 23.05.2011. Second version: 23.04.2015.*
- 37 R. J. Buenker, **The clock riddle, Einstein's third postulate and faster-than-c neutrino speeds**, 605 *J. Phys. & Optics Sciences* **2 (1)**, 1-6 (2020). *First Version: 09.07.2011; last update; 14.10.2011.*
- 38 R. J. Buenker, **Reevaluating Newton's theory of light**, 565 *Open Sci. J. Mod. Phys.* **2 (6)**, 103-110 (2015). *First Version: 10.08.2011.*
- 39 R. J. Buenker, **The equivalence principle and uniform coordinate scaling**, 561 *Open Sci. J. Mod. Phys.* **2**, 32-41 (2015). *First Version: 12.10.2011. Second Version: 15.03.2015.*
- 40 R. J. Buenker, **Faster-than-c neutrinos and the alternate Lorentz transformation**, 607 *ITS App. Phys.* **3 (4)**, 24-35 (2020). *First Version: 13.11.2011.*
- 41 R. J. Buenker, **The clock riddle: the failure of the Lorentz transformation**, 528 *Apeiron* **19**, 84-95 (2012), accepted on 04.01.2012. *First Version: 22.11.2011.*
- 42 R. J. Buenker, **Expressing the units of electricity and magnetism directly in the mks system**, 544 *J. Found. and Applic. Phys.* **2**, 11-16 (2015). *First Version: 12.09.2011.*
- 43 R. J. Buenker, **Einstein's hidden postulate**, 536 *Apeiron* **19**, 282-301 (2012). *First Version: 25.02.2012.*
- 44 R. J. Buenker, **Degree of freedom in the Lorentz transformation**, 548 *Physics Essays* **26 (4)**, 494-497 (2013). *First Version: 31.03.2012.*
- 45 R. J. Buenker, G. Golubkov, M. Golubkov, I. Karpov and M. Manzheliy, **Relativity laws for the variation of rates of clocks moving in free space and GPS positioning errors caused by space-weather events**, 541 *ISBN 980-307-843-9; InTech-China*, pp. 1-48, 2013. *First Version: 25.08.2012.*
- 46 R. J. Buenker, **The giant twin's travels**, 552 *Galilean Electrodynamics* **27**, 50-53 (2016). *First Version: 23.09.2012.*

- 47 R. J. Buenker, **Fresnel light-drag formula, Einstein's dual theories of time dilation and the amended Lorentz transformation**, 556 *Open Science J. Mod. Phys.* **2** (1), 1-9 (2015). *First Version: 12.10.2012.*
- 48 R. J. Buenker, **The myth of FitzGerald-Lorentz length contraction and the reality of Einstein's velocity transformation**, 545 *Apeiron* **20** (1), 27-52 (2013). *First Version: 28.10.2012.*
- 49 R. J. Buenker, **Lorentz invariance and the Global Positioning System**, 555 *Recent Progress in Space Technology* **4** (2), 89-98 (2015). *First Version: 03.01.2013.*
- 50 R. J. Buenker, **Application of relativity theory to the Global Positioning System**, 553 *Phys. Essays* **27** (2), 253-258 (2014). *First Version: 02.10.2013.*
- 51 R. J. Buenker, **Asymmetric time dilation and the velocity transformation: Einstein's dual versions of relativity**, 563 *Open Sci. J. Mod. Phys.* **2** (4), 42-49 (2015). *First version: 16.11.2013.*
- 52 R. J. Buenker, **Brief history of Einstein's flawed version of relativity theory: How Phipps and Buenker fixed it over a century late.** held in reserve. *Univ.-Wuppertal Library, Item 21*, 1-18 (2017). *First version: 23.10.2013.*
- 53 R. J. Buenker, **Contradictions in Einstein's special relativity theory: Amending the Lorentz transformation**, 559 *Open Science J. Mod. Phys.* **2** (1), 14-18 (2015). *First Version: 04.03.2014. Second Version: 28.01.2015.*
- 54 R. J. Buenker, **Proof of internal contradictions in the Lorentz transformation: The end of space-time mixing**, 560 *Galilean Electrodynamics* **28**,63-73 (2017). *First Version: 10.11.2014. Second Version: 17.01.2015.*
- 55 R. J. Buenker, **The role of simultaneity in the methodology of the Global Positioning Navigation System**, 569 *J. App. Fundamental Sci.* **1** (2), 150-156 (2015). *First version: 09.12.2014.*
- 56 R. J. Buenker, **GPS-compatible Lorentz transformation that satisfies the Relativity Principle**, 564 *J. Astrophys.Aerospace Technol.* **3**, 115, 1-6 (2015). *First version: 18.01.2015.*
- 57 R. J. Buenker, **Newton's law of inertia and clock-rate proportionality: Einstein's historic mistake**, 580 *BAOJ Physics* **31: 1**, 1-10 (2018). *First version: 09.03.2015.*
- 58 R. J. Buenker, **Maxwell's equations, the Relativity Principle and the objectivity of measurement**, 581 *J. App. Fundamental Sci.* **5** (2), 58-65 (2019). *First version: 21.04.2015.*

