

## LIST OF PUBLICATIONS

Dr. rer. nat. habil. Margarita Spirova

### 1. Papers in scientific journals

1. M. LASSAK, H. MARTINI, M. SPIROVA: On translative coverings of convex bodies, *Rocky Mountain J. Math.*, 14 pp., to appear.
2. P. MARTÍN, H. MARTINI, M. SPIROVA: Chebyshev sets and ball operators, *J. Convex Analysis* **21** (2014), No. 2, pp. 19, online first  
<http://www.heldermann.de/JCA/JCA21/JCA212/jca21031.htm>.
3. H. MARTINI, M. SPIROVA, K. STRAMBACH: Geometric algebra of strictly convex Minkowski planes, *Aequationes Math.* (2013), 18 pp., online first  
<http://link.springer.com/article/10.1007/s00010-013-0204-z>.
4. J. ALONSO, H. MARTINI, M. SPIROVA: On reduced triangles in normed planes, *Results Math.* (2013), 19 pp., online first  
<http://link.springer.com/article/10.1007/s00025-013-0313-y>.
5. Y. S. KUPITZ, H. MARTINI, M. SPIROVA: The Fermat-Torricelli problem, Part I: A discrete gradient-method approach, *J. Optim. Theory Appl.* **158** (2013), 305–327.
6. H. MARTINI, C. RICHTER, M. SPIROVA: Intersections of balls and sets of constant width in finite dimensional normed spaces, *Mathematika* **59** (2013), 477–492.
7. J. ALONSO, H. MARTINI, M. SPIROVA: Discrete geometry in Minkowski spaces, In: *Discrete Geometry and Optimization*, K. Bezdek et al. (eds.), Fields Institute Communications **69**, Springer, 2013, pp. 1-16.
8. H. MARTINI, M. SPIROVA: On universal covers in normed planes, *Adv. Geom.* **13** (2013), 41–50.
9. J. ALONSO, H. MARTINI, M. SPIROVA: Minimal enclosing discs, circumcircles, and circumcenters in normed planes (Part II), *Comput. Geom.* **45** (2012), 350–369.

10. J. ALONSO, H. MARTINI, M. SPIROVA: Minimal enclosing discs, circumcircles, and circumcenters in normed planes (Part I), *Comput. Geom.* **45** (2012), 258–274. MR2891414
11. H. MARTINI, M. SPIROVA, K. SWANEPOEL: Geometry where directions matters - or does it? *Math. Intelligencer* **33**, (2011), 115–125. MR2844107
12. J. ALONSO, M. SPIROVA: Characterizations of different classes of convex bodies via orthogonality, *Bull. Belg. Math. Soc. Simon Stevin* **18** (2011), 707–721. MR2907614
13. M. SPIROVA: On Miquel’s theorem and inversions in normed planes, *Monatsh. Math.* **161** (2010), 335–345. MR2726217
14. M. SPIROVA: Circle configurations in strictly convex normed planes, *Adv. Geom.* **10** (2010), 631–646. MR2733957
15. H. MARTINI, M. SPIROVA: A new type of orthogonality in normed planes, *Czechoslovak Math. J.* **60** (2010), 339–349. MR2657953
16. J. ALONSO, H. MARTINI, M. SPIROVA: Visibility in crowds of translates of a centrally symmetric body, *European J. Combin.* **31** (2010), 710–719. MR2587023
17. M. SPIROVA: On a theorem of G. D. Chakerian, *Contrib. Discrete Math.* **5** (2010), 107–118. MR2630074
18. H. MARTINI, M. SPIROVA: On the circular hull property in normed planes, *Acta Math. Hungar.* **125** (2009), 275–285. MR 2557036
19. H. MARTINI, M. SPIROVA: Reflections in strictly convex Minkowski planes, *Aequationes Math.* **78** (2009), 71–85. MR2552524
20. H. MARTINI, M. SPIROVA: Covering discs in Minkowski planes, *Canad. Math. Bull.* **52** (2009), 424–434. MR 2547809
21. H. MARTINI, M. SPIROVA: On regular 4-coverings and their application for lattice coverings in normed planes, *Discrete Math.* **309** (2009), 5158–5168. MR 2548917
22. M. SPIROVA: Propellers in affine Cayley-Klein planes, *J. Geom.* **93** (2009), 164–177. MR 2501216
23. H. MARTINI, M. SPIROVA: Circle geometry in affine Cayley-Klein planes, *Periodica Math. Hungar.* **57** (2008), 197–206. MR 2469605

