

Marián FECKO
Differential Geometry and Lie Groups for Physicists
Citations of the book

Cambridge edition: Cambridge University Press, 2006, 2011.
Citations registered in **Scopus** and/or **WoS** database
are marked with **boxed bold** numerals.

- 1.** D.Kochan:
Grassmann Electrodynamics and General Relativity,
J.Geom.Phys. Vol.51, 2, 196-210 (2004) (cited as "in press")
- 2.** D.Kochan:
Quantization of dissipative systems - some irresponsible speculations,
XXVI Workshop on Geometrical Methods in Physics, AIP Conference Proceedings, 956, pp. 3-8 (2007)
- 3.** V.Polák, V.Balek:
Plane waves in a relativistic homogeneous and isotropic elastic continuum,
Class. Quantum Grav. 25 045007 (12pp) (2008)
arXiv:gr-qc/0701055
- 4.** B.V.Somov:
On the topological trigger of large eruptive solar flares,
Astronomy Letters, Volume 34, Number 9 , pp.635-645 (2008)
see also: O topologicheskome triggere bol'shikh eruptivnykh vspyshek na Solntse,
Pis'ma v Astronomicheskii zhurnal - 2008, S. 702-713
<http://www.maikonline.com/maik/showArticle.do?auid=VAFJWE2YT2>
<http://www.maikonline.com/maik/showArticle.do?auid=VAFJWE2YT2&lang=ru>
- 5.** D.Kochan:
Noncommutative Lagrange Mechanics,
SIGMA 4, 028, (2008)
- 6.** A.Jadczyk:
The Theory of Kairons,
Advances in Applied Clifford Algebras, 19 (1), 63-82 (2009),
<http://www.springerlink.com/content/g3240137w1626880/>
arXiv:0711.4716 [math-ph]
- 7.** J.Mikeš, K.Strambach:
Differentiable Structures on Elementary Geometries,
Results in Mathematics, volume 53, pages 153172 (2009)
<http://www.springerlink.com/content/a530x4pr362n2208/fulltext.pdf>
- 8.** D.Kochan:
Quantization of non-lagrangian systems,
International Journal of Modern Physics A 24 (28-29), pp. 5319-5340 (2009)
- 9.** J.A.Krommes:
Comment on "Guiding center plasma models in three dimensions" (Phys. Plasmas 15, 092112 (2008)),
Phys. Plasmas 16, 084701 (2009)
(previously in Princeton Plasma Physics Laboratory Report Disclaimers, May 2009)
- 10.** M.S.Zhdanov:
Differential calculus of vector fields and differential forms,
Methods in Geochemistry and Geophysics, 43, pp. 3-28. (2009)
- 11.** M.S.Zhdanov:
Foundations of Field Theory,
Methods in Geochemistry and Geophysics, 43, pp. 29-61. (2009)

- 12.** R.daRocha, W.A.Rodrigues Jr:
Rigorous formulation of duality in gravitational theories,
J. Phys. A: Math. Theor., 43 (20), art. no. 205206, (2010)
- 13.** D.Kochan:
How to quantize forces (?): An academic essay on how the strings could enter classical mechanics,
Journal of Geometry and Physics 60 (2), pp. 219-229 (2010)
- 14.** M.S.Zhdanov:
Maxwells Equations and Numerical Electromagnetic Modeling in the Context of the Theory
of Differential Forms,
Handbook of Geophysical Exploration: Seismic Exploration, 40 (C), pp. 299-324. (2010)
Active Geophysical Monitoring, (Chapter) pp. 245-267, (2019)
- 15.** M.G.C.Grunewald, D.Abel, V.Mut, I.B.Makhlouf, H.Diab, S.Kowalewski:
Regelung und Sicherheitsanalyse einer Gruppe Massenpunktfahrzeuge
mit Hilfe energiebasierter Methoden
At-Automatisierungstechnik, 58 (4), pp. 227-236. (2010)
- 16.** D.Kochan:
Direct quantization of equations of motion:
From classical dynamics to transition amplitudes via strings,
International Journal of Geometric Methods in Modern Physics 7 (8), pp. 1385-1405 (2010)
arXiv:hep-th/0703073
- 17.** A.Vanžurová:
A note on variational and metrizable connections,
Acta Mathematica Academiae Paedagogicae Nyíregyháziensis, 26 , 383-396 (2010)
- 18.** J.A.Krommes:
Nonlinear gyrokinetics: a powerful tool for the description of microturbulence in magnetized plasmas,
Phys. Scr. T142 art.no. 014035 (2010)
- 19.** G.M.Webb, Q.Hu, B.Dasgupta, G.P.Zank:
Homotopy formulas for the magnetic vector potential and magnetic helicity: The Parker spiral
interplanetary magnetic field and magnetic flux ropes,
Journal of Geophysical Research A: Space Physics, 115 (10), art. no. A10112, (2010)
- 20.** M.S.Zhdanov:
Electromagnetic geophysics: Notes from the past and the road ahead,
Geophysics, 75 (5), pp. 75A49-75A66. (2010)
- 21.** J.A.Krommes:
The gyrokinetic description of microturbulence in magnetized plasmas,
Annual Review of Fluid Mechanics 44 , pp. 175-201 (2011)
- 22.** O.E.Fernandez, A.M.Bloch:
The Weitzenböck connection and time reparameterization in nonholonomic mechanics,
Journal of Mathematical Physics 52 (1), art. no. 012901 (2011)
- 23.** A.Jadczyk:
On Conformal Infinity and Compactifications of the Minkowski Space,
Advances in Applied Clifford Algebras 21 (4), pp. 721-756 (2011)
- 24.** M.Bakšová:
Neutral wrenches of 3-parametric robot-manipulators of the spherical rank 1,
Applications of Mathematics, vol. 56, issue 4, pp. 405-416 (2011)
- 25.** I.Hinterleitner, J.Mikeš:
On fundamental equations of geodesic mappings and their generalizations,
Journal of Mathematical Sciences, 174 (5), pp. 537-554 (2011)
- 26.** S.Kopeikin, M.Efroimsky, G.Kaplan:
Relativistic Celestial Mechanics of Solar System,
Wiley-VCH, (2011)
- 27.** M.Błaszczak, Z.Domański:
Phase Space Quantum Mechanics,

Annals of Physics 327 (2) , pp. 167-211 (2012)

- 28.** H.Arponen:
Infinite symmetry on the boundary of $SL(3)/SO(3)$,
J. Math. Phys. 53 (3), art. no. 033512 (2012)
arXiv:11112295v3 [hep-th]
- 29.** H.Zhang, T.Li, J.Geng:
Manifold Modeling and Its Application to Tubular Scene Manifold Mosaicing Algorithm,
Journal of Mathematical Imaging and Vision 44 (1) , pp. 80-98 (2012)
- 30.** R.T.Thompson, S.A.Cummer:
Transformation optics,
Advances in Imaging and Electron Physics 171 , pp. 195-295 (2012)
- 31.** M.F.M.Speetjens:
A generalised Lagrangian formalism for thermal analysis of laminar convective heat transfer,
International Journal of Thermal Sciences, 61, pp.79-93 (2012)
<http://www.sciencedirect.com/science/article/pii/S129007291200186X#> FCANote
- 32.** I.Markechova, H.Stupalova, D.Jurovata:
Physics and geometry: An unique optics for introductory dynamical systems knowledge,
15th International Conference on Interactive Collaborative Learning,
ICL 2012 , art. no. 6402205 (2012)
- 33.** V.Vrábeř, M.Slodička:
Nonlinear parabolic equation with a dynamical boundary condition of diffusive type,
Applied Mathematics and Computation, Volume 222, 1, pp. 372-380 (2013)
<http://www.sciencedirect.com/science/article/pii/S0096300313008072>
- 34.** G.M.Webb, B.Dasgupta, J.F.McKenzie, Q.Hu, G.P.Zank, R.Hofsteenge:
Local and nonlocal advected invariants and helicities in magnetohydrodynamics and gas dynamics I:
Lie dragging approach,
J. Phys. A: Math. Theor. 47 095501, doi:10.1088/1751-8113/47/9/095501 (2014)
- 35.** X.Wang, A.Ritz:
Kerr-AdS black holes and force-free magnetospheres,
Physical Review D 89 (10), 106011, (2014)
<http://arxiv.org/pdf/1402.1452.pdf>
- 36.** P.Exner, M.Jex:
Spectral asymptotics of a strong δ' interaction supported by a surface,
Physics Letters, Section A:
General, Atomic and Solid State Physics 378 (30-31), pp. 2091-2095 (2014)
<https://arxiv.org/abs/1402.6117>
- 37.** V.E.Berezovski, J.Mikeš, A.Vanžurová:
Fundamental PDEs of the canonical almost geodesic mappings of type $\tilde{\pi}_1$,
Bulletin of the Malaysian Mathematical Sciences Society, 37 (3), pp. 647-660 (2014)
arXiv:1006.3200 [math.DG]
- 38.** B.Auchmann, S.Kurz:
Observers and splitting structures in relativistic electrodynamics,
J.Phys.A: Math.Theor. 47 435202, doi:10.1088/1751-8113/47/43/435202 (2014)
- 39.** M.Pavelka, V.Klika, M.Grmela:
Time reversal in nonequilibrium thermodynamics,
Physical Review E - Statistical, Nonlinear, and Soft Matter Physics 90 (6), 062131 (2014)
- 40.** H.Nguyen-Schäfer, J.P.Schmidt:
Tensor Analysis and Elementary Differential Geometry for Physicists and Engineers,
Mathematical Engineering, Volume 21 (2014)
- 41.** M.G.C.Grunewald, D.Abel:
Control of a group of point mass vehicles using energy methods,
2009 European Control Conference, ECC 2009 7074753, pp. 2331-2336 (2014)
- 42.** S.Hahn, K.Zindler, U.Jumar:

Nonlinear model-based track guidance of user-defined points at the vehicle front,
Control Engineering Practice, Volume 41, pp. 98 - 112 (2015)

- 43.** S.Hahn, K.Zindler, K.Doll, U.Jumar:
New control scheme for a lane-keeping evasive maneuver exploiting the free space optimally,
20th International Conference on Methods and Models in Automation and Robotics (MMAR),
pp. 856 - 861, DOI: 10.1109/MMAR.2015.7283989 IEEE (2015)
http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=7283989&tag=1
- 44.** I.Avramidi:
Heat Kernel Method and its Applications,
Springer (Birkhäuser), ISBN: 978-3-319-26265-9 (Print), 978-3-319-26266-6 (Online) (2015)
- 45.** W.Mathis, R.Mathis:
On the derivation of generalized transmission line equations of cylindrical waveguides
with irregular deformed surfaces,
IEEE International Symposium on Electromagnetic Compatibility - 2015
Pages: 830 - 833, DOI: 10.1109/ISEMC.2015.7256271 IEEE Conference Publications (2015)
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=7240520>
- 46.** J.Ben Achour, E.Huguet, J.Queva, J.Renaud:
Explicit vector spherical harmonics on the 3-sphere,
J. Math. Phys. **57**, 023504 (2016)
arXiv:1505.03426 [math-ph]
- 47.** N.Killoran, F.E.S.Steinhoff, M.B.Plenio:
Converting Nonclassicality into Entanglement,
Physical Review Letters **116** (8), 080402 (2016)
arXiv:1505.07393 [quant-ph]
- 48.** J.Smotlacha, R.Pinčák:
Green Function Approach to the Calculation of the Local Density of States in the Graphitic Nanocone,
EPJ Web of Conferences **108**, 02043 (2016)
DOI: 10.1051/epjconf/201610802043
- 49.** Zhen-Yu Xu:
Detecting quantum speedup in closed and open systems,
New Journal of Physics **18** (7), 073005, DOI: 10.1088/1367-2630/18/7/073005 (2016)
arXiv:1510.00101v1 [quant-ph]
- 50.** M.Pavelka, V.Klika, O.Esen, M.Grmela:
A hierarchy of Poisson brackets in non-equilibrium thermodynamics,
Physica D: Nonlinear Phenomena **335**, pp. 54-69 (2016)
arXiv:1512.08010 [math-ph]
- 51.** C.Seren, J.-P.Codomines, G.Hattenberger:
Optimal Invariant Observers Theory for Nonlinear State Estimation,
pp.391-408 in Multisensor Attitude Estimation: Fundamental Concepts and Applications,
CRC Press, ISBN 9781498745710 (2016)
- 52.** Jinsong Yang, Yongge Ma:
Graphical calculus of volume, inverse volume and Hamiltonian operators in loop quantum gravity,
Eur. Phys. J. C **77**:235 (2017)
(see 156 here; arXiv:1505.00223 [gr-qc])
- 53.** N.Voicu:
Volume forms for time orientable Finsler spacetimes,
Journal of Geometry and Physics, Vol. 112, pp. 85-94 (2017)
arXiv:1507.00847 [math.DG]
- 54.** I.Y.Park:
One-loop renormalization of a gravity-scalar system,
European Physical Journal C **77** (5), 3372017 (2017)
arXiv:1606.08384 [hep-th]
- 55.** O.Esen, M.Pavelka, M.Grmela:
Hamiltonian Coupling of Electromagnetic Field and Matter,

