CURRICULUM VITAE

Personal Data
Name: Jie Wang

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Education
- Bachelor of Mathematics (9/2008-7/2012)
- University of Science and Technology of China
- Doctor of Mathematics (9/2012-7/2017)
- Academy of Mathematics and Systems Science, Chinese Academy of Sciences
- Supervisor: Xiao-Shan Gao

Work Experiences
- 7/2017 – 6/2019, Postdoc, Peking University, Mentor: Bican Xia
- 7/2019 – present, Postdoc, LAAS-CNRS, Mentor: Victor Magron

Research Interests
Real Algebraic Geometry, Polynomial Optimization, Biological Mathematics, Difference Algebra

Publication List
Published papers

1. Jie Wang, Monomial difference ideals, *Proceedings of the American Mathematical Society*, 145(4):1481-1496, 2017.

2. XiaoShan Gao, Zhang Huang, Jie Wang and ChunMing Yuan, Toric difference variety, *Journal of Systems Science & Complexity*, 30(1):173-195, 2017.

3. Jie Wang, Difference indices of quasi-prime difference algebraic systems, *Journal of Symbolic Computation*, 87:1-13, 2018.

4. Jie Wang, Finite basis for radical well-mixed difference ideals generated by binomials, *Communications in Algebra*, 46(6):2589-2599, 2018.

5. Jie Wang, Toric P-difference varieties, online in *Science China Mathematics*, 2019.

6. Jie Wang, Haokun Li and Bican Xia, A new sparse SOS decomposition algorithm based on term sparsity, in Proceedings of the 2019 on International Symposium on Symbolic and Algebraic Computation, ACM, 347-354, 2019.

7. Jie Wang, Systems of polynomials with at least one positive real zero, online in *Journal of*

Algebra and Its application, 2019.

Papers in submission

8. Jie Wang, Nonnegative polynomials and circuit polynomials, 2018.

9. Jeffrey Uhlmann and Jie Wang, On the nonnegativity of the inverse RGA of positive-definite matrices in low dimensions, 2019.

10. Xiaoxian Tang and Jie Wang, Bistability of sequestration networks, 2019.

Preprints

11. Jie Wang, SONC optimization via second order cone programming, 2019.

12. Jie Wang, Jean-Bernard Lasserre and Victor Magron, A new sparse moment-SOS hierarchy based on term sparsity, 2019.

Invited Talks (excluding conference presentations)

1. "The finitely generated property of binomial difference ideals", The 2nd workshop on combinatorial mathematics and symbolic computation, Tianjin, 6/2017

2. "On systems of polynomials with at least one positive zero", Youth Forum of National Center for Mathematics and Interdisciplinary Sciences, CAS, Beijing, 10/2018

3. "Nonnegative polynomials and circuit polynomials", SIAM Conference on Applied Algebraic Geometry, Switzerland, 7/2019

4. "Exploiting term sparsity in SOS programming and sparse polynomial optimization", International Conference on Continuous Optimization, Berlin, 8/2019

Honor & Awards

2016, Gained the "Dean Special Prize" of Academy of Mathematics and Systems Science, CAS

2017, Gained the title of "Outstanding Graduates" of University of Chinese Academy of Sciences

Project Funding

The 64th China Postdoctoral Science Foundation