

Murray Marshall's selected publications

1 Positive Polynomials and Moment Problems

1. M. Infusino, S. Kuhlmann, M. Marshall, *A uniqueness property for measures*, in preparation.
2. M. Ghasemi, M. Marshall, *Representation of a continuous linear functional on subspaces of \mathbb{R} -algebras*, in preparation.
3. M. Ghasemi, M. Infusino, S. Kuhlmann, M. Marshall, *Moment problem for symmetric algebras of locally convex spaces*, arXiv:1507.06781, submitted.
4. M. Ghasemi, S. Kuhlmann, M. Marshall, *Moment problem in infinitely many variables*, arXiv:1409.5777, to appear in the Israel Journal of Mathematics.
5. M. Marshall, *Application of localization to the multivariate moment problem II*, arXiv:1410.4609, to appear in Math. Scandinavica.
6. M. Ghasemi, M. Marshall, *Lower bounds for a polynomial on a basic closed semialgebraic set using geometric programming*, arXiv:1311.3726, submitted.
7. M. Ghasemi, S. Kuhlmann, M. Marshall, *Application of Jacobi's representation theorem to locally multiplicatively convex topological R -algebras*, J. Functional Analysis, 266 (2014), no. 2, 1041–1049.
8. M. Ghasemi, J.B. Lasserre, M. Marshall, *Lower bounds on the global minimum of a polynomial*, Computational Optimization and Applications, 57 (2014) 387–402.
9. M. Marshall, *Application of localization to the multivariate moment problem*, Math. Scandinavica, 115 no. 2 (2014) 269–286.
10. M. Ghasemi, M. Marshall, Sven Wagner, *Closure of the cone of sums of $2d$ -powers in certain weighted ℓ_1 -seminorm topologies*, Canad. Math. Bull., 57, no 2, (2014) 289–302.
11. M. Ghasemi, M. Marshall, *Lower bounds for polynomials using geometric programming*, SIAM Journal on Optimization, 22 (2012) 460–473.
12. M. Marshall, T. Netzer, *Positivstellensätze for real function algebras*, Math. Zeitschrift, 270 (2012) 889–901.
13. J. Cimprič, M. Marshall, T. Netzer, *Closures of quadratic modules*, Israel J. Math., 189 (2011) 445–474.
14. J. Cimprič, M. Marshall, T. Netzer, *On the real multidimensional rational K -moment problem*, Transactions AMS, 363 (2011) 5773–5788.
15. M. Ghasemi, M. Marshall, *Lower bounds for a polynomial in terms of its coefficients*, Archiv der Mathematik, 95 (2010) 343–353.
16. M. Marshall, *Polynomials non-negative on a strip*, Proceedings AMS, 138 (2010) 1559–1567.
17. J. Cimprič, S. Kuhlmann, M. Marshall, *Positivity in power series rings*, Advances in Geometry, 10 (2010) 135–143.
18. M. Marshall, *Representation of non-negative polynomials, degree bounds and applications to optimization*, Canad. J. Math., 61 (2009) 205–221.
19. M. Marshall, *Positive polynomials and sums of squares*, AMS Math. Surveys and Monographs 146 (2008) 187+xii pages.
20. M. Marshall, *Representation of non-negative polynomials with finitely many zeros*, Annales de la Faculte des Sciences Toulouse 15 (2006)
21. M. Marshall, *Error estimates in the optimization of degree two polynomials on a discrete hypercube*, SIAM Journal on Optimization, 16 (2005)
22. S. Kuhlmann, M. Marshall, N. Schwartz, *Positivity, sums of squares and the multi-dimensional moment problem II*, Advances in Geometry, 5(2005)583-606
23. M. Marshall, *Approximating Positive Polynomials Using Sums Of Squares*, Can. math. bulletin, 46 (2003) 400-418
24. M. Marshall, *Optimization of Polynomial Functions*, Can. math. bulletin, 46 (2003) 575-587

25. S. Kuhlmann, M. Marshall, *Positivity, sums of squares and the multi-dimensional moment problem*, TAMS 354 (2002), 4285-4301
26. M. Marshall, *A General Representation Theorem For Partially Ordered Commutative Rings*, Math. Zeitschrift 242 (2002), 217-225
27. M. Marshall, *Extending The Archimedean Positivstellensatz To The Non-Compact Case*, Can. math. bulletin, 44 (2001) 223-230
28. M. Marshall, *A Real Holomorphy Ring Without The Schmüdgen Property*, Can. math. bulletin, 42 (1999) 354-35

2 Orderings, Valuations and Quadratic Forms

1. P. Gladki, M. Marshall, *Witt equivalence of function fields over global fields*, to appear.
2. P. Gladki, M. Marshall, *Quotients of index two and general quotients in a space of orderings*, Oberwolfach Preprint 2011-36, Fundamenta Mathematicae, 229 (2015) 255-275.
3. P. Gladki, M. Marshall, *Orderings and signatures of higher level on multirings and hyperfields*, J. K-Theory, 10 (2012) 489-518.
4. S. Kuhlmann, M. Marshall, K. Osiaik, *Cyclic 2-structures and spaces of orderings of power series fields in two variables*, J. Algebra, 335 (2011) 36-48.
5. M. Machura, M. Marshall, K. Osiaik, *Metrizability of the space of R -places of a real function field*, Math. Zeitschrift, 266 (2010) 237-242.
6. D. Gondard, M. Marshall, *Real holomorphy rings and the complete real spectrum*, Annales de la Faculte des Sciences Toulouse 19 (2010), Fascicule Special, 57-74.
7. P. Gladki, M. Marshall, *On families of testing formulae for a pp formula*, Cont. Math. 493 (2009) 181-188.
8. P. Gladki, M. Marshall, *The pp conjecture for the space of orderings of the field $R(x, y)$* , J. Pure & Applied Algebra, 212 (2008) 197-203.
9. P. Gladki, M. Marshall, *The pp conjecture for spaces of orderings of rational conics*, Algebra and its Applications, 6 (2007) 245-257.
10. J. Cimpric, M. Kochetov, M. Marshall, *Orderability of pointed cocommutative Hopf algebras*, Algebras and Representation Theory (2007) 25-54.
11. M. Marshall, *Real reduced multirings and multifields*, J. Pure & Applied Algebra, 205 (2006) 452-468.
12. M. Marshall, *Local-global properties of positive primitive formulas in the theory of spaces of orderings*, J. Symbolic Logic, 71 (2006) 1097-1107.
13. M. Dickmann, M. Marshall, F. Miraglia, *Lattice ordered reduced special groups*, Annals of Pure and Applied Logic, 132 (2005) 27-49.

3 Other Topics

- A. Fischer, M. Marshall, *Extending piecewise polynomial functions in two variables*, Annales de la Faculte des Sciences Toulouse, 22 (2013) 253-268.