International Journal of Advances in Engineering Sciences and Applied Mathematics,
Volume: 9, Issue: 1, pp. 3-20 (2017)
arXiv:1607.02023 [math-ph]

- 56.** N.Besse, U.Frisch:
Geometric formulation of the Cauchy invariants for incompressible Euler flow in flat and curved spaces,
Journal of Fluid Mechanics, 825, pp. 412-478 (2017)
arXiv:1701.01592v1 [physics.flu-dyn]
- 57.** B.Sahin:
Riemannian Submersions, Riemannian Maps in Hermitian Geometry, and Their Applications,
Elsevier Science & Technology Books, ISBN: 0128043911 (Print), 9780128043912 (Online) (2017)
- 58.** L.Combi, G.E.Romero:
Gravitational energy and radiation of a charged black hole,
Class. Quantum Grav., Volume 34, Issue: 19, Article Number: 195008 (2017)
arXiv:1708.04758v1 [gr-qc]
- 59.** J.P.Arias Zapata, A.Belokogne, E.Huguet, J.Queva, J.Renaud:
Friedmann-Lemaître-Robertson-Walker spaces as submanifolds of \mathbb{R}^6 :
Restriction to the Klein-Gordon operator,
Journal of Mathematical Physics 58, 113503 (2017)
arXiv:1711.10771 [math-ph]
- 60.** Chuan-Yu Xu:
Tensor Fields on C1 Fuzzy Compact Manifolds,
Proceedings of the 2017 International Conference on Robotics and Artificial Intelligence, pp. 75-78,
Shanghai, China, ISBN: 978-1-4503-5358-8 (2017)
<https://dl.acm.org/citation.cfm?id=3175625>
- 61.** L.Combi, G.E.Romero:
Is Teleparallel Gravity really equivalent to General Relativity?
Annalen der Physik, Volume 530, 1, 1700175 (2018)
arXiv:1708.04569v1 [gr-qc]
- 62.** M.Klimek, S.Kurz, S.Schöps, T.Weiland:
Discretization of Maxwell's equations for non-inertial observers using space-time algebra,
Adv. Appl. Clifford Algebras 28: 22. <https://doi.org/10.1007/s00006-018-0841-3> (2018)
arXiv:1611.07368 [cs:CE]
- 63.** Z.Y.Xu, W.L.You, Y.L.Dong, Ch.Zhang, W.L.Yang:
Generalized speed and cost rate in transitionless quantum driving,
Phys.Rev.A, Volume: 97, Issue: 3, Article Number: 032115 (2018)
arXiv:1711.06140v1 [quant-ph]
- 64.** T.Bittner:
Formal ontology of space, time, and physical entities in classical mechanics,
Applied Ontology, Volume: 13, Issue: 2 Pages: 135-179 (2018)
<https://content.iospress.com/articles/applied-ontology/ao195>
- 65.** A.Tiwari, S.R.Pattanaik, K.C.Pati:
Revisiting parallel car parking problem,
Journal of Applied Mathematics and Computing, vol 58, issue 1-2, pp 257-272 (2018)
<https://doi.org/10.1007/s12190-017-1143-y>
- 66.** Liang Dong, Qian Niu:
Geometrodynamics of electrons in a crystal under position and time dependent deformation,
Phys.Rev.B, Vol.98, Issue 11, Article Number: 115162 (2018)
arXiv:1802.02887 [cond-mat.mtrl-sci]
- 67.** M.Pavelka, V.Klika, M.Grmela:
Thermodynamic Explanation of Landau Damping by Reduction to Hydrodynamics,
Entropy 20 (6) 457 DOI: 10.3390/e20060457 (2018)
<http://www.mdpi.com/1099-4300/20/6/457>
- 68.** G.Webb:

Magnetohydrodynamics and Fluid Dynamics: Action Principles and Conservation Laws,
Lecture Notes in Physics, vol 946, pp 1-7, Springer International Publishing (2018)
ISBN 978-3-319-72511-6, DOI 10.1007/978-3-319-72511-6
<http://www.springer.com/us/book/9783319725109>

- 69.** J.A.Krommes:
Projection-operator methods for classical transport in magnetized plasmas. I. Linear response, the Braginskii equations, and fluctuating hydrodynamics in Gyrokinetics, *Journal of Plasma Physics* 84(4) (2018)
arXiv:1708.04601v1 [physics.plasm-ph]
- 70.** I.Peshkov, M.Pavelka, E.Romenski, M.Grmela:
Continuum Mechanics and Thermodynamics in the Hamilton and the Godunov-type Formulations, *Continuum Mechanics and Thermodynamics*, 30 (6), pp. 1343-1378 (2018)
arXiv:1710.00058 [physics.class-ph]
- 71.** S.Berceanu:
The real Jacobi group revisited, *SIGMA* 15, No. 096 (2019)
arXiv:1903.10721 [math.DG]
- 72.** M.Fontanini, E.Huguet, M.Le Delliou:
Teleparallel gravity equivalent of general relativity as a gauge theory: Translation or Cartan connection? *Phys. Rev. D* 99, 064006 (2019)
arXiv:1811.03810v1 [gr-qc]
- 73.** M.Łaszak:
Non-autonomous Hénon-Heiles system from Painlevé class, *Physics Letters A* 383, 21492152 (2019)
arXiv:1904.05203v2 [math-ph]
- 74.** C.W.Duncan, C.Ross, N.Westerberg, M.Valiente, B.J.Schroers, P.Öhberg:
Linked and knotted synthetic magnetic fields, *Phys. Rev. A* 99, 6, 063613 (2019)
arXiv:1808.03655v2 [cond-mat.quant-gas]
- 75.** I.Peshkov, E.Romenski, M.Dumbser:
Continuum mechanics with torsion, *Continuum Mechanics and Thermodynamics*, 31, 5, pp. 1517-1541 (2019)
arXiv:1810.03761 [physics.flu-dyn]
- 76.** M.Pavelka, V.Klika, M.Grmela:
Ehrenfest regularization of Hamiltonian systems, *Physica D: Nonlinear Phenomena*, Volume: 399, Pages: 193-210 (2019)
arXiv:1810.08072v4 [physics.comp-ph]
- 77.** QS Wu, A.A.Soluyanov, T.Bzdušek:
Non-Abelian band topology in noninteracting metals, *Science*, Vol. 365, Issue 6459, pp. 1273-, DOI: 10.1126/science.aau8740 (2019)
arXiv:1808.07469 [cond-mat.mes-hall]
- 78.** O.Esen, M.Grmela, H.Gümral, M.Pavelka:
Lifts of Symmetric Tensors: Fluids, Plasma, and Grad Hierarchy, *Entropy* 21 (9) 907 DOI: 10.3390/e21090907 (2019)
- 79.** M.Sárený, V.Balek:
Effect of black hole - plasma system on light beams, *Gen.Rel.Grav.* 51, 141. <https://doi.org/10.1007/s10714-019-2629-8> (2019)
arXiv:1907.08525v1 [gr-qc]
- 80.** M.Tecchiolli:
On the mathematics of coframe formalism and Einstein-Cartan theory - a brief review, *Universe*, 5 (10), No. 206 (2019)
<https://www.mdpi.com/2218-1997/5/10/206/htm>
- 81.** D.Zhang, JQ.Shi, Y.Sun, XH.Yang, LB.Ye:
Lorenz chaotic system generated from Shimizu-Morioka system or Finance system:

Differential geometric approach,
Acta Physica Sinica 68, 24, 240502 (2019)
<http://wulixb.iphy.ac.cn/fileup/PDF/2019-24-240502.pdf>

- 82.** S.Kumar:
Jumping Manifolds: Geometry Aware Dense Non-Rigid Structure from Motion,
Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition,
2019-June,8953811, pp. 5341-5350 (2019)
arXiv:1902.01077v1 [cs.CV]
- 83.** J.Smrek, I.Chubak, Ch.N.Likos, K.Kremer:
Active topological glass
Nature Communications 11 (1), No. 26 (2020)
<https://www.nature.com/articles/s41467-019-13696-z.pdf?draft=marketing>
- 84.** M.Le Delliou, E.Huguet, M.Fontanini:
Teleparallel theory as a gauge theory of translations: Remarks and issues,
Physical Review D, 101 (2), No. 024059 (2020)
arXiv:1910.08471v1 [gr-qc]
- 85.** B.J.Wolk:
The Riemann Curvature Tensor and Higgs Scalar Field within CAM Theory,
Adv. Appl. Clifford Algebras 30:4. (2020)
<https://link.springer.com/article/10.1007/s00006-019-1033-5>
- 86.** B.J.Wolk:
The underlying geometry of the CAM gauge model of the Standard Model of particle physics,
International Journal of Modern Physics A, 35, 7, 205003 (2020)
- 87.** A.Tantet, M.D.Chekroun, H.A.Dijkstra, J.D.Neelin:
Ruelle-Pollicott Resonances of Stochastic Systems in Reduced State Space,
Part II: Stochastic Hopf Bifurcation
Journal of Statistical Physics, 179, pp. 1403-1448 (2020)
arXiv:1705.07573v1 [math-ph]
- 88.** R.Kozlovsky, A.Graf, D.Kochan, K.Richter, C.Gorini:
Magnetococonductance, Quantum Hall Effect and Coulomb Blockade in Topological Insulator Nanocones,
Phys.Rev.Lett. 124 (12), No. 126804 (2020)
arXiv:1909.13124v1 [cond-mat.mes-hall]
- 89.** M.Pavelka, I.Peshkov, V.Klika:
On Hamiltonian continuum mechanics,
Physica D: Nonlinear Phenomena 408,132510 (2020)
arXiv:1907.03396 [physics.class-ph]
- 90.** A.Tiwari, T.Bzdušek:
Non-abelian topology of nodal-line rings in \mathcal{PT} -symmetric systems,
Phys.Rev. B 101 (19) 195130 (2020)
arXiv:1903.00018v1 [cond-mat.mes-hall]
- 91.** M.Sáreny:
Flux of radiation from pointlike sources in general relativity,
General Relativity and Gravitation 52 (8), 76 (2020)
arXiv:2001.10358v1 [gr-qc]
- 92.** P.Bóna:
Classical Systems in Quantum Mechanics,
Springer Nature Switzerland AG,
ISBN 978-3-030-45069-4 (Print), ISBN 978-3-030-45070-0 (eBook) (2020)
<https://link.springer.com/book/10.1007%2F978-3-030-45070-0>
arXiv:1911.02081v1 [math-ph]
- 93.** A.Graf, R.Kozlovsky, K.Richter, C.Gorini:
Theory of magnetotransport in shaped topological insulator nanowires,
Phys.Rev. B102, 165105 (2020)
- 94.** S.Fumeron, B.Berche, F.Moraes:

Improving student understanding of electrodynamics: the case for differential forms, American Journal of Physics, 88, 12, pp. 1083-1093 (2020)
arXiv:2009.10356 [gr-qc]