- 59 R. J. Buenker, **Relativistic scaling of physical properties: Reciprocal relationship between conversion factors**, 582 *Int. J. App. Math. & Stat. Sci.* **9 (3)**, 15-30 (2020). *First version: 21.11.2015.*
- 60 R. J. Buenker, **The lack of internal consistency of the Lorentz transformation and its consequences for the concept of space-time mixing**, 573 *J. App. Fundamental Sci.* **2 (1)**, 1-6 (2016). *First version: 21.12.2015.*
- 61 Y.-G. Peng, Y. Wu, L.-F. Zhu, S. B. Zhang, J. Wang, H.-P. Liebermann and R. J. Buenker, **Complex multireference configuration interaction calculations for the K-vacancy Auger states of N^{q+} ($q=2-5$)**, 570 *J. Chem. Phys.* **144**, 054306, 1-9 (2016); doi: 10.1063/1.4940733.
- 62 R. J. Buenker, **Time dilation and lightning flashes on a train**, 583 *Internat. J. Applied Res.* **6(9)** 103-106 (2020). *First Version: 20.01.2016.*
- 63 R. J. Buenker, **Hafele-Keating atomic clock experiment and the Universal Time-dilation Law**, 584 *J. App. Fundamental Sci.* **4 (2)**, 94-98 (2018). *First Version: 25.03.2016.*
- 64 R. J. Buenker, **Voigt's conjecture of space-time mixing: Contradiction between non-simultaneity and the proportionality of time dilation**, 585 *BAOJ Physics* **2:27**, 1-9 (2017). *First Version: 20.08.2016.*
- 65 R. J. Buenker, **Commentary on the work of Thomas E. Phipps, Jr. (1925-2016)**, 576 *Apeiron* **20**, 9-41 (2017). *First Version: 25.01.2017.*
- 66 R. J. Buenker, **The clock puzzle and the incompatibility of proportional time dilation and remote non-simultaneity**, 587 *J. App. Fundamental Sci.* **4 (1)**, 6-18 (2018).
- 67 R. J. Buenker, **Uniform scaling of physical units and the principle of rationality of units**, 588 *J. Phys. & Optics Sciences* **3 (3)**, 1-6 (2021).
- 68 R. J. Buenker, **Derivations of time dilation using two different Lorentz-type transformations**, 589 *J. Phys. & Optics Sciences* **3 (1)**, 1-3 (2021).
- 69 R. J. Buenker, **The myth of remote non-simultaneity: Newton was right and Einstein was wrong**, 590 *J. Sci. Discov.* **3(1)**, 1-3 (2019).
- 70 R. J. Buenker, **The spacetime myth: Failure of the Lorentz transformation**, 591 *Adv. Theor. & Comp. Physics* **1(2)**, 1-4 (2018).
- 71 R. J. Buenker, **Relativity documentary outline - Title (tentative): Einstein's relativity theory overturned by elementary algebra**, 612 *Univ.-Wuppertal Library, Item* **31**, 1-9 (2018). *First Version: 04.12.2017.*

- 72 R. J. Buenker, **Comparison of proportional time dilation and remote non-simultaneity: Proof that the Lorentz transformation is self-contradictory**, 593 *Hadronic Press* **43**, 121-133 (2020).
- 73 R. J. Buenker, **Relativity theory based directly on the velocity transformation**, 608 *J. Sci. Discov.* **4(1)**, 1-6 (2019).
- 74 R. J. Buenker, **The Newton-Voigt relativistic space-time transformation**, 609 *East Africa Scholars J. Eng. Comput. Sci.* **4 (3)**, 27-36 (2021).
- 75 R.J. Buenker, **Stellar aberration and light-speed constancy**, 610 *J. Sci. Discov.* **3(2)**, 1-15 (2019).
- 76 R.J. Buenker, **The Newton-Voigt space-time transformation**, 613 *J. Sci. Discov.* **3(2)**, 1-8 (2019).
- 77 R.J. Buenker, **Critique of Einstein's light-speed postulate**, 614 *Internat. J.Applied Res.* **7(4)**, 402-409 (2021).
- 78 R.J. Buenker, **Hamilton's canonical equations and Einstein's $E=mc^2$ relation**, 615 *Internat. J.Applied Res.* **7(3)**, 346-351 (2021).
- 79 R. J. Buenker, **Critique of the treatment of Einstein's special theory of relativity in Isaacson's Biography¹** 618 *J. App. Fundamental Sci.* **6 (1)**, 27-34 (2020).
- 80 R. J. Buenker, **Frequency variations, the speed of sound and the gravitational redshift** , 619 *J. App. Fundamental Sci.* **6 (2)**, 79-88 (2020).
- 81 R. J. Buenker, **Big Bang theory based on Hubble's Constant** 620 *J. Phys. & Optics Sciences* **3 (2)**, 1-4 (2021).
- 82 R. J. Buenker, **The uniform scaling method for simplified accurate computation of the key tests of General Relativity** 622 *ITS App. Phys.* **4 (2)**, 1-17 (2021).
- 83 R. J. Buenker, **Production of photons in positronium decay: Critique of the creation-annihilation hypothesis: Part I** 624 *ITS Applied Physics*, **4(1)**, 11-34 (2021) ISSN: 2664-0821, DOI: <https://doi.org/10.31058/j.ap.2021.41002>.
- 84 R. J. Buenker, **Open Letter to physics departments criticizing their teaching of relativity theory** 625 *Univ.-Wuppertal Library, Item 62*, 1 (2020).
- 85 R. J. Buenker, **Letter to the Editor of Scientific American** 626 *Univ.-Wuppertal Library, Item 63*, 1-4 (2020).
- 86 R. J. Buenker, **Production of photons in positronium decay: Critique of the creation-annihilation hypothesis: Part II** 627 *ITS Applied Physics*, **4(1)**, 35-69 (2021) ISSN: 2664-0821, DOI: <https://doi.org/10.31058/j.ap.2021.41002>.

- 87 R. J. Buenker, **The failure of mainstream journals and documentaries to eradicate the myth of remote non-simultaneity: Newton was right and Einstein was wrong** 628 *J. Sci. Disc.* **5(1)**,1-8 (2021).
- 88 R. J. Buenker, **The theoretical explanation for the sound barrier and its relation to light refraction**, 630 *International Journal of Applied Research* **7(5)**: 86-90 (2021).
- 89 R. J. Buenker, **The new relativity theory: Absolute simultaneity, modified light speed constancy postulate, uniform scaling of physical properties.** 629 *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS) ISSN (P): 2319–3972; ISSN (E): 2319-3980* **10 (2)**, 151-162 (2021).
- 90 R. J. Buenker, **Rebuttal of Fermi’s denial of nuclear electrons: Part I: Historical background**, 631 *Internat. J.Applied Res.* **7(5)**, 181-192 (2021).
- 91 R. J. Buenker, **Rebuttal of Fermi’s denial of nuclear electrons: Part II: Adapting the XBPS method to the description of the neutron’s internal structure.** 632 *Internat. J.Applied Res.* **7(5)**, 403-414 (2021).
- 92 R. J. Buenker, **Rebuttal of Fermi’s denial of nuclear electrons: Part III: XBPS Calculations of the Neutron’s Internal Structure**, 633 *Internat. J.Applied Res.* **7(5)**, 314- 322 (2021).
- 93 R. J. Buenker, **Electroweak analogue of the Stern-Gerlach Effect: Parity conservation restored?**, 634 *ITS Applied Physics*, **5(1)**, 1-17 (2022) ISSN: 2664-0821.
- 94 R. J. Buenker, **The binding energy of the deuteron in the exponentially damped Breit-Pauli-Schrödinger (XBPS) Model**, 635 *Internat. J.Applied Res.* **7(7)**,133-142 (2021).
- 95 R. J. Buenker, **The fate of solar neutrinos,,** 636 *East African Scholars J. Eng.Comp. Sci.* **5 (1)**, 1-3 (2022).
- 96 R. J. Buenker, **The spin-flip mechanism for neutron decay and its relation to the Nuclear Shell model**, 638 *Internat. J.Applied Res.* **7(11)**, 8-16 (2021).
- 97 R. J. Buenker, **The structure and properties of muons and pions in the exponentially damped Breit-Pauli-Schrödinger (XBPS) Model**, 639 *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS) ISSN (P): 2319–3972; ISSN (E): 2319–3980* **10 (2)**, 39–64 (2021).

