

## ENI

### List of Publications

(2010-2016)

- (1) H. Abels, G. Margulis, G. Soifer, *The linear part of an affine group acting properly discontinuously and leaving quadratic form invariant*, *Geometriae Dedicata* **153**, (2011), no. 1, 1-46.
- (2) H. Abels, G.A. Margulis, G. Soifer, *The Auslander conjecture for dimension less than 7*, to appear in *Invent. Math.*, 43 pages.
- (3) M. Aka, T. Gelander, G. Soñfer, *Homogeneous number of free generators*, *J. Group Theory* **17** (2014), no. 4, 525-539.
- (4) E. Aladova, *Syntax versus semantics in knowledge bases I*, accepted in *Internat. J. Algebra Comput. (IJAC)*.
- (5) E. Aladova, A. Gvaramiya, B. Plotkin, *Logic in representations of groups*, *Algebra i Logika* **51** (2012), no. 1, 3-40.
- (6) E. Aladova, A. Gvaramia, B. Plotkin, E. Plotkin, T. Plotkin, *Logically-geometrical similarity for algebras and models with the same identities* *Tr. Inst. Mat.* **23** (2015), no. 2, 112-122.
- (7) E.V. Aladova, B.I. Plotkin, *Varieties of representations of groups and varieties of associative algebras*, *Internat. J. Algebra Comput. (IJAC)* **21** (2011), no.7, 1149-1178.
- (8) E.V. Aladova, B.I. Plotkin, *Syntax versus semantics in knowledge bases II*, to appear in *Israel Mathematics Conference Proceedings, Contemporary Math.*
- (9) E. Aladova, E. Plotkin, T. Plotkin, *Isotypeness of models and knowledge bases equivalence*, *Math. Comput. Sci.* **7** (2013), no. 4, 421-438.
- (10) E. Aladova, B. Plotkin, E. Plotkin, *Algebraic logic and logically-geometric types in varieties of algebras*, to appear in *Journal of Algebra and its Applications*.
- (11) M. Amram, *Classification of algebraic surfaces and curves*, *International Journal of Applied and Experimental Mathematics* **1:104** (2016), 1-2.
- (12) M. Amram, M. Cohen, M. Teicher, *Links arising from braid monodromy factorizations*, *J. Knot Theory Ramifications* **23** (2014), no. 2, 1450009, 32 pp.
- (13) M. Amram, M. Cohen, H. Sun, M. Teicher, A. Zarkh, F. Ye, *Combinatorial symmetry of line arrangements and applications*, *Topology and Appl.* **93** (2015), 226-247.
- (14) M. Amram, M. Dettweiler, M. Teicher, *On rigid covers associated to the three-cuspidal quartic*, *Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg* **80** (1) (2010), 1-8.