- 95.** E.Huguet, J.Queva, J.Renaud:
Massive scalar field on (A)dS space from a massless conformal field in \mathbb{R}^6 ,
Journal of Mathematical Physics 61, 053506 (2020)
arXiv:1606.07611 [gr-qc]
- 96.** P.Vágner, M.Pavelka, O.Esen:
Multiscale thermodynamics of charged mixtures,
Continuum Mechanics and Thermodynamics, 33, 1, 237-268 (2021)
arXiv:1903.01274v1 [physics.class-ph]
- 97.** B.J.Wolk:
The Underlying Fiber Bundle Geometry of the CAM Gauge Model
of the Standard Model of Particle Physics: SU(3),
Advances in Applied Clifford Algebras 31, 26 (2021)
<https://doi.org/10.1007/s00006-021-01127-6>
- 98.** M.Húska, M.Medfa, K.Mikula, S.Morigi:
Lagrangian evolution approach to surface-patch quadrangulation,
Applications of Mathematics, first online, pp. 1-43 (2021)
<https://articles.math.cas.cz/10.21136/AM.2021.0366-19>
- 99.** E.Huguet, M.Le Delliou, M.Fontanini, Z.C.Lin:
Teleparallel gravity as a gauge theory: Coupling to matter with Cartan connection,
Phys. Rev. D 103, 044061 (2021)
arXiv:2008.13493v1 [gr-qc]
- 100.** P.Constantin, Th.D.Drivas, D.Ginsberg:
On quasisymmetric plasma equilibria sustained by small force,
Journal of Plasma Physics, 87, 1 905870111 (2021)
arXiv:2009.08860v1 [math.AP]
- 101.** P.G.L.Porta Mana:
Dimensional analysis in relativity and in differential geometry,
European Journal of Physics, Volume: 42 , Issue: 4, Article Number: 045601 (2021)
Open Science Framework doi:10.31219/osf.io/jmqnu
pglpm191219-dimanalysis_diffmanifold.pdf
- 102.** E.Huguet, M.Le Delliou, M.Fontanini:
Cartan approach to Teleparallel Equivalent to General Relativity: A review,
International Journal of Geometric Methods in Modern Physics, 2152602988 (Scopus, in press) (2021)
arXiv:2101.07064v1 [gr-qc]
- 103.** M.Błaszak, K.Marciniak, A.Sergyeyev:
Deforming Lie algebras to Frobenius integrable nonautonomous Hamiltonian systems
Reports on Mathematical Physics, Volume 87, Issue 2, Pages 249-263 (2021)
arXiv:1712.08155 [nlin.SI]
- 104.** R.Ayoub, A.Hamdouni, D.Razafindralandy:
A new Hodge operator in discrete exterior calculus. Application to fluid mechanics.
Communications on Pure & Applied Analysis, 20(6), pp.2155-2185 (2021)
arxiv:2006.16930 [cs.CE]
- 105.** F.Z.Boudara, H.Bouzekri, Y.Benhammadi, P.-H.Cocquet, M.Rivaletto, L.Pécastaing,
A.Silvestre de Ferron, Y.Le Guer:
Accurate numerical modeling of convective heat transfer coefficient for a high power PLA-core toroidal
electromagnetic coupler subject to cooling.
International Journal of Thermal Sciences, Volume 170, 107125 (2021)
- 106.** L.Xu, H.Chen:
Transformation Metamaterials,
Advanced Materials, 2005489, DOI: 10.1002/adma.202005489 (2021)
- 107.** M.Błaszak, K.Marciniak, Z.Domański:

Systematic construction of non-autonomous Hamiltonian equations of Painlevé-type.

I. Frobenius integrability,

Studies in Applied Mathematics, <https://doi.org/10.1111/sapm.12473> (2021)

arXiv:2001.02881v1 [math-ph]

- 108.** M.Sýkora, M.Pavelka, M.La Mantia, D.Jou, M.Grmela:
On the relations between large-scale models of superfluid helium-4,
Phys. Fluids 33, 127124; doi: 10.1063/5.0070031 (2021)
<https://aip.scitation.org/doi/pdf/10.1063/5.0070031>
- 109.** X.Di, O.Tchernyshyov:
Conserved momenta of ferromagnetic solitons through the prism of differential geometry,
SciPost Phys. 11, 108 DOI: 10.21468/SciPostPhys.11.6.108 (2021)
arxiv:2105.03553v1 [cond-mat.mes-hall]
- 110.** Y.Zhang, A.Palhaa, M.Gerritsmaa, L.G.Rebholz:
A mass-, kinetic energy- and helicity-conserving mimetic dual-field discretization
for three-dimensional incompressible Navier-Stokes equations, part I: Periodic domains,
Journal of Computational Physics, 451, 110868, (2022)
doi: <https://doi.org/10.1016/j.jcp.2021.110868> arXiv:2104.13023 [math.NA]
- 111.** P.Pelech, K.Tůma, M.Pavelka, M.Šípka, M.Sýkora:
On compatibility of the Natural configuration framework with GENERIC:
Derivation of anisotropic rate-type models,
Journal of Non-Newtonian Fluid Mechanics 305,104808 (2022)
arXiv:2010.06903v1 [cond-mat.stat-phys]
- 112.** M.Błaszak, K.Marciniak:
Systematic construction of non-autonomous Hamiltonian equations of Painlevé-type.
III. Quantization,
Studies in Applied Mathematics, <https://doi.org/10.1111/sapm.12514> (2022)
arXiv:2205.07327v1 [nlin.SI] (2022)
- 113.** S.Choudhury, S.P.Selvam, K.Shirish:
Circuit complexity from supersymmetric quantum field theory with Morse function,
Symmetry, 14(8), 1656; <https://doi.org/10.3390/sym14081656> (2022)
arXiv:2101.12582v1 [hep-th]
- 114.** H. Rodríguez-Cortés, M. Velasco-Villa:
A new geometric trajectory tracking controller for the unicycle mobile robot,
Systems & Control Letters 168, 1053 (2022)
- 115.** R.Gonzalez, O.Tchernyshyov:
Gyroscopic tensor of a magnetic soliton,
Journal of Magnetism and Magnetic Materials 562,169749 (2022)
arXiv:2206.07158 [nlin.PS]
- 116.** A.L.Luna, H.R.Cortes, I.C.Vega, J.Martinez-Carranza:
An Immersion and Invariance Controller for Aerial Manipulation,
Unmanned Systems, <https://doi.org/10.1142/S2301385022410023> (2022)
- 117.** E.Huguet, J.Queva, J.Renaud:
Restriction of Laplace-de Rham operator on one-forms: from \mathbb{R}^{n+2} and \mathbb{R}^{n+1} ambient spaces
to embedded $(A)dS_n$ submanifolds,
Journal of Mathematical Physics 63(7):072301, DOI: 10.1063/5.0085573 (2022)
arXiv:2201.03253v1 [math-ph]
- 118.** K.Aggarwal, R.Noomen:
Graveyard orbits for future Mars missions,
Advances in Space Research, doi: <https://doi.org/10.1016/j.asr.2022.07.023> (2022)
<https://www.sciencedirect.com/science/article/pii/S027311772200624X>
- 119.** A.Nelson, T.Neupert, A.Alexandradinata, T.Bzdušek:
Delicate topology protected by rotation symmetry: Crystalline Hopf insulators and beyond,
Phys.Rev.B 106, 075124 (2022)
arXiv:2111.09365 [cond-mat.mes-hall]

- 120.** A.Stokes, A.Nazir:
Implications of gauge-freedom for nonrelativistic quantum electrodynamics,
Rev. Mod. Phys. 94, 045003 (2022)
arXiv:2009.10662 [quant-ph]
- 121.** O.Esen, M.Grmela, M.Pavelka:
On the role of geometry in statistical mechanics and thermodynamics I: Geometric perspective,
J. Math. Phys. 63, 122902; DOI: 10.1063/5.0099923 (2022)
arXiv:2205.10315v1 [cond-mat.stat-mech]
- 122.** O.Esen, M.Grmela, M.Pavelka:
On the role of geometry in statistical mechanics and thermodynamics II: Thermodynamic perspective,
J. Math. Phys. 63, 123305; DOI: 10.1063/5.0099930 (2022)
arXiv:2205.10392v1 [cond-mat.stat-mech]
- 123.** M.Błaszak:
Multi-component Painlevé ODEs and related non-autonomous KdV stationary hierarchies,
Studies in Applied Mathematics <https://doi.org/10.1111/sapm.12571> (2023)
arXiv:2209.03018 [nlin-SI]
- 124.** M.Hütter, M.Pavelka:
Particle-based approach to the Eulerian distortion field and its dynamics
Continuum Mechanics and Thermodynamics, DOI: 10.1007/s00161-023-01219-7 (2023)
- 125.** G.Romano, R.Barretta, M.Diaci:
Spacetime evolutive equilibrium in Nonlinear Continuum Mechanics
Continuum Mechanics and Thermodynamics, <https://doi.org/10.1007/s00161-023-01213-z> (2023)
<https://link.springer.com/article/10.1007/s00161-023-01213-z>
- 126.** S.Lee, K.Nakata, O.Tchernyshyov, Se Kwon Kim:
Magnon dynamics in a skyrmion-textured domain wall of antiferromagnets,
Phys. Rev. B 107, 184432 DOI:<https://doi.org/10.1103/PhysRevB.107.184432> (2023)
- 127.** B.J.Wolk:
A New Way to Construct the Riemann Curvature Tensor Using Geometric Algebra
and Division Algebraic Structure,
Advances in Applied Clifford Algebras volume 33, Article number: 42 (2023)
<https://link.springer.com/article/10.1007/s00006-023-01286-8>
- 128.** M.Sýkora, M.Pavelka, L.Restuccia, D.Jou:
Multiscale heat transport with inertia and thermal vortices,
Physica Scripta 98 105234 , DOI 10.1088/1402-4896/acf418 (2023)
arXiv:2209.08557 [cond-mat.mes-hall]
- 129.** A.Chen, Y.Guan, P.M.Lenggenhager, J.Maciejko, I.Boettcher, T.Bzdušek:
Symmetry and topology of hyperbolic Haldane models,
Phys. Rev. B 108, 085114 (2023)
- 130.** J.Figueroa-O’Farrill, A.Pérez, S.Prohazka:
Quantum Carroll/fracton particles,
JHEP (Journal of High Energy Physics), (10) 41 (2023)
arXiv:2307.05674 [hep-th]
- 131.** Ch.G.Weaver:
Hamilton, Hamiltonian Mechanics, and Causation,
Foundations of Science, DOI <https://doi.org/10.1007/s10699-023-09923-y> (2023)
arXiv:2011.07803 [physics.hist-ph]
- 132.** M.Šípka, M.Pavelka, O.Esen, M.Grmela:
Direct Poisson neural networks: Learning non-symplectic mechanical systems,
Journal of Physics A: Mathematical and Theoretical, 56 (49), DOI10.1088/1751-8121/ad0803 (2023)
arXiv:2305.05540 [math-ph] (2023)
- 133.** B.J.Wolk:
Quantum gravity through geometric algebra,
Journal of Physics A: Mathematical and Theoretical, 57(1),015402 (2024)
<https://iopscience.iop.org/article/10.1088/1751-8121/ad0ee7/meta>