- 98 R. J. Buenker, **Description of virtual photons and pion clouds in the XBPS Model of elementary particles**, 640 *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS)* ISSN (P): 2319–3972; ISSN (E): 2319–3980, **10 (2)**, 95–120 (2021).
- 99 R. J. Buenker, **Clock-rate Corollary to Newton’s Law of Inertia**, 641 *East Africa Scholars J. Eng. Comput. Sci.* **4 (10)**, 138-142 (2021).
- 100 R. J. Buenker, **Uniform scaling: Relativistic energy-momentum relationships**, 643 *J. Phys. & Optics Sciences* **3 (4)**, 1-5 (2021).
- 101 R. J. Buenker, **Inertial Clocks and Remote Non-Simultaneity**, 644 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 78**, 1-15 (2021).
- 102 R. J. Buenker, **Newton’s Theory of Light and Wave-particle Duality**, 645 *East Africa Scholars J. Eng. Comput. Sci.* **5 (2)**, 21-31 (2022).
- 103 R. J. Buenker, **Inclusion of Breit-Pauli Short-range Interactions in the Quantum Mechanical Theory of Sub-atomic Systems**, 646 *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS)*, ISSN (P): 2319–3972; ISSN (E): 2319–3980 **11 (1)**, 11-24 (2022).
- 104 R. J. Buenker, **Dissecting Einstein’s Lightning-Strike Example: Proof That His Light-speed Constancy Postulate Is Untenable**, 647 *East Africa Scholars J. Eng. Comput. Sci.* **5 (7)**, 85-91 (2022).
- 105 R. J. Buenker, **The Galilean Velocity Transformation and Newtonian Simultaneity**, 648 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 82**, 1-20 (2022).
- 106 R. J. Buenker, **Mass-Energy Equivalence Relation**, 649 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 83**, 1-14 (2022).
- 107 R. J. Buenker, **Newtonian Particle Theory of Light**, 650 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 84**, 1-31 (2022).
- 108 R. J. Buenker, **Simplified Computation of the Key Tests of General Relativity**, 651 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 85**, 1-45 (2022).
- 109 R. J. Buenker, **Proof That Einstein’s Light Speed Postulate Is Untenable**, 652 *East Africa Scholars J. Eng. Comput. Sci.* **5 (4)**, 51-52 (2022).
- 110 R. J. Buenker, **Proof That the Lorentz Transformation Is Incompatible with the**

- Law of Causality**, 653 *East Africa Scholars J. Eng. Comput. Sci.* **5 (4)**, 53-54 (2022).
- 111 R. J. Buenker, **Debunking the Lorentz Transformation and replacing it with the Newton-Voigt transformation**, 656 *Amer. J. Planetary Sci. and Space Sci.* **1 (1)**, 1-5 (2022)
- 112 R. J. Buenker, **Compelling evidence that light travels in a perfectly straight line as it passes through a gravitational field**, 657 *Amer. J. Planetary Sci. and Space Sci.* **1 (1)**, 1-8 (2022).
- 113 R. J. Buenker, **Experimental Refutation of Einstein's Symmetry Principle** 658 *East Africa Scholars J. Eng. Comput. Sci.* **6 (1)**, 1-8 (2023).
- 114 R. J. Buenker, **Pound's Falling Light Experiment and Einstein's Elevator** 659 *J. Phys.& Optics Sciences* **5 (2)**, 1-4 (2023).
- 115 R. J. Buenker, **The Failure of Both Einstein's Space-time Theory and His Equivalence Principle and Their Resolution by the Uniform Scaling Method** 660 *East Africa Scholars J. Eng. Comput. Sci.* **6 (2)**, 1-10 (2023).
- 116 R. J. Buenker, **A Revised Light-speed Postulate and the Applicability of the Galilean Velocity Transformation in Relativity Theory** 661 *Internat. J. Applied Res.* **9(4)**,34-37 (2023).
- 117 R. J. Buenker, **History of the Lorentz Transformation and Its Failure to Obey the Law of Causality** 662 *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS)*, ISSN (P): 2319–3972; ISSN (E): 2319- 3980 **12 (1)**, 9-18 (2023).
- 118 R. J. Buenker, **Comparison of the Falling Light Experiment and the Ultracentrifuge Gamma Radiation Study** 664 *J. Phys.& Optics Sciences* **5 (2)**, 1-5 (2023).
- 119 R. J. Buenker, **The Many Flaws of the Lorentz Transformation** 666 *East Africa Scholars J. Eng. Comput. Sci.* **6 (2)**,(2023).
- 120 R. J. Buenker, **Incompatibility of FitzGerald-Lorentz Contraction and Time Dilation** 667 *East Africa Scholars J. Eng. Comput. Sci.* **6 (4)**, 48-49 (2023).
- 121 R. J. Buenker, **Hubble's Constant: The Clock of the Universe** 668 *J. Phys.& Optics Sciences* **5 (4)**, 1-4 (2023).
- 122 R. J. Buenker, **The Necessity for Fair Evaluation of Objective Criticism of Physical Theories** 669 *Adv. Theor. & Comp. Phy* **6(3)**, 215-217 (2023).
- 272 R.J. Buenker, **Evidence from the special relativity and blackbody radiation theories for the existence of photons possessing zero kinetic energy**, *Mol. Phys.* **76**, 277-291 (1992); see also <http://arxiv.org, physics/0501054>.