- (15) M. Amram, D. Garber, R. Shwartz, M. Teicher, *8-point - regenerations and applications*, Adv. Geometric Anal., Adv. Lect. Math. **21** (2012), 307-342.
- (16) M. Amram, D. Garber, M. Teicher, *On the fundamental group of the complement of two tangent conics and an arbitrary number of tangent lines*, Configuration spaces, CRM Series, Ed. Norm., Pisa **14** (2012), 27-48.
- (17) M. Amram, C. Gong, M. Teicher, W.-Y. Xu, *Moduli spaces of arrangements of 11 projective lines with a quintuple point*, Turkish J. Math. **39** (2015), no. 5, 618-644.
- (18) M. Amram, R. Lawrence, U. Vishne, *Artin covers of the braid groups*, J. Knot Theory Ramifications **21** (2012), no. 7, 1250061, 44 pp.
- (19) M. Amram, R. Lehman, R. Shwartz, M. Teicher, *Algebraic invariants in classification of 6-points in degenerations of surfaces*, Differ. Geom. Dyn. Syst. **16** (2014), 14-49.
- (20) M. Amram, R. Lehman, R. Shwartz, M. Teicher, *Classification of fundamental groups of Galois covers of surfaces of small degree degenerating to nice plane arrangements*, Topology of Algebraic Surfaces and Singularities, Contemporary Math. **538** (2011), 65-94.
- (21) M. Amram, R. Shwartz, M. Teicher, *Coxeter covers of classical Coxeter groups*, IJAC **20** (8), (2010), 1041-1062.
- (22) M. Amram, R. Shwartz, M. Teicher, *Covers of D-type Artin groups*, to appear in Communications in Algebra.
- (23) M. Amram, M. Teicher, F. Ye, *Moduli spaces of arrangements of 10 projective lines with quadruple points*, Adv. Appl. Math. **51** (2013), no. 3, 392-418.
- (24) A. Amsel, Y. Beiderman, D. Fixler, J. Garcia, V. Mico, Y. Tzadka, M. Teicher and Z. Zalevsky, *A microscope configuration for nano metric 3-D movement monitoring accuracy*, Micron, doi:10.1016/j.micron.2010.05.020.
- (25) Z. Arad, *On Normalized Integral Table Algebras (Fusion Rings) Generated by a Faithful Non-real Element of Degree 3*, Springer Verlag, 2011.
- (26) Y. Azani, Y. Beiderman, Y. Cohen, J. Garcia, V. Mico, C. Nisankoren, M. Teicher and Z. Zalevsky, *Cleaning and quality classification of optically recorded voice signals*, Recent Patents on Signal Processing **2** (2010), 6-11.
- (27) T. Bandman, S. Garion, *Surjectivity and equidistribution of the word  $x^2y^2$  on  $PSL(2, q)$  and  $SL(2, q)$* , Int. J. Algebra & Comput. **22** (2012), no.2, 1250017, 33pp.
- (28) T. Bandman, S. Garion, F. Grunewald, *On the surjectivity of Engel words on  $PSL(2, q)$* , Groups Geom. Dyn. **6** (2012), no. 3, 409-439.
- (29) T. Bandman, S. Garion, B. Kunyavskii, *Equations in simple matrix groups: algebra, geometry, arithmetic, dynamics*, Central European J. Math. **12** (2014), 175–211.
- (30) T. Bandman, N. Gordeev, B. Kunyavskii, E. Plotkin, *Equations in simple Lie algebras*, J. Algebra **355** (2012), 67-79.

- (31) T. Bandman, F. Grunewald and B. Kunyavskii (with an Appendix by N. Jones), *Geometry and arithmetic of verbal dynamical systems on simple groups*, Groups, Geometry, and Dynamics **4** (2010), 607-655.
- (32) T. Bandman, B. Kunyavskii, *Criteria for equidistribution of solutions of word equations on  $SL(2)$* , J. Algebra **382** (2013), 282–302.
- (33) T. Bandman, Y. G. Zarhin, *Jordan groups and algebraic surfaces*, Transformation Groups **20** (2015), no. 2, 327-334.
- (34) T. Bandman, Y. G. Zarhin, *Surjectivity of certain word maps on  $PSL(2,C)$  and  $SL(2,C)$* , Eur. J. Math. **2** (2016), no. 3, 614-643.
- (35) Y. Beiderman, R. Blumenberg, J. Garcia, V. Mico, N. Rabani, M. Teicher, Z. Zalevsky, *Demonstration of remote optimal measurement configuration that correlates to glucose concentration in blood*, Biomedical Medical Express **2** (2011), 858–870.
- (36) Y. Beiderman, N. Burshtein, J. Garcia, I. Horovitz, V. Mico, M. Teicher, Z. Zalevsky, *Remote estimation of blood pulse pressure via temporal tracking of reflected secondary speckles pattern*, J. Biomedical Optics **15** (2012), 061707.
- (37) Y. Beiderman, J. Garcia, V. Mico, M. Teicher, Z. Zalevsky, *Optical technique for classification, recognition and identification of obscured objects*, Optics Communications **283** (2010), 4274-4282.
- (38) Y. Beiderman, J. Garcia, V. Mico, D. Yeori, Z. Zalevsky, *Use of PC mouse components for continuous measuring of human heartbeat*, Applied Optics **51** (2012), 3323-3328.
- (39) Y. Beiderman, E. Rivlin, M. Teicher, Z. Zalevsky, *Illumination insensitive reconstruction and pattern recognition using spectral manipulation and K-factor spatial transforming*, Recent Patents on Signal Processing **2** (2010), 22-27.
- (40) E. Ben-Jacob, I. Doron, T. Gazit, M.H. Kohrman, O. Sagher, M. Teicher and V.L. Towle, *Time-frequency characterization of electrocorticographic recordings of epileptic patients using frequency-entropy similarity: A comparison to other bivariate measures*, J. Neuroscience Methods **194** (2011), 353-373.
- (41) J. Bernstein and A. Reznikov, *Subconvexity bounds for triple L-functions and representation theory*, Annals Math. **172** (2010), 1679-1718.
- (42) M. Borovoi and B. Kunyavskii, *Stably Cayley semisimple groups*, Doc. Math. 2015, Extra vol.: Alexander S. Merkurjev’s sixtieth birthday, 85-112.
- (43) M. Borovoi, B. Kunyavskii, N. Lemire, Z. Reichstein, *Stably Cayley groups in characteristic zero*, Int. Math. Res. Not. IMRN 2014, no. 19, 5340-5397.
- (44) B. Burton, M. Elder, A. Kalka, S. Tillmann, *2-manifold recognition is in logspace*, J. Comput. Geom. **7** (2016), no. 1, 70-85.
- (45) H. Chu, S.-J. Hu, M. Kang, B. Kunyavskii, *Noether’s problem and the Bogomolov multiplier for groups of order 64*, Intern. Math. Res. Notices (2010), no. 12, 2329-2366.