- 134.** M.Sýkora, M.Pavelka, I.Peshkov, P.Minakowski, V.Klika, Ev.Romenski:
Comparison of the Symmetric Hyperbolic Thermodynamically Compatible framework
with Hamiltonian mechanics of binary mixtures,
Continuum Mech. Thermodyn. <https://doi.org/10.1007/s00161-024-01281-9> (2024)
arXiv:2201.04460v1 [physics.flu-dyn]
- 135.** M.Braß, Liang Si, K.Held:
Weyl points and spin-orbit coupling in copper-substituted lead phosphate apatite,
Phys. Rev. B 109, 085103 (2024)
arXiv:2310.09310 [cond-mat.mes-hall]
- 136.** W.Setoyama, Y.Hasegawa:
Lie Algebraic Quantum Phase Reduction,
Physical Review Letters 132(9) ; DOI: 10.1103/PhysRevLett.132.093602 (2024)
arXiv:2208.12006 [quant-ph]
137. *D.Kochan*:
Quantization of Equations of Motion,
Acta Polytechnica Vol. 47, No. 2-3, pp. 60-67 (2007)
138. *H.Hluchá*:
QCD corrections to the neutralino decay to an antibottom and a bottom quark within MSSM,
Master Thesis, Comenius University in Bratislava (2007)
139. *V.Polák*:
Relativistická mechanika kontinua,
PhD. práca, FMFI UK Bratislava (2007)
140. *J.Pampolina*:
Integrable Systems and the Spin Ruijsenaars-Schneider model,
Master Thesis, Universiteit Utrecht (2007)
141. *R.R.Gullapalli, T.Tabouillot, R.H.Mathura, P.J.Butler*:
Integrated multimodal microscopy, time resolved fluorescence, and optical-trap rheometry:
toward single molecule mechanobiology,
Journal of Biomedical Optics, vol. 12, issue 1, p. 014012, DOI: 10.1117/1.2673245 (2007)
<http://labs.adsabs.harvard.edu/ui/abs/2007JBO....12a4012G>
- 141'. *M.Fecko, D.Kochan, J.Korbaš, M.Niepel, P.Ševera*:
Zimná škola zo symplektickej geometrie,
Bratislava, proceedings, in Slovak (2007)
<http://www.dnp.fmph.uniba.sk/esf-cepos/symposium/ZimnaSkola/zbornik.pdf>
142. *R.Jantzen*:
Calculus, Differential Equations and Linear Algebra, Villanova University, course info
<http://www34.homepage.villanova.edu/robert.jantzen/courses/mat5600/resources.htm>
143. *F.Klinker*:
Seminar: Geometrie für Lehramt Gymnasium, Differentialgeometrie (Literatur)
http://www.mathematik.uni-dortmund.de/~klinker/SS08/seminar_SS08.html
144. *O.Gwilliam, A.Ford, B.Fang, J.Thomas, Y.Kahn*:
Students Mathematical Physics Seminar,
Dept. of Mathematics, Northwestern University
<http://math.northwestern.edu/~aford/SMPS/docs/smpsinfo.pdf>
145. *L.Feldkamp*:
Nichtabelsche Eichsymmetrie und Quantenchromodynamik,
Seminar "Theorie der Teilchen und Felder",
Westfälische Wilhelms-Universität Münster (2008)
<http://pauli.uni-muenster.de/tp/fileadmin/lehre/teilchen/ss08/NichtabelscheET.pdf>
146. *T.Rahn*:
Yang-Mills Configurations on Coset Spaces,
Diplomarbeit, Institut für Theoretische Physik, G.W.Leibniz Universität Hannover (2009)
<http://www.itp.uni-hannover.de/~lechtenf/Theses/rahn.pdf>
147. *B.Smith*:
The Differential Geometry of Instantons,

- Master Thesis, University of Waterloo (2009)
148. *S.Gottwald*:
Funktionalintegral für Eichpotentiale und bosonische Strings,
Bachelorarbeit im Studiengang Physik an der LMU München (2009)
 149. *M.Bakšová, A.Dekrét*:
On some cohomological properties of the Lie algebra of Euclidean motions,
Mathematica Bohemica, vol. 134, issue 4, pp. 337-348 (2009)
 150. *M.Bakšová*:
Aplikácie duálneho priestoru k Lie algebre euklidovských pohybov v robotike,
PhD. práca, FMFI UK Bratislava (2010)
 151. *F.Lubbe*:
Yang-Mills Solutions in Heterotic Flux Compactification,
Diploma Thesis, Universität Hannover (2010)
 152. *D.Karásek*:
Differential and difference equation invariant w.r.t. given solvable Lie algebra,
Research Project, Faculty of Nuclear Sciences and Physical Engineering, Prague (2010)
http://ssmf.fjfi.cvut.cz/studthes/2008/Karasek_res.pdf
 153. *P.Kotyczka*:
Transparente Dynamikvorgabe bei der nichtlinearen passivitätsbasierten Zustandsregelung,
Doktor-Ingenieurs Dissertation, Technische Universität München,
Fakultät für Maschinenwesen, Lehrstuhl für Regelungstechnik (2010)
 154. *M.S.Zhdanov, S.Constable*:
4. Electrical and Electromagnetic Methods,
Geophysics Today, pp. 53-87, Society of Exploration Geophysicists (2010)
 155. *J.Mikeš, M.Jukl, L.Juklová*:
Some results on traceless decomposition of tensors,
Journal of Mathematical Sciences, Vol.174, No.5, DOI:10.1007/s10958-011-0321-y (2011)
 156. *M.Poláček*:
A study of lepton flavor violating process $Z_0 \rightarrow l_i^+ l_j^-$ in Minimal supersymmetric standard model,
Master thesis, FMFI UK Bratislava (2011)
 157. *J.Vysoký*:
Poisson structures on Lie Groups,
Diploma thesis, FJFI ČVUT Praha (2011)
 158. *L.Tomek*:
Aplikácie subriemannovskej geometrie,
diplomová práca, FMFI UK Bratislava (2011)
 159. *D.Karásek*:
Differential and difference equation invariant w.r.t. given solvable Lie groups,
Diploma thesis, Faculty of Nuclear Sciences and Physical Engineering, Prague (2011)
http://ssmf.fjfi.cvut.cz/studthes/2008/Karasek_thesis.pdf
 160. *M.G.C.Grunewald*: Energiebasierte Regelung von Fahrzeugkolonnen in der Ebene,
Doktor Dissertation (= PhD. thesis), Technische Hochschule Aachen (2011)
 161. *A.G.Dedeyan*:
Killing spinors and Cartan connections - by Aram Garabed Dedeyan,
Thesis (M.S.), American University of Beirut, Department of Mathematics (2011)
<https://scholarworks.aub.edu.lb/handle/10938/8725>
 162. *G.Marino*:
Analysis of performance of automatic target recognition systems,
PhD. Thesis, Cranfield University (2011)
<https://scholarworks.aub.edu.lb/handle/10938/8725>
 163. *E.Zeidler*:
Quantum Field Theory III: Gauge Theory: A Bridge between Mathematicians and Physicists,
Springer-Verlag, Berlin Heidelberg (2011)
 164. *M.Škovran*:
Tensor perturbations in a universe with an elastic component,

- Project of PhD. Thesis, Comenius University in Bratislava (2011)
<http://sophia.dtp.fmph.uniba.sk/~skovran/materialy/minim.pdf>
165. *G.Karjala, L.Lew Yan Voon:*
 Treatment of a Ring with Periodic Atomic Placement through Differential Geometry, Explorations - The Journal of Undergraduate Research, Scholarship and Creativity at Wright State, 1 (1) (2012)
<http://corescholar.libraries.wright.edu/cgi/viewcontent.cgi?article=1003&context=explorations>
166. *O.Niemimäki:*
 Improved Quasi 3D Modelling and Simulation of Axial Flux Machines, Master Thesis, Tampere University of Technology (2012)
167. *E.Martínez Pascual:*
 Rescaling Constraints, BRST Methods, and Refined Algebraic Quantisation, PhD Thesis, University of Nottingham (2012)
http://eprints.nottingham.ac.uk/12433/1/PhDThesis_EMP_eVersion.pdf
168. *G.Szepesi:*
 Derivation of the fully electro-magnetic, non-linear, gyrokinetic VlasovMaxwell equations in a rotating frame of reference for GKW with Lie transform perturbation method, GKW (Gyro-Kinetic Workshop) (2012)
http://www.gkw.org.uk/tikiwiki/tiki-download_wiki_attachment.php?attId=59
169. *M.Scholtz:*
 Helical symmetry, spinors and periodic solutions in general relativity: Spinors and conformal techniques in general relativity with applications to periodic solutions of Einstein's equations, Lambert Academic Publishing (2012)
<https://www.amazon.com/Helical-symmetry-periodic-solutions-relativity/dp/3659285803>
170. *J.Syska:*
 Metoda największej wiarygodności i informacja Fishera w fizyce i ekonofizyce, Skrypt dla studentów ekonofizyki, Instytut Fizyki, Uniwersytet Śląski, Katowice (2013)
<http://vm1.cko.us.edu.pl/ekonofizyka/images/f/f2/Fisher.pdf>
<http://arxiv.org/pdf/1211.3674v1.pdf>
171. *B.Schroers:*
 Gauge Theory (SMSTC 2013/14, Lecture 2)
http://www.macs.hw.ac.uk/~bernd/GaugeLecture2_notes.pdf
172. *B.Schroers:*
 Gauge Theory (SMSTC 2013/14, Lecture 4)
http://www.macs.hw.ac.uk/~bernd/GaugeLecture4a_notes.pdf
173. *W.Arter:*
 An Anti-Perfect Dynamo Result, physics.plasm-ph (2013)
<http://arxiv.org/pdf/1309.7167.pdf>
174. *W.Arter:*
 Geometric Results for Compressible Magnetohydrodynamics (2013)
<http://arxiv.org/pdf/1309.7172.pdf>
175. *J.A.Krommes, G.W.Hammett:*
 Report of the Study Group GK2 on Momentum Transport in Gyrokinetics, PPPL Technical Report # 4945 (2013)
http://w3.pppl.gov/~hammett/gyrofluid/papers/2013/gyrokinetics_report_PPPL.pdf
176. *R.Hofsteenge:*
 Computational Methods for the Long-Term Propagation of Space Debris Orbits, Master Thesis, Delft University of Technology (2013)
177. *L.S.M.Al-qahtani:*
 Geometric Flows on Soliton Moduli Spaces, PhD. Thesis, The University of Leeds (2013)
178. *M.Pile:*
 On Einstein-Cartan Theory: I. Kinematical description, arXiv:1311.7360 [gr-qc] (2013)
179. *V.Vrábel:*

- Advanced numerical techniques in partial differential equations:
Non-standard boundary conditions and regularization of inverse problems
PhD. Thesis, Universiteit Gent (2013)
<https://biblio.ugent.be/publication/4088777/file/4336658>
180. *M. Šrámek*:
Částice se spinem v algebraicky speciálních prostoročasech,
Diplomová práce, Ústav teoretické fyziky, Univerzita Karlova v Praze (2013)
<https://dspace.cuni.cz/handle/20.500.11956/61468>
181. *L. Holka*:
Spinorial techniques for constructing quasi-local quantities in general relativity,
diploma thesis, Charles University in Prague (2014)
182. *I. Avramidi*:
Introduction to Differential Geometry, MATH 442, Topics in Differential Geometry, MATH 542,
Lecture Notes, New Mexico Institute of Mining and Technology, Socorro (2014)
<http://infohost.nmt.edu/~iavramid/notes/dg442.pdf>
<http://infohost.nmt.edu/~iavramid/notes/topicsdiffgeom.pdf>
183. *A. Stokes*:
On gauge freedom and subsystems in quantum electrodynamics,
PhD. Thesis, The University of Leeds (2014)
<http://etheses.whiterose.ac.uk/6833/1/thesis.pdf>
184. *Xun Wang*:
Force-free magnetospheres, Kerr-AdS black holes and holography,
PhD. Thesis, The University of Victoria (2014)
https://dspace.library.uvic.ca/bitstream/handle/1828/5811/Wang_Xun_PhD_2014.pdf
185. *O. Valdivia*:
Transgression forms as source for topological gravity and Chern-Simons-Higgs theories,
PhD. Thesis, Heriot-Watt University (2014)
<http://arxiv.org/pdf/1411.1780v1.pdf>
186. *A.M.A. Abubaker*:
Applications of Differentiable Manifolds and Lie Groups to Partial Differential Equations,
PhD. Thesis, Sudan University of Science and Technology (2014)
<http://repository.sustech.edu/handle/123456789/9930?show=full>
187. *De-Sheng Li*:
Square Root of Inverse Metric: The Geometry Background of Unified Theory?,
arXiv:1412.2578 [hep-th] (2014)
188. *A.J. Zerouali*:
Inégalité de Hitchin-Thorpe pour variétés à bords et à cusps feuilletés,
Mémoire, Université du Québec à Montréal, Maîtrise en mathématiques (2014)
<http://www.archipel.uqam.ca/7162/>
189. *D.F. Rengifo*:
Teoría de Chern-Simons D=3 y su Relación con Teoría de Campos Conformes,
Tesis de Maestría, Universidad del Valle (2014)
<http://bibliotecadigital.univalle.edu.co>
190. *B. Smith*:
Singular G -Monopoles on $S^1 \times \Sigma$,
PhD thesis, McGill University (2014)
<https://oatd.org/oatd/record?record=oai>
191. *Z. Domański*:
Admissible invariant canonical quantizations of classical mechanics,
PhD. Thesis, Uniwersytet Adama Mickiewicza w Poznaniu (2015)
https://repozytorium.amu.edu.pl/jspui/bitstream/10593/12664/1/Ziemowit_Domański_-_phd_thesis.pdf
192. *A. Zajac*:
Gauge Theories on Branes and Nilpotent Orbits,
MSc. Thesis, Imperial College, London (2015)