- 279 R.J. Buenker, **Exponentially damped Breit-Pauli Hamiltonian for the description of positronium decay and other high-energy processes**, *Mol. Phys.* **77**, 1095-1122 (1992); see also <http://arxiv.org>, physics/0504070.
- 377 J.M. Brown, R.J. Buenker, A. Carrington, C. diLauro, R.N. Dixon, R.W. Field, J.T.Hougen, W. Hüttner, K. Kuchitsu, A.J. Merer, T.A. Miller, M. Quack, D.A. Ramsay, A.J. Stone, L. Veseth, R.N. Zare, **Remarks on the signs of g-factors in atomic and molecular Zeeman spectroscopy**, *Mol. Phys.* **98**, 1597-1601 (2000).
- 405 R.J. Buenker, **Dynamical aspects of longitudinal polarization measurements for weak decay processes: suggestion for an experimental test of the two-component theory of the neutrino**, *Russ. J. Phys. Chem.* **76**, Supplement 1, 144-156 (2002).
- 408 R.J. Buenker, **Use of Hamilton's canonical equations to modify Newton's corpuscular theory of light: A missed opportunity**, *Khim. Fyz.* **22** (10), 124-128 (2003); see also <http://arxiv.org>, physics/0411110.
- 409 R.J. Buenker and P.L. Muiño, **Quantum mechanical relations for the energy, momentum and velocity of single photons in dispersive media**, *Khim. Fyz.* **23** (2), 111-116 (2004); see also <http://arxiv.org>, physics/0607094.
- 410 P.L. Muiño, A.M. Thompson and R.J. Buenker, **Use of time-correlated single photon counting detection to measure the speed of light in water**, *Khim. Fyz.* **23** (2), 117-128 (2004); see also <http://arxiv.org>, physics/0502100.
- 421 R.J. Buenker, **The Lorentz transformation sign ambiguity and its relation to measured faster-than-c photon speeds**, *Khim. Fyz.* **23** (7), 80-82 (2004); see also <http://arxiv.org>, physics/0411109.
- 437 R.J. Buenker, **Comparison of the phenomena of light refraction and gravitational bending**, *Khim. Fys.* **24** (4), 29-35 (2005); see also <http://arxiv.org>, 0904.3232.
- 438 R.J. Buenker, **The Lorentz Transformation for photons in dispersive media**, *Khim. Fys.* **24** (9), 19-24 (2005); see also <http://arxiv.org>, physics/0606172.
- 481 R. J. Buenker, **The global positioning system and the Lorentz transformation**, **26** *Apeiron* **15**, 254-269 (2008).
- 482 R. J. Buenker, **Huygens' principle and computation of the light trajectory responsible for the gravitational displacement of star images**, **2** *Apeiron* **15**, 338-357 (2008).
- 489 R. J. Buenker, **Gravitational and kinetic scaling of physical units**, **7** *Apeiron* **15**, 382-413 (2008).
- 490 R. J. Buenker, **Extension of Schiff's gravitational scaling method to compute the precession of the perihelion of Mercury**, **1** *Apeiron* **15**, 509-532 (2008).

- 492 R. J. Buenker, **Simultaneity and the constancy of the speed of light: Normalization of space-time vectors in the Lorentz transformation**, *22 Apeiron* **16**, 96-146 (2009).
- 500 R.J. Buenker, **On the asymmetry in relativistic Doppler shifts caused by time dilation: proposed two-way experiment**, *13 Apeiron* **16**, 203-224 (2009).
- 511 R. J. Buenker, **Time dilation and the concept of an objective rest system**, *3 Apeiron* **17**, 99-125 (2010).
- 518 R. J. Buenker, Y. Li, H.-P. Liebermann and M. Honigmann, **Use of Gauss-Hermite quadrature to approximate the asymptotic behavior of vibronic resonance wave functions**, *27 Khim. Fys.* **30** (11), 32-39 (2011).
- 528 R. J. Buenker, **The clock riddle: the failure of the Lorentz transformation**, *41 Apeiron* **19**, 84-95 (2012).
- 534 R. J. Buenker, **The sign of the Doppler shift in ultracentrifuge experiments**, *28 Apeiron* **19**, 218-237 (2012).
- 536 R. J. Buenker, **Einstein's hidden postulate**, *43 Apeiron* **19**, 282-301 (2012).
- 541 R. J. Buenker, G. Golubkov, M. Golubkov, I. Karpov and M. Manzheliy, **Relativity laws for the variation of rates of clocks moving in free space and GPS positioning errors caused by space-weather events**, *45 ISBN 980-307-843-9; InTech-China*, pp. 1-12, 2013.
- 542 A. B. Alekseyev, H.-P. Liebermann and R. J. Buenker, **Potential energy surfaces for ground and excited electronic states of the CF₃I molecule and their relevance to its A-band photodissociation**, *Phys. Chem .Chem. Phys.* **15**, 6660 (2013); DOI: 10.1039/c3cp44237c.
- 543 R. J. Buenker, **Complex coordinate scaling and the Schrödinger equation**, *30 Khim. Fys.* **33** (2), 1-8 (2014).
- 544 R. J. Buenker, **Expressing the units of electricity and magnetism directly in the mks system**, *42 J. Foundations and Applications of Phys.* **2**, 11-16 (2015).
- 545 R. J. Buenker, **The myth of FitzGerald-Lorentz length contraction and the reality of Einstein's velocity transformation**, *48 Apeiron* **20** (1) 27-52 (2013).
- 546 L. L. Yan, L. Liu, Y. Wu, Y. Z. Qu, J. G. Wang and R. J. Buenker, **Charge transfer and association of Na⁺ with ⁸⁷Rb atoms from extreme-low to intermediate energies**, *Phys. Rev. A* **88**, 012709, 1-8 (2013).
- 547 L. L. Yan, Y. Wu, Y. Z. Qu, J. G. Wang and R. J. Buenker, **Single- and double-electron capture processes in the collisions of C⁴⁺ ions with He**, *Phys. Rev. A* **88**, 022706, 1-8 (2013).