24. M. HAJJA, H. MARTINI, M. SPIROVA: New extensions of Napoleon's theorem to higher dimensions, *Beiträge Algebra Geom.* **49** (2008), 253–264. MR 2410581
25. H. MARTINI, M. SPIROVA: Clifford's chain of theorems in strictly convex Minkowski planes, *Publ. Math. Debrecen* **72** (2008), 371–383. MR 2406927
26. H. MARTINI, M. SPIROVA: The Feuerbach circle and orthocentricity in normed planes, *Enseign. Math.* **53** (2007), 237-258. MR2455944
27. M. SPIROVA: On the Napoleon-Torricelli configuration in affine Cayley-Klein planes, *Abh. Math. Sem. Univ. Hamburg* **76** (2006), 131-142. MR 2293438
28. M. HAJJA, H. MARTINI, M. SPIROVA: On converses of Napoleon's theorem and a modified shape function, *Beiträge Algebra Geom.* **47** (2006), no. 2, 363-383. MR 2307909
29. H. MARTINI, M. SPIROVA: On Napoleon's theorem in the isotropic plane, *Periodica Math. Hungar.* **53** (2006), 199-208. MR 2286471
30. M. SPIROVA: On Brocard points in the isotropic plane, *Beiträge Algebra Geom.* **47** (2006), no. 1, 167-174. MR 2246532
31. H. MARTINI, M. SPIROVA: On similar triangles in the isotropic plane, *Revue Roumaine Math. Pures Appl.* **51** (2006), no. 1, 57-64. MR 2275318
32. A. BORISOV, M. SPIROVA: Some integral geometric results in the simply isotropic space, *J. Geom.* **77** (2003), 8-21. MR 2000850

## 2. Papers in conference proceedings

33. M. SPIROVA, A. BORISOV: On the measurability of sets of pairs of straight lines in the simply isotropic space, *PDEs, Submanifolds and affine differential geometry, Banach Center Publ.* **69**, Polish Acad. Sci., Warsaw, 2005, 243-256. MR 2189571
34. A. V. BORISOV, M. G. SPIROVA: Measurability of sets of pairs of skew non-isotropic and isotropic straight lines in the simply isotropic space, *Math. and Educ. in Math.*, Proc. XXXIII Spr. Conf. UBM, Borovets, April 1-4, 2004, 108-113. MR 2081571

35. M. G. SPIROVA, A. V. BORISOV: Measurability of sets of pairs of intersecting nonisotropic and isotropic straight lines in the simply isotropic space, *Math. and Educ. in Math.*, Proc. XXXIII Spr. Conf. UBM, Borovets, April 1-4, 2004, 171-175. MR 2081982
36. A. V. BORISOV, M. G. SPIROVA: Some similar triangles associated with a pure triangle in the Galilean plane, *Math. and Educ. in Math.*, Proc. XXXII Spr. Conf. UBM, Sunny Beach, April 5-8, 2003, 138-143. MR 2006141
37. A. V. BORISOV, M. G. SPIROVA: Measurability of sets of pairs of points in the simply isotropic space, *Math. and Educ. in Math.*, Proc. XXXII Spr. Conf. UBM, Sunny Beach, April 5-8, 2003, 144-149. MR 2006140

### 3. Popular science publications and surveys

38. H. MARTINI, M. SPIROVA: Regular tessellations in normed planes, *Symmetry Cult. Sci.* **22** (2011), 223–235.
39. H. MARTINI, M. SPIROVA: Golden rectangles in normed planes, *Mitt. Math. Ges. Hamburg* **29** (2010), 125–134.
40. M. SPIROVA: Reconstruction of 3D objects using perspective. *Multisensor Signal, Image and Data Processing*, In: Proc. of the Workshop in the frame of 3rd Balkan Conference in Informatics, Sofia, Bulgaria, September 27-29, 2007, 69-76.
41. H. MARTINI, M. SPIROVA: Recent results in Minkowski geometry. In: Proc. Internat. Conf. Math. Appl. (Mahidol University of Bangkok, Thailand, 2007), Mahidol University Press, Bangkok, 2007, pp. 45-83. (It also appeared in a special volume of the *East-West J. Math.* (2007), 59-101.)  
MR 2494900

### 4. Submitted papers

42. M. SPIROVA: Semi-inner product and concept on semi-polarity, 10 pp., submitted.  
<http://arxiv.org/abs/1308.0974>
43. H. MARTINI, P. L. PAPINI, M. SPIROVA: Complete sets and completions of sets in Banach spaces, 10 pp., submitted.  
<http://arxiv.org/abs/1308.0789>

44. Y. S. KUPITZ, H. MARTINI, M. SPIROVA: The Fermat-Torricelli problem, Part II, 15 pp., to be submitted.
45. H. MARTINI, C. RICHTER, M. SPIROVA: Illuminating and covering convex bodies, 17 pp., submitted.  
<http://arxiv.org/abs/1308.0791>

## 5. Books

46. M. SPIROVA: *Discrete Geometry in Normed Spaces*, Südwestdeutscher Verlag für Hochschulschriften, Saarbrücken, 2011.