193. *Jinsong Yang, Yongge Ma:*
Graphical method in loop quantum gravity: I. Derivation of the closed formula for the matrix element of the volume operator,
arXiv:1505.00223 [gr-qc] (2015)
194. *J.Mikeš, E.Stepanova, A.Vanžurová et.al.:*
Differential geometry of special mappings,
Palacký University, Olomouc, ISBN 978-80-244-4671-4 (2015)
195. *M.Škovran:*
Cosmological perturbations in a universe with an elastic component,
PhD. Thesis, Comenius University in Bratislava (2015)
https://inis.iaea.org/search/search.aspx?orig_q=RN:50064922
196. *R.Jante:*
On the Spectrum of some Gravitational Instantons,
PhD. Thesis, Heriot-Watt University (2015)
<http://inspirehep.net/record/1501141/files/JanteR.1115.macs.pdf>
197. *P.Stampolidis:*
Reduction theorem for symplectic and Poisson manifolds,
Master thesis, Aristotle University of Thessaloniki (2015)
<http://ikee.lib.auth.gr/record/282664/files/GRI-2016-16367.pdf>
198. *M.Pavelka:*
Thermodynamic analysis of processes in Hydrogen fuel cells,
Doctoral Thesis, Charles University in Prague (2015)
<https://dspace.cuni.cz/handle/20.500.11956/79436>
199. *Loumi-Fergane Halima:*
Geometrie Multisymplectique et structure k -cosymplectique pour les theories de champs et la mecanique relativiste,
Doctorat en Physique, Université des sciences et de la technologie d'Oran - Mohamed-Boudiaf (2015)
Éditions universitaires européennes, ISBN-10: 6202268166 (2017)
200. *M.Sárený:*
Gravitational lensing in the presence of plasma,
Master thesis, FMFI UK Bratislava (2016)
201. *D.J.Jackson:*
Unification in One Dimension,
arXiv:1606.09568 [physics.gen-ph] (2016)
202. *M.Pilc:*
Covariant Quantum Gravity with Continuous Quantum Geometry I:
Covariant Hamiltonian Framework
arXiv:1609.08021 [gr-qc] (2016)
203. *D.J.Jackson:*
Construction of a Kaluza-Klein type Theory from One Dimension,
arXiv:1610.04456 [physics.gen-ph] (2016)
204. *P.Fan, H.Qin, J.Liu, N.Xiang, Z.Yu:*
Geometric field theory and weak Euler-Lagrange equation
for classical relativistic particle-field systems,
arXiv:1610.04979 [physics.plasm-ph] (2016)
205. *A.Flandera:*
Geometry of isolated horizons,
Master thesis, Charles University in Prague
arXiv:1611.02215 [gr-qc] (2016)
206. *Ch.Ch.Muminov, D.A.Sattarov, Ju.Jussefi:*
Generalized Berry's Phase for $S=1$ Spin System,
Doklady Akademii Nauk Respubliki Tajikistan, 59. No.9-10 (in Russian) (2016)
http://journals.anrt.tj/files/00023469.2016.59_09-10/387-391.pdf
207. *J.Pejcha:*
Lorentz group and its application in the theory of quantum gravity,

- Master Thesis, Institute of Theoretical Physics, Charles University in Prague (2016)
<https://is.cuni.cz/webapps/zzp/detail/161483/?lang=cs>
208. *B.Solheim*:
 Loops, strings and noncommutative geometry,
 MSc. Thesis, Department of Physics, University of Oslo (2016)
<https://www.duo.uio.no/bitstream/handle/10852/53772/FinalVersion.pdf?sequence=1>
209. *L.Combi*:
 Equivalencia entre Relatividad General y Gravedad de Torsión,
 Tesis de Licenciatura (= Bachelor) en Física, Universidad Nacional de La Plata (2016)
210. *Minh Truong*:
 Ultra-Hyperbolic Equations,
 talk at “Miami 2016”, University of Miami (2016)
<https://cgc.physics.miami.edu/Miami2016/Truong.pdf>
211. *F.Dadam, Y.X.Martins*:
 Topologia, Geometria e Buracos Negros: Um guia para físicos e matemáticos,
 Novas Edições Acadêmicas, ISBN-10: 9783841718242 (2016)
212. *S.P.Sahoo, A.Jena, S.R.Sahoo, K.C.Pati*:
 Optimal Control, Stability and Numerical Integration on SU(3),
 International Journal of Applied and Computational Mathematics, vol. 3, pp. 1661-1675 (2017)
213. *B.Jurčo, J.Vysoký*:
 Courant Algebroid Connections and String Effective Actions
 Noncommutative Geometry and Physics 4, pp.211-266, World Scientific (2017)
 arXiv:1612.01540 [math-ph]
214. *A.Janečka, M.Pavelka*:
 Gradient dynamics and entropy production maximization
 J. Non-Equilib. Thermodyn. 43(1), 1-19 (2017)
 arXiv:1610.05499 [physics.flu-dyn]
215. *L.Ptáčková*:
 A Discrete Wedge Product on Polygonal Pseudomanifolds,
 PhD. Thesis, Instituto Nacional de Matemática Pura e Aplicada, Rio de Janeiro, Brazil (2017)
http://www.visgraf.impa.br/Data/RefBib/PS_PDF/student-phd-2017-02-lenka-ptackova/Thesis.Lenka.pdf
216. *E.Deumens*:
 The Principles of Quantum Mechanics,
 University of Florida (2017)
 After publication in print or e-book: ©2018 Oxford University Press
<https://people.clas.ufl.edu/deumens/files/Principles-TOC.pdf>
217. *G.Gaeta, M.A.Rodríguez*:
 Lectures on Hyperhamiltonian Dynamics and Physical Applications,
 Springer International Publishing AG (2017)
218. *S. de Marco*:
 Output Regulation for Systems with Symmetry,
 Dottorato di Ricerca, Università di Bologna (2017)
<http://amsdottorato.unibo.it/7936/1/thesis.pdf>
219. *M.Pavelka, V.Klika, M.Grmela*:
 Statistical mechanics of Landau damping
 arXiv:1711.10022v1 [physics.flu-dyn] (2017)
220. *T.Bzdušek*:
 Symmetry and topology of nodal semimetals,
 Doctoral Thesis, ETH Zürich (2017)
<https://www.research-collection.ethz.ch/handle/20.500.11850/216959>
221. *M.Pavelka, V.Klika, O.Esen, M.Grmela*:
 Electronic Supplementary to
 ”A hierarchy of Poisson brackets in non-equilibrium thermodynamics” (2017)
https://www.researchgate.net/profile/Michal_Pavelka/publication/

- 305243584_Electronic_supplementary/links/5785d37f08ae3949cf53946c.pdf
222. *N.Bodendorfer*:
Introduction to Quantum Gravity I (lecture notes, 100pp.),
Institute for Theoretical Physics, University of Regensburg (2017)
http://homepages.uni-r.de/~bon39708/lectures/2017_ws/skript_ws_2017.pdf
223. *F.P.Schuller*:
Lectures on the Geometric Anatomy of Theoretical Physics,
Friedrich-Alexander-Universität Erlangen-Nürnberg, Institut für Theoretische Physik III,
Course delivered in the 2013/14 academic year, Last updated on October 25, 2017
<https://www.scribd.com/document/357192605>
224. *D.Rist*:
Fuzzy spaces,
MSc Dissertation in Gravity, Particles and Fields (supervisor Prof.J.Barrett)
School of Mathematical Sciences, University of Nottingham (2017)
225. *J.Křap*:
Kvantování Weylovy gravitace,
Bakalářská práce, FJFI ČVUT Praha (2017)
226. *M.Pavelka, V.Klika*:
Self-regularization of Hamiltonian systems,
arXiv:1810.08072v1 [physics.comp-ph] (2018)
227. *T.Sekera*:
Quantum transport of fermions in honeycomb lattices and cold atomic systems,
Inauguraldissertation, Universität Basel (2018)
<https://edoc.unibas.ch/65479/1/main.pdf>
228. *B.Lessel*:
Shape space in terms of Wasserstein geometry and applications to quantum physics,
Dissertation zur “Doctor rerum naturalium”, Universität Göttingen (2018)
<https://d-nb.info/1172500770/34>
229. *B.Schroers*:
Geometry and Topology 2, Lecture 3: Gauss Curvature,
SMSTC = Scottish Mathematical Sciences Training Centre (2017/18)
Lecturer: Diletta Martinelli, Notes by Bernd Schroers (2018)
230. *J.Sedlmeir*:
The Vlasov equation for multiple particle types,
Master’s Thesis, Elite Master Course, Ludwig-Maximilians-Universität München (2018)
<https://www.theorie.physik.uni-muenchen.de/TMP/theses/thesissedlmeir.pdf>
231. *K.Šramková*:
Frölicherova-Nijenhuisova závorka a její aplikace v geometrii a variačním počtu,
Diplomová práce (Master’s Thesis), Ústav matematiky, VUT v Brně (2018)
https://www.vutbr.cz/www_base/zav_prace_soubor_verejne.php?file_id=173348
232. *Y.X.Martins*:
Categorical and Geometrical Methods in Physics,
Master Thesis, Universidade Federal de Minas Gerais (2018)
<http://www.mat.ufmg.br/posgrad/wp-content/uploads/TesesDissertacoes/Diss301.pdf>
233. *M.S.Zhdanov*:
Foundations of Geophysical Electromagnetic Theory and Methods,
Elsevier, 2-nd edition, 804 pp. (2018)
234. *M.Klimek*:
Space-Time Discretization of Maxwell’s Equations in the Setting of Geometric Algebra,
PhD. Thesis, Technische Universität Darmstadt (2018)
URL: <http://tuprints.ulb.tu-darmstadt.de/id/eprint/7232>
<https://core.ac.uk/download/pdf/147561584.pdf>
235. *M.Scandi, M.Perarnau-Llobet*:
Thermodynamic length in open quantum systems,
Quantum 3, 197 (2019)

- arXiv:1810.05583v1 [quant-ph]
236. *Jian-Zhou Zhu*:
v2.: The geometry and physics of the Taylor-Proudman theorems in $E^{d \geq 3}$, the compressible flows and the plasma analogues,
arXiv:1905.11783v2 [math.AP] (2019)
v3.: Fast rotating flows in high spatial dimensions,
arXiv:1905.11783v3 [math.AP] (2020)
237. *M. Błaszak*:
Quantum versus Classical Mechanics and Integrability Problems (book),
Springer Nature Switzerland AG, DOI: 10.1007/978-3-030-18379-0_2 (2019)
238. *A.R.A.R. A. Gadir, R.M.H. Ibrahim, N.H.E. Eljaneid*:
On Cotangent Bundles Hamiltonian Tubes Theorem and Its Some Applications in Reduction Theory, American Journal of Mathematical and Computer Modelling, Volume 4, Issue 2, Page: 31-35 (2019)
<http://www.ajmcm.org/article/616/10.11648.j.ajmcm.20190402.11>
239. *P. Vágner*:
Thermodynamic analysis of solid oxide cells,
Doctoral Thesis, Mathematical Institute, Charles University (2019)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/107797/140075245.pdf?sequence=1>
240. *H.M. Gaway*:
Curvas de Rotação Galácticas em Teorias Métricas da Gravitação,
Dissertação (Mestrado), Brasil, Universidade Federal de São Carlos UFSCar (2019)
https://repositorio.ufscar.br/bitstream/handle/ufscar/11503/Curvas_de_Rotação_Galácticas_em_Teorias_Métricas_da_Gravitação.pdf?sequence=3
241. *J. Rammensee*:
Semiclassical Treatment of Interference Phenomena in Bosonic Quantum Many-Body Systems,
PhD Thesis, Universität Regensburg (2019)
https://epub.uni-regensburg.de/40547/1/Rammensee_PhDthesis.pdf
242. *R. T. Sato*:
Discrete Mechanics for Forced and Constrained Systems,
Doctoral Thesis, ICMAT, Universidad Complutense, Madrid (2019)
https://www.icmat.es/Thesis/2019/Tesis_RodrigoSato.pdf
243. *M. Zíka*:
Generalized Complex Geometry,
Bachelor Thesis, Mathematical Institute of Charles University, Prague (2019)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/110037/130266949.pdf?sequence=1>
244. *Mak Pavičević*:
Conservation Laws with respect to Curved Backgrounds associated with Black Holes and Cosmological Models,
Bachelor Thesis, Institute of Theoretical Physics, Charles University in Prague (2019)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/110023/130266935.pdf?sequence=1>
245. *S.Q. de los Ríos*:
The Hodge star operator for people not quite in a hurry
homotopico.com (2019),
https://www.homotopico.com/assets/docs/pdf_posts/hodge-star.pdf
246. *S.Q. de los Ríos*:
What is a gauge field? Part 1: Electromagnetism
homotopico.com (2019),
https://www.homotopico.com/assets/docs/pdf_posts/gauge-fields-01.pdf
247. *M. Tichý*:
Invariant solutions to and qualitative analysis of reaction-diffusion problems on evolving domains,
Master Thesis, FJFI ČVUT, Prague (2019)
https://physics.fjfi.cvut.cz/publications/mf/2019/dp_mf_19_tichy.pdf
248. *A. Y. Kamenshchik*:
The Bianchi Classification of the Three-Dimensional Lie Algebras and Homogeneous Cosmologies and the Mixmaster Universe,