- 548 R. J. Buenker, **Degree of freedom in the Lorentz transformation**, *44 Physics Essays* **26** (4), 494-497 (2013).
- 549 D. C. Joseph, B. C. Saha, J.-P. Gu, H.-P. Liebermann, P. Funke and R. J. Buenker, **(SiH)³⁺ quasi-molecule in the adiabatic representation**, *Adv. Quantum Chem.* **68**, 191-202 (2014).
- 550 R. J. Buenker, **Relativity Contradictions Unveiled: Kinematics, Gravity and Light Refraction**, Ed. C. Roy Keys (Apeiron, Montreal, 2014), pp. 1-232.
- 551 R. J. Buenker, R. A. Phillips, S. Krebs, H.-P. Liebermann, A. B. Alekseyev and P. Funke, **The Wuppertal multireference configuration interaction (MRD-CI) program system**, *Theor. Chem. Acc.* **133**, 1468-1479 (2014).
- 552 R. J. Buenker, **The giant twin's travels**, *46 Galilean Electrodynamics* **27**, 50-53 (2016).
- 553 R. J. Buenker, **Application of relativity theory to the Global Positioning System**, *50 Phys. Essays* **27** (2), 253-258 (2014).
- 554 R. J. Buenker, **On the equality of relative velocities between fixed points for observers in different rest frames**, *36 Apeiron* **20**, 73-83 (2016). *First version: 23.05.2011.*
- 555 R. J. Buenker, **Lorentz invariance and the Global Positioning System**, *49 Recent Progress in Space Technology* **4** (2), 89-98 (2015).
- 556 R. J. Buenker, **Fresnel light-drag formula, Einstein's dual theories of time dilation and the amended Lorentz transformation**, *47 Open Science J. Mod. Phys.* **2** (1), 1-9 (2015).
- 557 T. C. Li, Y. Z. Qu, Y. Wu, L. Liu, J. G. Wang, H.-P. Liebermann and R. J. Buenker, **Charge transfer and association of Li⁺ colliding with Na from very low to intermediate energies**, *Phys. Rev. A* **91**, 052702, 1-11 (2015).
- 558 K. D. Setzer, E. H. Fink, H.-P. Liebermann, R. J. Buenker and A. B. Alekseyev, **Experimental and theoretical study of the electronic states and spectra of BiLi**, *J. Mol. Spectrosc.* **312**, 38-45 (2015).
- 559 R. J. Buenker, **Contradictions in Einstein's Special Relativity Theory: Amending the Lorentz transformation**, *53 Open Science J. Mod. Phys.* **2** (1), 14-18 (2015).
- 560 R. J. Buenker, **Proof of internal contradictions in the Lorentz transformation: The end of space-time mixing**, *54 Galilean Electrodynamics* **28**, 63-73 (2017).
- 561 R. J. Buenker, **Relativistic theory of gravitation based solely on the uniform**

- scaling of physical properties**, 39 *Open Sci. J. Mod. Phys.* **2**, 32-41 (2015).
- 562 T. C. Li, C. H. Liu, Y. Z. Qu, L. Liu, Y. Wu, J. G. Wang, H.-P. Liebermann and R. J. Buenker, **Resonant charge transfer in slow Li⁺-Li(2s) collisions**, *Chin. Phys. B* **24** (10) 103401 1-6 (2015).
- 563 R. J. Buenker, **Asymmetric time dilation and the velocity transformation: Einstein's dual versions of relativity**, 51 *Open Sci. J. Mod. Phys.* **2** (4), 42-49 (2015).
- 564 R. J. Buenker, **GPS-compatible Lorentz transformation that satisfies the Relativity Principle**, 56 *Astrophys. & Aerospace Tech.* **3**, 115, 1-6 (2015).
- 565 R. J. Buenker, **Reevaluating Newton's theory of light**, 38 *Open Sci. J. Mod. Phys.* **2** (6), 103-110 (2015).
- 566 R. J. Buenker, **Five proofs of isotropic length expansion accompanying relativistic time dilation**, 35 *Open Sci. J. Mod. Phys.* **2** (6), 122-129 (2015).
- 567 R. J. Buenker, **The relativistic velocity transformation and the principle of absolute simultaneity**, 24 *Apeiron* **20**(2), 84-102 (2015).
- 568 K. D. Setzer, E. H. Fink, H.-P. Liebermann, R. J. Buenker, A. B. Alekseyev, **Experimental and theoretical study of the electronic states and spectra of SbNa**, *J. Mol. Spectrosc.* **318**, 1-11 (2015).
- 569 R. J. Buenker, **The role of simultaneity in the methodology of the Global Positioning Navigation System**, 55 *J. Found. App. Sci.* **1** (2) 150-156 (2015). *First version: 09.12.2014.*
- 570 Y.-G. Peng, Y. Wu, L.-F. Zhu, S. B. Zhang, J. Wang, H.-P. Liebermann and R. J. Buenker, **Complex multireference configuration interaction calculations for the K-vacancy Auger states of N^{q+} (q=2-5)**, 61 *J. Chem. Phys.* **144**, 054306, 1-9 (2016); doi: 10.1063/1.4940733.
- 571 R. J. Buenker, **New Synthesis of Elementary Particle Physics: A Theory of Elemental Balance in Physical Transformations**, 1st Edition, (Berg. Univ.-Wuppertal Library, Wuppertal, **Item 26**, 2015), pp. 1-304.
- 572 K. D. Setzer, E. H. Fink, A. B. Alekseyev, H.-P. Liebermann, R. J. Buenker, , **Experimental and theoretical study of the electronic states and spectra of NaAs**, *J. Mol. Spectrosc.* **320**, 39-47 (2016).
- 573 R. J. Buenker, **The lack of internal consistency of the Lorentz transformation and its consequences for the concept of space-time mixing**, 60 *J. App. Fundamental Sci.* **2** (1), 1-6 (2016).

- 574 R. J. Buenker, **Contradiction between Fitz-Gerald-Lorentz length contraction and time dilation: A GPS-compatible Lorentz transformation**, 33 *J. Biosensors & Bioelectronics* 7, 1-4 (2016).
- 575 K. D. Setzer, E. H. Fink, A. B. Alekseyev, H.-P. Liebermann and R. J. Buenker, **Theoretical and experimental study of the electronic states and spectra of KBi and KSb**, *J. Mol. Spectrosc.* 333, 1-11 (2017).
- 576 R. J. Buenker, **Commentary on the work of Thomas E. Phipps, Jr. (1925-2016)**, 65 *Apeiron* 20, 9-41 (2017).
- 577 R. J. Buenker, **The relativity principle and the kinetic scaling of the units of energy, time and length**, 6 *Apeiron* 20 (4), 1-31 (2018).
- 578 R. J. Buenker, **Use of an objective rest system to determine energy and momentum relationships for observers in relative motion**, 14 *J. Sci. Discov.* 4 (1) 1-8 (2020).
- 579 R. J. Buenker, **Reconciling Einstein's postulates with the objectivity of measurement: the reciprocal Lorentz transformation**, 29 *Int. J. App. Res.* 6(5), 220-225 (2020). *First version: 24.12.2009.*
- 580 R. J. Buenker, **Newton's law of inertia and clock-rate proportionality: Einstein's historic mistake**, 57 *BAOJ Physics* 31: 1, 1-10 (2018).
- 581 R. J. Buenker, **Maxwell's equations, the Relativity Principle and the objectivity of measurement**, 58 *J. App. Fundamental Sci.* 5 (2), 58-65 (2019). *First version: 21.04.2015.*
- 582 R. J. Buenker, **Relativistic scaling of physical properties: Reciprocal relationship between conversion factors**, 59 *Int. J. App. Math. & Stat. Sci.* 9 (3), 15-30 (2020). *First version: 21.11.2015.*
- 583 R. J. Buenker, **Time dilation and lightning flashes on a train**, 62 *Internat. J. Applied Res.* 6(9) 103-106 (2020). *First Version: 20.01.2016.*
- 584 R. J. Buenker, **Hafele-Keating atomic clock experiment and the Universal Time-dilation Law**, 63 *J. App. Fundamental Sci.* 4 (2), 94-98 (2018).
- 585 R. J. Buenker, **Voigt's conjecture of space-time mixing: Contradiction between non-simultaneity and the proportionality of time dilation**, 64 *BAOJ Physics* 2:27, 1-9 (2017).
- 586 R. J. Buenker, **The Universal Time-dilation Law: Objective variant of the Lorentz transformation**, 31 *BAOJ Physics* 3:23, 1-6 (2017).
- 587 R. J. Buenker, **The clock Puzzle and the incompatibility of proportional**