- (46) M. Cohen, A. Henrich, *Knot games with  $\_not$  K Nerds*, Math. Horiz., Mathematical Association of America **20** (2012), no. 2, 25-29.
- (47) M. Cohen, M. Teicher, *Kauffman's clock lattice as a graph of perfect matchings: A formula for its height*, Electron. J. Combin. **21** (2014), no. 4, paper 4.31, 39 pp.
- (48) J.-L. Colliot-Thelene, B. Konyavskii, V. L. Popov, Z. Reichstein, *Is the function field of a reductive Lie algebra purely transcendental over the field of invariants for the adjoint action?*, Compositio Math. **147** (2011), 428-466.
- (49) O. Demchenko, A. Gurevich, X. Xarles, *Formal completions of the Néron models for algebraic tori*, Proc. London Math. Soc. **100** (2010), 607-638.
- (50) M. Eliyahu, D. Garber, M. Teicher, *A conjugation-free geometric presentations of fundamental groups of arrangements*, Manuscripta Math. **133** (2010), 247-271.
- (51) M. Eliyahu, D. Garber, M. Teicher, *A conjugation-free geometric presentation of fundamental groups of arrangements II: Expansion and some properties*, IJAC (International Journal of Algebra and Computation) **21** (2011), 775-792.
- (52) M. Eliyahu, E. Liberman, M. Schaps, M. Teicher, *Characterizations of line arrangements whose fundamental group of the complement is a direct product of free groups*, Algebraic and Geometric Topology **10** (2010), 1285-1304.
- (53) M. Friedman, R. Lehman, M. Leyenson, M. Teicher, *On ramified covers of the projective plane II: Generalizing Segre's Theory*, J. Eur. Math. Soc. (JEMS) **14** (2012), no. 3, 971-996.
- (54) M. Friedman, M. Leyenson, *On ramified covers of the projective plane I: Segre's theory and classification in small degrees (with an Appendix by Eugenio Shustin)*, Internat. J. Math. **22** (2011), no. 5, 619-653.
- (55) A. Ferman, T. Nowik, M. Teicher, *On the structure and automorphism group of finite Alexander quandles*, acJ. Knot Theory Ramifications **20** (2011), 463-468.
- (56) M. Friedman, M. Teicher, *On the fundamental groups related to degeneratable surfaces: conjectures and examples*, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) **11** (2012), no. 3, 565-603.
- (57) M. Friedman, M. Teicher, *On the singularities of branch curves of K3 surfaces and applications*, Automorphic Forms and Related Geometry: Assessing the Legacy of I.I. Piatetski-Shapiro (James W. Cogdell, Freydoon Shahidi, David Soudry, eds.), Contemp. Math. **614** (2014), 433-441.
- (58) N. Gordeev, F. Grunewald, B. Konyavskii, E. Plotkin, *From Thompson to Baer-Suzuki: a sharp characterization of the solvable radical*, J. Algebra **323** (2010), 2888-2904.
- (59) N. Gordeev, B. Konyavskii, E. Plotkin, *Word maps and word maps with constants of simple algebraic groups*, Doklady Math. **94** (2016), 1-2.
- (60) F. Grunewald, B. Konyavskii, E. Plotkin, *Characterization of solvable groups and solvable radical*, Internat. J. Algebra Comput. **23** (2013), 1011-1062.