- In: Cacciatori S., Güneysu B., Pigola S. (eds): Einstein Equations: Physical and Mathematical Aspects of General Relativity, DOMOSCHOOL, Birkhäuser, Cham, (2019)
https://doi.org/10.1007/978-3-030-18061-4_3
https://link.springer.com/chapter/10.1007/978-3-030-18061-4_3
249. *D. Mirfendereski*:
 Scaling Solutions of N=2 Supergravity and Holography,
 PhD Thesis, Bogazici University (2019)
<https://inspirehep.net/literature/1817448>
250. *M. Díaz*:
 Semiclassical consistent constraints with moments in spherically symmetric Quantum Gravity,
 Master Thesis, The Pennsylvania State University, The Graduate School (2019)
https://etda.libraries.psu.edu/files/final_submissions/20717
251. *S. Beznák, P. Prešnajder*:
 Some oscillatory representations of fuzzy conformal group $SU(2, 2)$ with positive energy,
 arXiv:2001.08408v1 [math-ph] (2020)
252. *P. Čišovský*:
 Solutions of Friedmann equation and cosmological horizons,
 Bachelor's Thesis, FMFI, Comenius University in Bratislava (2020)
253. *A. Miklášová*:
 Universe expansion and dark matter freeze-out in 1 + 1 dimension,
 Bachelor Thesis, FMFI, Comenius University in Bratislava (2020)
254. *M. Sárený*:
 Optical properties of a black hole - plasma system,
 Dissertation Thesis, FMFI, Comenius University in Bratislava (2020)
255. *R. Kozlovsky*:
 Magnetotransport in 3D Topological Insulator Nanowires,
 Dissertation (Dr. rer. nat.), Fakultät für Physik der Universität Regensburg (2020)
https://epub.uni-regensburg.de/43040/1/Dissertation_Kozlovsky_PHY_Bd.54_WEB.pdf
256. *H. Ennes*:
 A Review of differential geometry methods in classical and quantum mechanics through quantization,
 Graduation with Honors in Physics Thesis, Whitman College (2020)
<https://arminda.whitman.edu/theses/2020045>
257. *Isha Kotecha*:
 On Generalised Statistical Equilibrium and Discrete Quantum Gravity,
 Dissertation (Dr. rer. nat.), Spezialisierung: Theoretische Physik,
 Mathematisch-Naturwissenschaftlichen Fakultät der Humboldt-Universität zu Berlin
 arXiv:2010.15445v1 [gr-qc] (2020)
258. *A.A. Barp*:
 The bracket geometry of statistics,
 PhD Thesis, Department of Mathematics, Imperial College London (2020)
259. *R.O. Richburg*:
 Going in Circles: An Exploration of Functions into the Circle Group,
 Honors Thesis, Department of Mathematics and Statistics, Eastern Kentucky University (2020)
https://encompass.eku.edu/cgi/viewcontent.cgi?article=1795&context=honors_theses
260. *G.F. Torres del Castillo*:
 Differentiable Manifolds, A Theoretical Physics Approach,
 2nd edition: Springer Nature Switzerland AG (2020)
261. *Khai Phan*:
 Geometrical viewpoint of quantum mechanics (Wavefunctions on curved spaces),
 Bachelor of Science Thesis, Tampere University (2020)
<https://trepo.tuni.fi/bitstream/handle/10024/124686/PhanKhai.pdf?sequence=2&isAllowed=y>
262. *D.A. Muñoz Ovalle*:
 Masa y energia en relatividad general,
 Trabajo fin de grado en física, Universidad de Granada (2020)
<http://www.ugr.es/~bjanssen/text/TFG-AlejandroMunozOvalle.pdf>

263. *Kapish Aggarwal*:
Graveyard Orbits Around Mars,
Master thesis, Delft University of Technology (2020)
<https://repository.tudelft.nl/islandora/object/uuid>
264. *M. Crasmareanu*:
The Hopf-Levi-Civita data of two-dimensional metrics,
Chapter in: S.Hoskova-Mayerova,C.Flaut,F.Maturo (Eds.): Algorithms as a Basis of Modern Applied
Mathematics, Studies in Fuzziness and Soft Computing, volume 404,
Springer, Hardcover ISBN 978-3-030-61333-4 (2021)
<https://www.springer.com/gp/book/9783030613334>
265. *E.Malm*:
Numerical and experimental aspects of coherent lensless imaging,
Doctoral Thesis, Lund University, Department of Physics (2021)
https://lup.lub.lu.se/search/ws/files/97186307/e_nailing_thesis_malm.pdf
266. *P.Pelech, K.Tuma, M.Pavelka, M.Šípka, M.Sýkora*:
On compatibility of the natural configuration framework with general equation for non-equilibrium
reversible-irreversible coupling (GENERIC): Derivation of anisotropic rate-type models
Preprint No. 2856, Weierstraß-Institut für Angewandte Analysis und Stochastik,
Leibniz-Institut im Forschungsverbund Berlin e. V. (2021)
http://www.wias-berlin.de/preprint/2856/wias_preprints_2856.pdf
267. *D.Rod*:
Interakce testovacích částic s impulzními gravitačními vlnami,
Bakalářská práce, Ústav teoretické fyziky, MFF, Univerzita Karlova (2021)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/128234/130308959.pdf?sequence=1>
268. *B.J.C.B. de Barros*:
An exotic Universe: from dark energy to wormholes,
Documento especialmente elaborado para a obtenção do grau de doutor (2021)
Departamento de Física da Faculdade de Ciências da Universidade de Lisboa
<https://repositorio.ul.pt/handle/10451/49743>
269. *G.Romano*:
Electrodynamics without Lorentz force,
arXiv:1209.5960v3 [physics.gen-ph] (2021)
270. *J.Delso*:
On Twisted space,
OSP Journal of Physics and Astronomy 2: JPA-2-123 (2021)
<https://www.ospublishers.com/pdf/JPA-2-123.pdf>
271. *P.Jiroušek*:
Modified Gravity and Cosmic Acceleration: Now and in the Early Universe
PhD thesis, Charles University, Institute of Theoretical Physics (2021)
<https://dspace.cuni.cz/handle/20.500.11956/172136>
272. *F.Corelli*:
Instability of Schwarzschild Black Holes in Einstein-scalar-Gauss-Bonnet Gravity: Perturbative
Approach and Time-Domain Analysis,
Masters thesis, Sapienza University of Rome
arXiv:2112.12048v1 [gr-qc] (2021)
273. *M.H.Nöth*:
On Relativistic Interaction of Electric Charges and External Fields in Quantum Electrodynamics
PhD thesis, Ludwig-Maximilians-Universität München (2021)
<https://edoc.ub.uni-muenchen.de/29250/>
274. *L.Dong*:
Geometrodynamics in crystals with space-time periodicity and deformation
PhD thesis, University of Texas at Austin (2021)
<http://web.math.ku.dk/noter/filer/phd22mf.pdf>
275. *P.Press*:
Jednosmyčkové beta-funkce skalárních vazeb v minimálním SO(10) Higgsově modelu

- diplomová práce (Master thesis), Univerzita Karlova, Matematicko-fyzikální fakulta, Praha (2021)
<https://dspace.cuni.cz/handle/20.500.11956/172163>
276. *T. Červeň:*
 Some topics in differential and generalized geometry with applications in physics
 Bachelor thesis, Mathematical Institute of Charles University, Prague (2021)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/172164/130315964.pdf?sequence=1&isAllowed=y>
277. *J. Delso:*
 On Gravitomagnetic Tensor Derived from Energy-Momentum 1-Form in a Riemann-Cartan Space with a Metric Connection,
 OSP Journal of Physics and Astronomy 3: JPA-3-126 (2022)
<https://www.ospublishers.com/pdf/JPA-2-126.pdf>
278. *Isha Kotecha:*
 Thermal Group Field Theory.
 In: On Generalised Statistical Equilibrium and Discrete Quantum Gravity pp 95-166.
 Springer, Cham. https://doi.org/10.1007/978-3-030-90969-7_5 (2022)
279. *S. Fumeron:*
 Transport phenomena in the presence of curvature and torsion. From cosmology to functional materials
 French habilitation thesis to supervise research, Université de Lorraine (2022)
http://factuel.univ-lorraine.fr/sites/factuel.univ-lorraine.fr/files/files/2022/u12941/abstract_hdr_monsieur_fumeron_sebastien.pdf
280. *M. Fialová:*
 Aharonov-Casher theorem for manifolds with boundary
 PhD thesis, University of Copenhagen, Department of Mathematical Sciences (2022)
<http://web.math.ku.dk/noter/filer/phd22mf.pdf>
281. *B. Leandro, R. Novais, H. dos Reis:*
 Curve Shortening Flow on T^2
 arXiv:2204.06678 [math.DG] (2022)
282. *M. Hrmó:*
 Behaviour of microscopic black holes,
 Bachelor Thesis, FMFI, Comenius University in Bratislava (2022)
283. *M. Stano:*
 Gravitational waves in the expanding universe,
 Bachelor Thesis, FMFI, Comenius University in Bratislava (2022)
284. *P. Čišovský:*
 Cosmological perturbations in universe with dark energy,
 Master Thesis, FMFI, Comenius University in Bratislava (2022)
285. *D. Guerrero Domínguez:*
 Introduction to Conformal Geometry and Penrose Diagrams,
 Treballs Finals de Grau de Matemàtiques, Facultat de Matemàtiques, Universitat de Barcelona (2022)
<http://diposit.ub.edu/dspace/handle/2445/186532>
286. *H. R. Cortés:*
 Aportaciones al control de vehículos aéreos no tripulados en México,
 (Mexican researchers contributions to unmanned aerial vehicles control)
 Revista Iberoamericana de Automática e Informática Industrial 00 1-12 (2022)
<http://ojs.upv.es/index.php/RIAI/article/download/16870/15101>
287. *V. I. Spasova:*
 Degrees of Freedom in a Multipole Expansion of an Electromagnetic Current Over a Worldline
 Master thesis, School of Physics and Astronomy, Lancaster University (2022)
<https://eprints.lancs.ac.uk/id/eprint/172398/1/2022SpasovaMSbyResearch.pdf>
288. *R. Azuaje:*
 Time-dependent moment map, reduction and Lie integrability for time-dependent Hamiltonian systems,
www.researchgate.net (2022)
289. *M. Le Delliou:*
 Advanced General Relativity Notes,