- time dilation and remote non-simultaneity**, 66 *J. App. Fundamental Sci.* **4 (1)**, 6-18 (2016).
- 588 R. J. Buenker, **Uniform scaling of physical units and the principle of rationality of units**, 67 *Univ.-Wuppertal Library, Item 35*, 1-21 (2018).
- 589 R. J. Buenker, **Derivations of time dilation using two different Lorentz-type transformations**, 68 *Univ.-Wuppertal Library, Item 40*, 1-8 (2018).
- 590 R. J. Buenker, **The myth of remote non-simultaneity: Newton was right and Einstein was wrong**, 69 *J. Sci. Discov.* **3(1)**, 1-3 (2019).
- 591 R. J. Buenker, **The spacetime myth: Failure of the Lorentz transformation**, 70 *Adv. Theor. & Comp. Physics* **1(2)**, 1-4 (2018).
- 592 K. D. Setzer, E. H. Fink, A. B. Alekseyev, H.-P. Liebermann and R. J. Buenker, **Theoretical and Experimental Study of the Electronic States and Spectra of LiSb**, *J. Mol. Spectrosc.* **347**, 41-47 (2018).
- 593 R. J. Buenker, **Comparison of proportional time dilation and remote non-simultaneity: Proof that the Lorentz transformation is self-contradictory**, 72 *Hadronic Press* **43**, 121-133 (2020).
- 594 R. J. Buenker, **Mass dilation and the Lewis-Tolman conjecture**, 19 *Int. J. App. Res.* **6(12)**, 141-145 (2020).
- 595 R.J. Buenker, **The Lorentz transformation and the transverse Doppler effect**, 4 *ITS App. Phys.* **2**, 6-14 (2019). *First version: 21.11.2003.*
- 596 R.J. Buenker, **The triplet paradox and the Lorentz transformation**, 9 *Int. J. App. Res.* **6(6)**, 161-167 (2020). *First version: 30.04.2005; last update: 28.11.2011.*
- 597 R.J. Buenker, **Deduction of relativistic length variations based on tests using a cryogenic optical resonator**, 11 *Internat. J. Nanomaterials, Nanotech. and Nanomed.* **6(2)**, 16-20 (2020). *First version: 25.08.2005.*
- 598 R.J. Buenker, **The transverse Doppler effect and the relativity principle: experimental test of length contraction**, 15 *J. Sci. Discov.* **4 (2)**, 1-10 (2020). *First version: 17.04.2006.*
- 599 R.J. Buenker, **Relativity theory and the principle of the rationality of measurement**, 16 *Int. J. App. Math. & Stat. Sci.* **9** (2020). *First version: 14.03.2006.*
- 600 R. J. Buenker, **Simultaneity, time dilation and the Lorentz transformation**, 17 *Int. J. App. Math. & Stat. Sci.* **10 (1)**, 1-12 (2021). *First version: 23.05.2006.*

- 601 R. J. Buenker, **The kinetic and gravitational scaling of the units of electricity and magnetism**, **20** *East Africa Scholars J. Eng. Comput. Sci.* **3 (6)**, 103-109 (2020). *First version: 28.09.2006.*
- 602 R. J. Buenker, **Kinetic energy and the relativistic symmetry principle**, **23** *Int. J. App. Math. & Stat, Sci.* **9 (3)**, 5-14 (2020). *First version: 05.07.2007.*
- 603 R. J. Buenker, **Changes in the relativistic theory of electromagnetism prescribed by experience with the global positioning system**, **34** *Int. J. App. Res.* **7(1)**, 188-193 (2021).
- 604 R. J. Buenker, **On the relationship between relativistic length variations and time dilation**, **32** *East Africa Scholars J. Eng. Comput. Sci.* **3 (4)**, 51-53 (2020). *First version: 15.03.2011.*
- 605 R. J. Buenker, **The clock riddle, Einstein's third postulate and faster-than-c neutrino speeds**, **37** *J. Phys. & Optics Sciences* **2 (1)**, 1-6 (2020). *First Version: 09.07.2011; last update; 14.10.2011.*
- 606 R. J. Buenker, **Hamiltonian matrix representations for the determination of approximate wave functions for molecular resonances**, **25** *J. App. Fundamental Sci.* **5 (1)**, 6-17 (2019)..
- 607 R. J. Buenker, **Faster-than-c neutrinos and the alternate Lorentz transformation**, **40** *ITS App. Phys.* **3 (4)**, 24-35 (2020). *First Version: 13.11.2011.*
- 608 R. J. Buenker, **Relativity Theory Based Directly on the Velocity Transformation**, **73** *J. Sci. Discov.* **4(1)**, 1-6 (2019).
- 609 R. J. Buenker, **The Newton-Voigt Relativistic Space-time Transformation**, **74** *Univ.-Wuppertal Library, Item 48*, 1-25 (2018).
- 610 R.J. Buenker, **Stellar Aberration and Light-speed Constancy**, **75** *J. Sci. Discov.* **3(2)**, 1-15 (2019).
- 611 K. Wang , Y. Z. Qu, C. H. Liu, L. Liu , Y Wu, H.-P. Liebermann and R. J. Buenker, **The influence of pseudo-states on the single-electron capture processes in low-energy collisions of N⁵⁺ with He**, *J. Phys. B: At. Mol. Opt. Phys.* **52**, 075202, 1-9 (2019).
- 612 R. J. Buenker, **Relativity documentary outline - Title (tentative): Einstein's relativity theory overturned by elementary algebra**, **71** *Univ.-Wuppertal Library, Item 31*, 1-9 (2018).
- 613 R.J. Buenker, **The Newton-Voigt Space-time Transformation**, **76** *J. Sci. Discov.* **3(2)**, 1-8 (2019).