- (61) A. Gurevich, B. Kunyavskii, *Deterministic primality tests based on tori and elliptic curves*, Finite Fields Appl. **18** (2012), 222-236.
- (62) A. Hoshi, M. Kang, B. Kunyavskii, *Noether's problem and unramified Brauer groups*, Asian J. Math **17** (2013), 689-713.
- (63) Z. Izhakian, M. Knebusch, L. Rowen, *Supertropical semirings and supervaluations*, J. Pure Appl. Algebra **215** (2011), no. 10, 2431-2463.
- (64) Z. Izhakian, M. Knebusch, L. Rowen, *Layered supertropical domains*, J. Algebra **416** (2014), 200-273.
- (65) Z. Izhakian, M. Knebusch, L. Rowen, *Supertropical linear algebra*, Pacific J. Math. **266** (2013), no. 1, 43-75.
- (66) Z. Izhakian, M. Knebusch, L. Rowen, *Monoid valuations and value ordered supervaluations*. Comm. Algebra **43** (2015), no. 8, 3207-3248.
- (67) Z. Jiang, H. Sun, *Cohomological support loci of varieties of Albanese fibre dimension one*, Trans. Amer. Math. Soc. **367** (2015), 103-119.
- (68) A. Kalka, *Non-associative public-key cryptography*, Contemporary Math. (special issue of AMS Proceedings of a special section of the Joint AMS/IMU conference held in Tel Aviv/Ramat Gan, June 2015) 677 (2016), 85-112.
- (69) A. Kalka, E. Liberman, M. Teicher, *Subgroup conjugacy problem for Garside subgroups of Garside groups*, Groups - Complexity - Cryptology **2**, (2010), no. 2, 157-174.
- (70) A. Kalka, M. Teicher, *Non-associative key establishment for left distributive systems*, Groups-Complexity-Cryptology **5** (2013), no. 2, 169-191.
- (71) A. Kalka, M. Teicher, *Non-associative key establishment protocols and their implementation*, to appear in Contemporary Mathematics (special issue of AMS Proceedings of a special section of the Joint AMS/IMU conference held in Tel Aviv/Ramat Gan, June 2015).
- (72) A. Kalka, M. Teicher, B. Tsaban, *Short expressions of permutations as products and cryptanalysis of the Algebraic Eraser*, Advances in Appl. Math. **49** (2012), 57-76.
- (73) J.Y. Kaminski, A. Kanel-Belov, M. Teicher, *Multi-Secant Lemma*, Israel Journal of Mathematics **177** (2010), 253-266.
- (74) A. Kanel-Belov, B. Kunyavskii, E. Plotkin, *Word equations in simple groups and polynomial equations in simple algebras*, Vestnik St. Petersburg Univ. Math. **46** (2013), no. 1, 3-13.
- (75) M. Kang, B. Kunyavskii, *The Bogomolov multiplier of rigid finite groups*, Arch. Math. **102** (2014), 209-218.
- (76) S. Kaplan, A. Shapiro, M. Teicher, *Braid Monodromy Type and rational transformations of plane algebraic curves*, to appear in Acta Appl. Math.
- (77) A. Kleks, A. Pantanowitz, G. Peyton, D. M. Rubin, M. Teicher, *Analysis of MEG signals for selective arithmetic tasks*, IFMBE Proc. (MEDICON 2016), 179-183.