- arXiv:2208.02506 [gr-qc] (2022)
290. *De-Sheng Li*:
Pati-Salam model in curved space-time and sheaf quantization,
arXiv:2208.05942 [hep-th] (2022)
 291. *W.Setoyama, Y.Hasegawa*:
Quantum Phase Reduction for Continuous Measurement,
arXiv:2208.12006 [quant-ph] (2022)
 292. *Š. Vedral*:
The Role of Shape Operator in Gauge Theories,
Master thesis, Czech Technical University in Prague (2022)
https://dspace.cvut.cz/bitstream/handle/10467/100916/F4-DP-2022-Vedral-Simon-dp_mf_22_vedl.pdf
 293. *J.Křiš*:
Supersymmetric Quantum Mechanics meets Topology,
Bachelor Thesis, Institute of Particle and Nuclear Physics, Charles University, Prague (2022)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/175665/130342134.pdf?sequence=1>
 294. *M.Burýšek*:
The Connection between Continuum Mechanics and Riemannian Geometry,
Bachelor Thesis, Mathematical Institute of Charles University, Prague (2022)
<https://dspace.cuni.cz/bitstream/handle/20.500.11956/175698/130333628.pdf?sequence=1>
 295. *A.Martínez-Ramírez Marco, H.Rodríguez-Cortés, J.Corona-Sánchez José*:
Lateral guidance and control for a fixed-wing aircraft,
13-th International Micro Air Vehicle Conference, IMAV2022-1 (2022)
Delft, The Netherlands, September 12 -16, 2022
<https://www.imavs.org/papers/2022/1.pdf>
 296. *A.Cavallar Oriol*:
The Chern-Simons Topological Quantum Field Theory,
Bachelor thesis, both in Mathematics and Engineering Physics,
Caltech, Pasadena and Universitat Polyècnica de Catalunya, Barcelona (2022)
https://upcommons.upc.edu/bitstream/handle/2117/374157/Bachelor_Thesis_Caltech_June_28.pdf?sequence=1&isAllowed=y
 297. *L.Werne*:
Mechanising Newtonian Mechanics in Isabelle,
Honours Project, Artificial Intelligence and Mathematics, University of Edinburgh (2022)
https://project-archive.inf.ed.ac.uk/ug4/20223088/ug4_proj.pdf
 298. *A.Ajji, J.Chaouki, O.Esen, M.Grmela, V.Klika, M.Pavelka*:
On geometry of multiscale mass action law and its fluctuations,
Physica D: Nonlinear Phenomena 133642, doi: <https://doi.org/10.1016/j.physd.2022.133642> (2022)
arXiv: 2103.11004 [physics.chem-ph]
 299. *Siwaporn Sungted*:
The multi-time propagators and the consistency condition,
Master thesis, Graduate School of Naresuan University, Mueang Phitsanulok District, Thailand (2022)
<https://www.if.nu.ac.th/wp-content/uploads/2023/01/The-multi-time-propagators-and-the-consistency-condition.pdf>
 300. *M.Martínez-Ramírez, H.Rodríguez-Cortés*:
Lateral directional geometric control for small fixed-wing aircraft,
Memorias del 2022 Congreso Nacional de Control Automático, Tuxtla Gutiérrez, México (2022)
<https://revistadigital.amca.mx/wp-content/uploads/2022/11/0088.pdf>
 301. *M.Martínez-Ramírez*:
Seguimiento de caminos para la dinámica lateral-direccional de una aeronave de ala fija,
Tesis Maestro en Ciencias, Cinvestav IPN, Zacatenco, Mexico City (2022)
<https://repositorio.cinvestav.mx/bitstream/handle/cinvestav/4252/SSIT0019255.pdf?sequence=1>
 302. *Q.Kang, K.Zhao, Y.Song, S.Wang, W.P.Tay*:
Neural Hamiltonian Flows in Grap Neural Networks,
ICLR 2023 Conference (2023)
<https://openreview.net/pdf?id=lhPLT5gnBrH>

303. *J.Delso*:
On Torsion Tensor in a Rearranged Kerr's Metric with a Generalized Clifford Algebra,
OSP Journal of Physics and Astronomy 4: JPA-4-145 (2023)
<https://www.ospublishers.com/On-Torsion-Tensor-in-a-Rearranged-Kerr's-Metric-with-a-Generalized-Clifford-Algebra.html#Article>
304. *R.Alawadhi*:
Aspects of the Classical Double Copy,
PhD. thesis, Centre for Theoretical Physics, Queen Mary University of London (2023)
https://qmro.qmul.ac.uk/xmlui/bitstream/handle/123456789/84960/approved_thesis.pdf?sequence=4&isAllowed=y
305. *B.J.Wolk*:
Building the Standard Model particles and fields within a sphere fiber bundle framework
Physics Open, <https://doi.org/10.1016/j.physo.2023.100153> (2023)
<https://www.sciencedirect.com/science/article/pii/S2666032623000182>
306. *E.Alesci, I.Mäkinen, J.Yang*:
Graphical Calculus of Spin Networks,
In: Bambi,C., Modesto,L., Shapiro,I.(eds) Handbook of Quantum Gravity, Springer, Singapore (2023)
https://doi.org/10.1007/978-981-19-3079-9_101-1
arXiv:2304.00268 [gr-qc]
- 307.** A.M.Escobar-Ruiz, R.Azuaje:
On particular integrability in classical mechanics,
Journal of Physics A - Mathematical and Theoretical, 57 (10), DOI10.1088/1751-8121/ad2a1c (2024)
arXiv:2304.12581 [math-ph]
308. *A.Santoni, E.Muñoz, B.Koch*:
Spin-statistics connection in the framework of very special relativity: The massive case
AIP Conference Proceedings 2731, 020002 <https://doi.org/10.1063/5.0133081> (2023)
309. *F.Đalakov*:
Lie derivative of linear connection and its applications,
Master thesis, Comenius University in Bratislava (2023)
also Student Research Conference, Comenius University in Bratislava (2023)
310. *H.L.Ennes*:
Detection of representation orbits of compact Lie groups on point clouds,
Master thesis, Escola de Matemática Aplicada, Rio de Janeiro (2023)
[https://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/33709/Detection of representation orbits of compact Lie groups on point clouds.pdf?sequence=1](https://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/33709/Detection%20of%20representation%20orbits%20of%20compact%20Lie%20groups%20on%20point%20clouds.pdf?sequence=1)
311. *Q.Kang, K.Zhao, Y.Song, S.Wang, R.She, W.P.Tay*:
Node Embedding from Hamiltonian Information Propagation in Graph Neural Networks,
arXiv:2303.01030 [cs.LG] (2023)
312. *R.Šmolka*:
Graded Lie theory,
Master Thesis, Faculty of Nuclear Sciences and Physical Engineering, Prague (2023)
313. *R.Marlon de Novaes*:
Fluxo de Curvatura Média e Hipersuperfícies Tipo-T-Einstein,
PhD.Thesis, Universidade Federal de Goiás, Programa de Pós-Graduação em Matemática (2023)
314. *I.A. Cortés Benito*:
Implementación en ROS de un control para seguimiento de trayectoria para un cuatrirotor,
Ingeniero en Mecatrónica Tesis, Benemérita Universidad Autónoma de Puebla (México) (2023)
315. *M.Fürst, D.Kochan, C.Gorini, K.Richter*:
Dirac Landau levels for surfaces with constant negative curvature,
arXiv:2307.09221 [cond-mat.mes-hall] (2023)
316. *O.Esen, A.Geziçi, M.Grmela, H.Gümral, M.Pavelka, S.Sütlü*:
Conformal and Contact Kinetic Dynamics and Their Geometrization,
arXiv:2307.06080 [math-ph] (2023)
317. *J.Delso*:
On Generalized Einstein Field Equation Geodesic Equation Conservation Laws and Torsion Tensor

- in a Non-Symmetric Geometry,
OSP Journal of Physics and Astronomy 4: JPA-4-147 (2023)
<https://www.ospublishers.com/On-Generalized-Einstein-Field-Equation-Geodesic-Equation-Conservation-Laws-and-Torsion-Tensor-in-a-Non-Symmetric-Geometry.html#Article>
318. *M.A.G.Amano, C.Cartwright, M.Kaminski, J.Wu:*
Relativistic Hydrodynamics under Rotation: Prospects & Limitations from a Holographic Perspective,
arXiv:2308.11686 [hep-th] (2023)
319. *B.Ateşli, O.Esen, M.de León, C.Sardón:*
On Non-autonomous Hamiltonian Dynamics, Dual Spaces, and Kinetic Lifts,
arXiv:2308.10336 [math.DG] (2023)
320. *L.Körber:*
Spin waves in curved magnetic shells,
PhD.Thesis (Doctor rerum naturalium), Technische Universität Dresden (2023)
<https://tud.qucosa.de/api/qucosa>
321. *H.L.Ennes, R.Tinarrage:*
LieDetect: Detection of representation orbits of compact Lie groups from point clouds,
arXiv:2309.03086 [math.OC] (2023)
322. *J.T.A.Peterson, M.Majji, J.L.Junkins:*
A Generalized Condition for Symplectic Dynamics and the State Transition Matrix,
AAS 23-464, Texas A & M University (2023)
323. *Yonghyeon Lee:*
A Geometric Perspective on Autoencoders,
arXiv:2309.08247 [cs.LG] (2023)
324. *J.Kříž:*
K rozkladu křivosti v cirkulárních prostoročasech,
Bakalářská práce, Ústav teoretické fyziky, MFF UK, Praha (2023)
325. *R.Azuaje, A.M.Escobar-Ruiz:*
Particular integrals and particular integrability for (co)symplectic and (co)contact Hamiltonian systems,
arXiv:2309.17356 [math-ph] (2023)
326. *S.Radošević:*
Metodi teorije polja u statističkoj fizici,
Prirodno-matematički fakultet u Novom Sadu, Departman za fiziku (2023)
<https://www.df.uns.ac.rs/wp-content/uploads/publikacije/Metodi-teorije-polja-u-statistickoj-fizici-dr-Slobodan-Radosevic.pdf>
327. *S.Sahraee, P.Wriggers:*
Tensor Calculus and Differential Geometry for Engineers,
Springer Nature Switzerland AG, ISBN 978-3-031-33952-3,
<https://doi.org/10.1007/978-3-031-33953-0> (2023)
328. *P.H.Barboza Rossetto:*
Magnetically Confined Mountains on Neutron Stars in General Relativity,
PhD. thesis, University of Otago, Dunedin, New Zealand (2023)
https://ourarchive.otago.ac.nz/bitstream/handle/10523/16337/BarbozaRossetto_PedroHenrique_2020PhD.pdf?sequence=1&isAllowed=y
329. *I.Peshkov, E.Romenski, M.Pavelka:*
Nonequilibrium model for compressible two-phase two-pressure flows with surface tension,
arXiv:2312.09324 [physics.flu-dyn] (2023)
330. *J.Delso:*
On Planck's Gravitational Constant and Kepler's Third Law Derived from Schrödinger's Equation
OSP Journal of Physics and Astronomy 4: JPA-4-149 (2023)
<https://www.ospublishers.com/pdf/JPA-4-149.pdf>
331. *J.Delso:*
On Gravity and Nuclear Force Unification and Gravitomagnetic and Colormagnetic
Higgs Bosons and Photons,
OSP Journal of Physics and Astronomy 4: JPA-4-150 (2023)
<https://www.ospublishers.com/pdf/JPA-4-150.pdf>

332. *Yonghyeon Lee*:
IMMP++: Isometric Motion Manifold Primitives with Parametric Curve Models,
arXiv:2310.17072 [cs.AI] (2023)
333. *F.C. Guimarães*:
Estudo das Teorias de Calibre e Recentes Perspectivas,
Bacharel em Física, Universidade de Brasília UnB (2023)
https://bdm.unb.br/bitstream/10483/37711/1/2023_FernandoCardosoGuimaraes_tcc.pdf
334. *R.Lomartire*:
Reduction of asymptotically AdS₃ spin- N gravity to $sl(N)$ Toda theory,
Masterarbeit, Universität Wien (2023)
<https://phaidra.univie.ac.at/detail/o:2037945.pdf>
335. *V.Palge, Ch.Pfeifer*:
Thomas-Wigner rotation as a holonomy for spin-1/2 particles,
Physical Review A 109(3), DOI: 10.1103/PhysRevA.109.032206 (2024)
arXiv:2310.08121 [quant-ph]
336. *M.Krššák*:
Teleparallel gravity, covariance and their geometrical meaning,
arXiv:2401.08106 [gr-qc] (2024)
337. *J.O'Byrne, M.E.Cates*:
Geometric theory of (extended) time-reversal symmetries in stochastic processes - Part I:
finite dimension,
arXiv:2402.04217 [cond-mat.stat-mech] (2024)
338. *J.C.M.Hughes, F.V.Kusmartsev*:
Connecting 2-Forms, Conformal Transformations, Curvature Invariants and Topological
Classes in Einstein Spacetimes,
arXiv:2403.11527 [gr-qc] (2024)
339. *T.Brauner*:
Effective Field Theory for Spontaneously Broken Symmetry,
Springer, Lecture Notes in Physics, volume 1023, ISBN 978-3-031-48377-6, (2024),
<https://doi.org/10.1007/978-3-031-48378-3>

Slovak edition: Diferenciálna geometria a Lieove grupy vo fyzike

Iris, Bratislava, 2004, 2008, 2018.