- 614 R. J. Buenker, **Critique of Einstein's Light-speed Postulate**, 77 *Internat. J. Applied Res.* **7(4)**, 402-409 (2021).
- 615 R. J. Buenker, **Hamilton's Canonical Equations and Einstein's $E=mc^2$ Relation**, 78 *Internat. J. Applied Res.* **7(3)**, 346-351 (2021).
- 616 Y. Wan, H.-P. Liebermann, R. J. Buenker, S. D. Loch, D. R. Schultz, and P. C. Stancil, **Fine-structure Excitation of Ne^+ in Collision with Atomic Hydrogen**, *Astrophys. J.* **881(1)**, 1-5 (2019).
- 617 K. Wang, X.-X. Wang, Y. Z. Qu, C. H. Liu, L. Liu, Y. Wu and R. J. Buenker, **Single- and double-electron capture processes in low-energy collisions of N^{4+} ions with He**, *Chin. Phys. Lett.* **37 (2)**, 023401, 1-5 (2020).
- 618 R. J. Buenker, **Critique of the treatment of Einstein's special theory of relativity in Isaacson's Biography¹**, 79 *J. App. Fundamental Sci.* **6 (1)**, 27-34 (2020).
- 619 R. J. Buenker, **Frequency variations, the speed of sound and the gravitational redshift**, 80 *J. App. Fundamental Sci.* **6 (2)**, 79-88 (2020).
- 620 R. J. Buenker, **Big Bang theory based on Hubble's Constant**, 81 *J. Phys. & Optics Sciences* **3 (2)**, 1-4 (2021).
- 621 K. D. Setzer, E. H. Fink, H.-P. Liebermann, A. B. Alekseyev and R. J. Buenker, **FTIR spectra of NaTe and KTe and ab initio calculations of the electronic structure of these molecules**, *J. Mol. Spectrosc.* **371**, 111328 (2020).
- 622 R. J. Buenker, **The uniform scaling method for simplified accurate computation of the key tests of General Relativity** 82 *ITS App. Phys.* **4 (2)**, 1-17 (2021).
- 623 Kun Wang, Yi-Zhi Qu, Chun-Hua Liu, Ling Liu, Yong Wu, Heinz-Peter Liebermann, Robert J. Buenker, **Charge transfer in low-energy collisions of Be^{3+} and B^{4+} ions with He** *Chin. Phys. B.* Link accepted manuscript IOP wangk July 24, 2020.
- 624 R. J. Buenker, **Production of photons in positronium decay: Critique of the creation-annihilation hypothesis: Part I** 83 *ITS Applied Physics*, **4(1)**, 11-34 (2021) ISSN: 2664-0821, DOI: <https://doi.org/10.31058/j.ap.2021.41002>.
- 625 R. J. Buenker, **Open Letter to physics departments criticizing their teaching of relativity theory** 84 *Univ.-Wuppertal Library, Item 62*, 1 (2020).
- 626 R. J. Buenker, **Letter to the Editor of Scientific American** 85 *Univ.-Wuppertal Library, Item 63*, 1-4 (2020).
- 627 R. J. Buenker, **Production of photons in positronium decay: Critique of the creation-annihilation hypothesis: Part II** 86 *ITS Applied Physics*, **4(1)**, 35-69 (2021) ISSN: 2664-0821, DOI: <https://doi.org/10.31058/j.ap.2021.41002>.

- 628 R. J. Buenker, **The failure of mainstream journals and documentaries to eradicate the myth of remote non-simultaneity: Newton was right and Einstein was wrong** **87** *J. Sci. Disc.* **5(1)**,1-8 (2021).
- 629 R. J. Buenker, **The new relativity theory: Absolute simultaneity, modified light speed constancy postulate, uniform scaling of physical properties.** **89** *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS) ISSN (P): 2319–3972; ISSN (E): 2319-3980* **10 (2)**, 151-162 (2021).
- 630 R. J. Buenker, **The theoretical explanation for the sound barrier and its relation to light refraction,** **88** *Internat. J.Applied Res.* **7-5**, 86-90 (2021).
- 631 R. J. Buenker, **Rebuttal of Fermi’s denial of nuclear electrons: Part I: Historical background,** **90** *Internat. J.Applied Res.* **7(5)**, 181-192 (2021).
- 632 R. J. Buenker, **Rebuttal of Fermi’s denial of nuclear electrons: Part II: Adapting the XBPS method to the description of the neutron’s internal structure.** **91** *Internat. J.Applied Res.* **7(5)**, 403-414 (2021).
- 633 R. J. Buenker, **Rebuttal of Fermi’s denial of nuclear electrons: Part III: XBPS Calculations of the Neutron’s Internal Structure,** **92** *Internat. J.Applied Res.* **7(5)**, 314-322 (2021).
- 634 R. J. Buenker, **Electroweak analogue of the Stern-Gerlach Effect: Parity conservation restored?,** **93** *ITS Applied Physics*, **5(1)**, 1-17 (2022) ISSN: 2664-0821.
- 635 R. J. Buenker, **The binding energy of the deuteron in the exponentially damped Breit-Pauli-Schrödinger (XBPS) Model,** **94** *Internat. J.Applied Res.* **7(7)**,133-142 (2021).
- 636 R. J. Buenker, **The fate of solar neutrinos,** **95** *East African Scholars J. Eng.Comp. Sci.* **5 (1)**, 1-3 (2022).
- 637 X. X. Wang, K. Wang, Y-G Peng, C-H. Liu, L. Liu, Y. Wu, H.-P. Liebermann, R. J. Buenker and Y-Z. Qu, , **Charge Transfer and excitation collisions in the low energy collisions of He⁺ ions with Li atoms,** *Research Astron. Astrophys* **21 (8)**, 210, 1-10 (2021).
- 638 R. J. Buenker, **The spin-flip mechanism for neutron decay and its relation to the Nuclear Shell model,** **96** *Internat. J.Applied Res.* **7(11)**, 8-16 (2021).
- 639 R. J. Buenker, **The structure and properties of muons and pions in the exponentially damped Breit-Pauli-Schrödinger (XBPS) Model,** **97** *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS) ISSN (P): 2319–3972; ISSN (E): 2319–3980* **10 (2)**, 39–64 (2021).
- 640 R. J. Buenker, **Description of virtual photons and pion clouds in the XBPS Model of elementary particles,** **98** *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS) ISSN (P): 2319–3972; ISSN (E): 2319–3980,* **10 (2)**, 95–120 (2021).