- (78) E. Klimenko, B. Konyavskii, J. Morita and E. Plotkin, *Word maps in Kac-Moody setting*, Toyama Math. J. **37**, (2015), 25-53.
- (79) B. Konyavskii, *The Bogomolov multiplier of finite simple groups*, Progr. Math. **282** (2010), 209-217.
- (80) B. Konyavskii, *Local-global invariants of finite and infinite groups: around Burnside from another side*, Expo. Math. **31** (2013), 256–273.
- (81) B. Konyavskii, *Equations in matrix groups and algebras over number fields and rings: prolegomena to a lowbrow noncommutative Diophantine geometry*, in: “Arithmetic and Geometry” (L. V. Dieulefait et al. eds.), London Math. Soc. Lecture Note Ser. **420**, Cambridge Univ. Press, Cambridge, 2015, 264-282.
- (82) X. Lu, S.-L. Tan, W.-Y. Xu, K. Zuo, *On the minimal number of singular fibers with non-compact Jacobians for families of curves over  $\mathbb{P}^1$* , J. Math. Pure. Appl., **105(5)** (2016), 724–733.
- (83) B. Plotkin, E. Plotkin, *Multi-sorted logic and logical geometry: some problems*, Demonstr. Math. **48** (2015), no. 4, 578-619.
- (84) B. Plotkin, E. Plotkin, G. Zhitomirski, *Type of a point in universal geometry and in model theory*, Algebra Discrete Math. **19** (2015), no. 1, 87-100.
- (85) A. Reznikov, *Geodesic restrictions for the Casimir operator*, J. of Functional Analysis **261** (2011), no. 9, 2437-2460.
- (86) A. Reznikov, *Torus periods of coefficients on  $GL(2)$  and Dirichlet Series*, J. of Number Theory **133** (2013), no. 1, 328-342 .
- (87) A. Reznikov, *Periods of automorphic functions and representation theory*, Automorphic Forms and  $L$ -functions, Advanced Lect. in Math. **30**, International Press (2014), 131-148.
- (88) A. Reznikov, *A uniform bound for geodesic periods of eigenfunctions on hyperbolic surfaces*, in Forum Mathematicum **27** (2015), 1569–1590.
- (89) A. Reznikov, *Estimates of triple products of automorphic functions II*, J. of Number Theory **161** (2016), 457–533.
- (90) M. Schein, C. Voll, *Normal zeta functions of the Heisenberg groups over number rings I – the unramified case*, J. London Math. Soc. (2) **91** (2015), no. 1, 19-46
- (91) M. Schein, C. Voll, *Normal zeta functions of the Heisenberg groups over number rings II – the non-split case*, Israel J. Math. **211** (2016), no. 1, 171-195.
- (92) G. Soifer, *Embedding of  $\mathbb{Z}^2 * \mathbb{Z}$  as a discrete subgroup into small linear groups*, Int. J. Algebr. Comput. **22** (2012), no. 6, 10 pages.
- (93) G. A. Soifer, *Affine semigroups acting properly discontinuously on a hyperbolic space* Israel J. Math. **194** (2013), no. 2, 703-722.
- (94) G. Soifer, S. Vishkautsan, *Simultaneous ping-pong partners in  $PSL(n, \mathbb{Z})$* , Comm. Algebra **8**, (2010), no. 1, 288-301.

- (95) H. Sun, *Pluricanonical map of irregular varieties of Albanese fiber dimension two*, Mathematische Zeitschrift **277** (2014), 739-747.
- (96) S.-L. Tan, W.-Y. Xu, *On Szpiro inequality for semistable families of curves*, J. of Number Theory, **151** (2015), 36–45.
- (97) A. Yosef, *Some classical-new results on the set-indexed Brownian motion*, Mod. Stoch. Theory Appl. **2** (2015), no. 2, 185-198.