1. *D.Kochan*: Aplikácie supergeometrie a diferenciálne formy,
PhD. Thesis, Comenius University (2003)
2. *S Mockovčiak, P.Baláz, D.Reitzner, M.Žonda*: Všeobecná teória relativity, učebná pomôcka k výberovej prednáške ÚFV/TRV1/00 Všeobecná teória relativity,
http://www.quantum.physics.sk/people/reitzner/Download/C06_vtr.pdf
3. *J.Čepila*: Hadrons, review work,
Czech Technical University, Prague (2006)
4. *J.Bakša*: Asymptotické pohyby trojrozmerných robotov,
PhD. Thesis, Bratislava, (2006)
5. *J.Podolský*: Teoretická mechanika v jazyce diferenciální geometrie,
studijní text, MFF UK Praha (2006)
<http://utf.mff.cuni.cz/vyuka/TMF069/tmf069.pdf>
6. *F.Štrupl*: Geometrická formulace Lagrangeovy mechaniky,
bakal. práce, MFF UK Praha (2006)
<http://utf.mff.cuni.cz/librtfy/bc/utf-bc0011-strupl.pdf>
7. *R.Švarc*: Geometrická formulace Hamiltonovy mechaniky,
balal. práce, MFF UK Praha (2006)
<http://utf.mff.cuni.cz/librtfy/bc/utf-bc0010-svarc.pdf>
8. *M.Michalčík*: Superdeterminant and odd symplectic geometry,
dipl. práce, FMFI UK Bratislava (2006)
9. *L.Richterek*: Geometrické metody matematické fyziky,
syllabus výběrové pednášky, PF UP Olomouc (2006)
<http://optics.upol.cz/richterek/prgmmf.pdf>
- 9'. *M.Fecko, D.Kochan, J.Korbaš, M.Niepel, P.Ševera*: Zimná škola zo symplektickej geometrie,
Bratislava (2007), zborník
<http://www.dnp.fmph.uniba.sk/esf-cepos/symposium/ZimnaSkola/zbornik.pdf>
10. *M.Bakšová*: Aplikácia diferenciálnej geometrie v robotike,
písomná práca k dizertačnej skúške, Zvolen (2007)
11. *K.Maleček, D.Szarková*: Absolutní derivace, pseudoparalelní přenos, vektor rotace,
Slovenský časopis pre geometriu a grafiku, ročník 4, číslo 7, str. 51-62 (2007)
12. *M.Jurčí*: Zovšeobecnená brachystochróna,
bakal. práce, FMFI UK Bratislava (2007)
13. *A.Nemečeková*: Geodetiky na dvojrozmerných plochách,
bakal. práce, FMFI UK Bratislava (2007)
14. *P.Maták*: Elementy teórie dynamických systémov,
bakal. práce, FMFI UK Bratislava (2007)
15. *A.Paták*: Geometrical Structure of Gauge Theories: Electromagnetism, Gravitation,
PhD. Thesis, Brno, 2008
16. *B.Novotný*: Last moments of a mini black hole,
diplom. práce, FMFI UK Bratislava (2008)
17. *J.Tillich, L.Richterek*: Klasická mechanika, PF UP Olomouc (2008)
<http://optics.upol.cz/richterek/mechanika.pdf>
18. *K.Houfek*: Použití grup v moderní fyzice, MFF UK Praha (2008),
syllabus přednášky,
<http://is.cuni.cz/studium/predmety/index.php?do=predmet&kod=NTMF061>
19. *A.Vanžurová*: Diferenciální geometrie,
syllabus pednášky, Univerzita Palackého, Olomouc (2008)
[https://stagweb.upol.cz/prohlizeni/pg\\$_prohlizeni.syllabus?kat=KAG&predm=DGN&rok=2009](https://stagweb.upol.cz/prohlizeni/pg$_prohlizeni.syllabus?kat=KAG&predm=DGN&rok=2009)
20. *P.Augustín*: Zákony zachovania v relativistickej elasticite,
dipl. práce, FMFI UK Bratislava (2009)
21. *Z.Tomková*: Všeobecnorelativistický Poyntingov-Robertsonov jav,

- dipl. práca, FMFI UK Bratislava (2009)
22. *M.Jurčí*: Pôsobenie žiarenia na nabité častice v blízkosti čiernych dier,
dipl. práca, FMFI UK Bratislava (2009)
 23. *J.Klaudíniová*: Hamiltonovský pohľad na dynamiku v kvantovej mechanike,
bakal. práca, FMFI UK Bratislava (2009)
 24. *L.Tomek*: Symetrie diferenciálnych rovníc,
bakal. práca, FMFI UK Bratislava (2009)
 25. *A.Nemečeková*: Geodetiky v niektorých fyzikálne relevantných priestoročasochoch,
dipl. práca, FMFI UK Bratislava (2009)
 26. *T.Bzdušek*: Zakrivený priestor, populárna matematicko-fyzikálna prednáška,
LTT Oravská Lesná, (2009)
 27. *D.Karásek*: Řešitelné Lieovy algebry s daným nilradikálem,
bakal. práce, FJFI ČVUT Praha (2009)
 28. *J.Schmidt*: Dvourozměrné sigma modely,
bakal. práce, FJFI ČVUT Praha (2009)
 29. *J.Genzor*: Izoholonomické úlohy v klasickej mechanike,
bakalárska práca, FMFI UK Bratislava (2010)
 30. *N.Paltseva*: Modely vesmíru s anizotropnou tmavou látkou,
diplomová práca, FMFI UK Bratislava (2010)
 31. *J.Sivek*: Svetlo v okolí čiernej diery,
diplomová práca, FMFI UK Bratislava (2010)
 32. *J.Navrátíl*: Poisson-Lie T-dualita jako dualita klasických bosonových strun,
bakal. práce, FJFI ČVUT Praha (2010)
http://physics.fjfi.cvut.cz/publications/mf/2009/bac_thesis_navratil.pdf
 33. *H.Floderová*: Geometrické struktury založené na kvaternionech
diplomová práce, VUT v Brně, Fakulta strojního inženýrství, Ústav matematiky (2010)
<https://core.ac.uk/download/pdf/30306985.pdf>
 34. *P.Zlatoš*: Lineárna algebra a geometria,
Albert Marenčin - Vydavateľstvo PT, (2011)
 35. *J.Navrátíl*: Renormalizace Poisson-Lie T-plurality,
výzkumný úkol, FJFI ČVUT Praha (2011)
https://physics.fjfi.cvut.cz/publications/mf/2009/navratil_res.pdf
 36. *P.Mészáros*: Synchronizácia hodín v neinerčiálnej vzťažnej sústave,
bakalárska práca, FMFI UK Bratislava (2012)
 37. *M.Serina*: Symetrie Keplerovej úlohy a Rungeho-Lenzov vektor,
bakalárska práca, FMFI UK Bratislava (2012)
 38. *M.Ždanský*: Clifford algebras and their visualization,
diplomová práca, FMFI UK Bratislava (2012)
 39. *P.Pirklová*: Metrizovatelnost afinní konexe,
disertační práce, Univerzita Palackého v Olomouci, Přírodovědecká fakulta (2012)
https://theses.cz/id/1lp5fx/Pirklova_Metrizovatelnost_afinn_konexe.txt
 40. *J.Hruška*: Generating Methods in GR and Properties of the Resulting Solutions,
Doctoral Thesis, Institute of Theoretical Physics, Charles University in Prague (2012)
<https://is.cuni.cz/webapps/zzp/detail/128596/?lang=cs>
 41. *M.Pilc*: On Einstein-Cartan Theory: I. Kinematical description,
arXiv:1311.7360 [gr-qc] (2013)
 42. *P.Horník*: Teorie Lieových grup v robotice,
bakalárska práca, VUT v Brně, Fakulta strojního inženýrství, Ústav matematiky (2013)
https://www.vutbr.cz/www_base/zav_prace_soubor_verejne.php?file_id=67705
 43. *I.Semorádová*: Dvourozměrné Lieovské grupy a jejich Poissonovy závorky,
bakal. práce, FJFI ČVUT Praha (2013)
http://physics.fjfi.cvut.cz/publications/mf/2014/BP_Iveta_Semoradova.pdf
 44. *L.Šnobl*: Geometrické metody fyziky 1,
text k rovnomernej prednáške z r.2012-2013, FJFI ČVUT Praha (2013)
<http://people.fjfi.cvut.cz/snoblib/GMF1.pdf>

- <http://wikiskripta.fjfi.cvut.cz/wiki/index.php/02GMF1>
45. *S.Sláček*: Motion of a body in a fluid with pressure dependent viscosity, Master Thesis, Mathematical Institute of Charles University, Prague (2013) <https://dspace.cuni.cz/handle/20.500.11956/54789>
 46. *P.Mészáros*: Kozmologické perturbácie vo vesmíre s pružným prostredím, diplomová práca, FMFI UK Bratislava (2014)
 47. *T.Dado*: Instantons in gauge theories, diplomová práca, FMFI UK Bratislava (2014)
 48. *J.Vrábel*: Generalized Metric and Gravity, Bachelor Thesis, Mathematical Institute, Faculty of Mathematics and Physics, Charles University in Prague (2014)
 49. *M.Šubjaková*: Gaussovská optika z lineárnej, bakalárska práca, FMFI UK Bratislava (2015)
 50. *S.Beznák*: Computation of Berry phase for spin s in the state m in magnetic field, bakalárska práca, FMFI UK Bratislava (2015)
 51. *I.Kačala*: Afinná grupa a jej Lieova algebra, bakalárska práca, FMFI UK Bratislava (2015)
 52. *Z.Kučerová*: R_K : Testing Beyond Standard Model Physics in CERN Experiments, diploma thesis, FMFI UK Bratislava (2015)
 53. *M.Plávala*: Symetrie v kvantovej mechanike, diplomová práca, FMFI UK Bratislava (2015)
 54. *J.Kubiena*: Dynamika robotických hadí, bakalárska práca, VUT v Brně, Fakulta strojího inženýrství, Ústav matematiky (2015) https://dspace.vutbr.cz/bitstream/handle/11012/41573/2015_BP_Kubiena_Jaromir.151725.pdf?sequence=1
 55. *D.Rist*: Ostrogradského nestabilita, bakalárska práca, FMFI UK Bratislava (2016)
 56. *M.Bohata*: Problémy záření relativistických systémů se symetriemi, diplomová práce, ÚTF MFF UK Praha (2017)
 57. *M.Šubjaková*: Teória poľa na nekomutatívnej sfére a maticové modely, diplomová práca, FMFI UK Bratislava (2017)
 58. *J.Vysoký*: Geometrické metody fyziky 2, učebný text k predmetu GMF2, FJFI ČVUT Praha (2021)
 59. *R.Šmolka*: Courant algebroids in the language of graded symplectic geometry, Research thesis, FJFI ČVUT Praha (2021)
 60. *M.Píro*: Kategorie Courantových algebroidů, Bakalárska práca, FJFI ČVUT Praha (2021)
 61. *V.Beneš*: Formulace Einsteinových rovnic pro numerickou relativitu, Bakalárska práca, FJFI ČVUT Praha (2021)
 62. *F.Varhaník*: Galileovskyy invariantné tenzory, bakalárska práca, FMFI UK, Bratislava (2022)
 63. *S.Brezina*: Jedna cesta k Minkowského metrike, bakalárska práca, FMFI UK, Bratislava (2023)
 64. *M.Kováč*: Cliffordova algebra $C(2,0)$ a grupa $\text{Pin}(2,0)$, bakalárska práca, FMFI UK, Bratislava (2023)
 65. *M.Lukáč*: Ekonomická analógia pre kalibračné polia, bakalárska práca, FMFI UK, Bratislava (2023)
 66. *Ľ.Ravas*: Noetherovej veta s bakalárskou matematikou, bakalárska práca, FMFI UK, Bratislava (2023)