- 641 R. J. Buenker, **Clock-rate Corollary to Newton's Law of Inertia**, 99 *East Africa Scholars J. Eng. Comput. Sci.* **4 (10)**, 138-142 (2021).
- 642 X. X. Wang, K. Wang, Y-G Peng, C-H. Liu, L. Liu, Y. Wu, H.-P. Liebermann, R. J. Buenker and Y-Z. Qu, **Ab Initio study of single- and double-electron capture processes in collisions of He²⁺ ions and Ne atoms**, *Chin. Phys. Lett.* **38(11)**, 113401, 1-7 (2021).
- 643 R. J. Buenker, **Uniform scaling: Relativistic energy-momentum relationships**, 100 *J Phys. & Optics Sciences* **3 (4)**, 1-5 (2021).
- 644 R. J. Buenker, **Inertial Clocks and Remote Non-Simultaneity**, 101 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 78**, 1-15 (2021).
- 645 R. J. Buenker, **Newton's Theory of Light and Wave-particle Duality**, 102 *East Africa Scholars J. Eng. Comput. Sci.* **5 (2)**, 21-31 (2022).
- 646 R. J. Buenker, **Inclusion of Breit-Pauli Short-range Interactions in the Quantum Mechanical Theory of Sub-atomic Systems**, 103 *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS)*, ISSN (P): 2319–3972; ISSN (E): 2319–3980 **11 (1)**, 11-24 (2022).
- 647 R. J. Buenker, **Dissecting Einstein's Lightning-Strike Example: Proof That His Light-speed Constancy Postulate Is Untenable**, 104 *East Africa Scholars J. Eng. Comput. Sci.* **5 (7)**, 85-91 (2022).
- 648 R. J. Buenker, **The Galilean Velocity Transformation and Newtonian Simultaneity**, 105 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 82**, 1-20 (2022).
- ,
- 649 R. J. Buenker, **Mass-Energy Equivalence Relation**, 106 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 83**, 1-14 (2022).
- 650 R. J. Buenker, **Newtonian Particle Theory of Light**, 107 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 84**, 1-31 (2022).
- 651 R. J. Buenker, **Simplified Computation of the Key Tests of General Relativity**, 108 Power Point Presentation, *Univ.-Wuppertal Library*, **Item 85**, 1-45 (2022).
- 652 R. J. Buenker, **Proof That Einstein's Light Speed Postulate Is Untenable**, 109 *East Africa Scholars J. Eng. Comput. Sci.* **5 (4)**, 51-52 (2022).
- 653 R. J. Buenker, **Proof That the Lorentz Transformation Is Incompatible with the Law of Causality** 110 *East Africa Scholars J. Eng. Comput. Sci.* **5 (4)**, 53-54 (2022).

- 654 K, Wang, C, Dong, Y-Z. Qu, L. Liu, Y. Wu, X-H, Hong and R. J. Buenker, **Electron excitation processes in low energy collisions of hydrogen-helium atoms**, *Chin. Phys. B.* **31**, 123401 (2022).
- 655 Book: R. J. Buenker, **Relativity Theory Based on the Uniform Scaling of Physical Properties**, 1st Edition, 2022), pp. 1-234.
- 656 R. J. Buenker, **Debunking the Lorentz Transformation and replacing it with the Newton-Voigt transformation**, **111** *Amer. J. Planetary Sci. and Space Sci.* **1 (1)**, 1-5 (2022)
- 657 R. J. Buenker, **Compelling evidence that light travels in a perfectly straight line as it passes through a gravitational field**, **112** *Amer. J. Planetary Sci. and Space Sci.* **1 (1)**, 1-8 (2022)
- 658 R. J. Buenker, **Experimental Refutation of Einstein's Symmetry Principle** **113** *East Africa Scholars J. Eng. Comput. Sci.* **6 (1)**, 1-8 (2023).
- 659 R. J. Buenker, **Pound's Falling Light Experiment and Einstein's Elevator** **114** *J. Phys.& Optics Sciences* **5 (2)**, 1-4 (2023).
- 660 R. J. Buenker, **The Failure of Both Einstein's Space-time Theory and His Equivalence Principle and Their Resolution by the Uniform Scaling Method** **115** *East Africa Scholars J. Eng. Comput. Sci.* **6 (2)**, 1-10 (2023).
- 661 R. J. Buenker, **A Revised Light-speed Postulate and the Applicability of the Galilean Velocity Transformation in Relativity Theory** **116** *Internat. J. Applied Res.* 9(4),34-37 (2023).
- 662 R. J. Buenker, **History of the Lorentz Transformation and Its Failure to Obey the Law of Causality** **117** *International Journal of Applied Mathematics and Statistical Sciences (IJAMSS)*, ISSN (P): 2319-3972; ISSN (E): 2319- 3980 **12 (1)**, 9-18 (2023).
- 663 R. J. Buenker, **New Synthesis of Elementary Particle Physics: A Theory of Elemental Balance in Physical Transformations**, 2nd Edition, (Berg. Univ.-Wuppertal Library, Wuppertal, 2023), pp. 1-307.
- 664 R. J. Buenker, **Comparison of the Falling Light Experiment and the Ultracentrifuge Gamma Radiation Study** **118** *J. Phys.& Optics Sciences* **5 (2)**, 1-5 (2023).
- 665 K. Wang (王堃), C. Dong (董川), Y. Z. Qu (屈一至), Y. Wu (吴勇), X. H. Lin (林晓贺), and R. J. Buenker, **Mutual neutralization in low-energy collisions of Na⁺ + H⁻ ions**, *Chin. Phys. B.* (2023).
- 666 R. J. Buenker, **The Many Flaws of the Lorentz Transformation** **119** *East Africa Scholars J. Eng. Comput. Sci.* **6 (2)**, (2023).
- 667 R. J. Buenker, **Incompatibility of FitzGerald-Lorentz Contraction and Time Dilation**

120 *East Africa Scholars J. Eng. Comput. Sci.* **6 (4)**, 48-49 (2023).

668 R.J.Buenker, **Hubble's Constant: The Clock of the Universe** 121 *J. Phys.& Optics Sciences* **5 (4)**, 1-4 (2023).

669 R. J. Buenker, **The Necessity for Fair Evaluation of Objective Criticism of Physical Theories** 122 *Adv. Theor. & Comp. Phy* **6(3)**, 215-217 (2023).