

# Vasyl Kovalchuk

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

19  
papers

96  
citations

6  
h-index

9  
g-index

27  
ext. papers

112  
ext. citations

1.5  
avg, IF

2.05  
L-index

#	Paper	IF	Citations
19	Classical motions of infinitesimal rotators on Mylar balloons. <i>Mathematical Methods in the Applied Sciences</i> , <b>2020</b> , 43, 9874-9887	2.3	0
18	Mechanics of infinitesimal gyroscopes on Mylar balloons and their action-angle analysis. <i>Mathematical Methods in the Applied Sciences</i> , <b>2020</b> , 43, 3040-3051	2.3	2
17	Mechanics of incompressible test bodies moving in Riemannian spaces. <i>Mathematical Methods in the Applied Sciences</i> , <b>2020</b> , 43, 9790-9804	2.3	0
16	Mechanics of Infinitesimal Test Bodies on Delaunay Surfaces: Spheres and Cylinders as Limits of Unduloids and Their Action-Angle Analysis. <i>Journal of Geometry and Symmetry in Physics</i> , <b>2019</b> , 53, 55-84	1.6	3
15	Space-time as a structured relativistic continuum. <i>Mathematical Methods in the Applied Sciences</i> , <b>2018</b> , 41, 5404-5422	2.3	1
14	Quantized mechanics of affinely rigid bodies. <i>Mathematical Methods in the Applied Sciences</i> , <b>2017</b> , 40, 6900-6918	2.3	
13	Mechanics of affine bodies. Towards affine dynamical symmetry. <i>Journal of Mathematical Analysis and Applications</i> , <b>2017</b> , 446, 493-520	1.1	2
12	Constraints and symmetry in mechanics of affine motion. <i>Journal of Geometry and Physics</i> , <b>2014</b> , 78, 59-70		3
11	Parametric representation of wave propagation in non-uniform media (both in transmission and stop bands). <i>Mathematical Methods in the Applied Sciences</i> , <b>2013</b> , 36, 1350-1362	2.3	
10	Generalized Weyl-Wigner-Moyal-Ville Formalism and Topological Groups. <i>Mathematical Methods in the Applied Sciences</i> , <b>2012</b> , 35, 17-42	2.3	1
9	Essential nonlinearity implied by symmetry group. Problems of affine invariance in mechanics and physics. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2012</b> , 17, 699-733	1.3	2
8	Mechanics of systems of affine bodies. Geometric foundations and applications in dynamics of structured media. <i>Mathematical Methods in the Applied Sciences</i> , <b>2011</b> , 34, 1512-1540	2.3	9
7	Schrödinger and related equations as hamiltonian systems, manifolds of second-order tensors and new ideas of nonlinearity in quantum mechanics. <i>Reports on Mathematical Physics</i> , <b>2010</b> , 65, 29-76	0.8	4
6	Affine symmetry in mechanics of collective and internal modes Part II. Quantum models. <i>Reports on Mathematical Physics</i> , <b>2005</b> , 55, 1-46	0.8	15
5	Green function for Klein-Gordon-Dirac equation. <i>Journal of Nonlinear Mathematical Physics</i> , <b>2004</b> , 11, 72	0.9	6
4	Classical and Quantized Affine Physics: A Step towards it. <i>Journal of Nonlinear Mathematical Physics</i> , <b>2004</b> , 11, 157	0.9	9
3	Affine symmetry in mechanics of collective and internal modes Part I. classical models. <i>Reports on Mathematical Physics</i> , <b>2004</b> , 54, 373-427	0.8	16

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| 2 | Invariant geodetic problems on the affine group and related hamiltonian systems. <i>Reports on Mathematical Physics</i> , <b>2003</b> , 51, 371-379 | 0.8 | 9  |
| 1 | Klein-Gordon-Dirac equation: Physical justification and quantization attempts. <i>Reports on Mathematical Physics</i> , <b>2002</b> , 49, 249-257   | 0.8 | 12 |