

Curriculum Vitae

Personal Data

Full name	Yi Zhang
Date of birth	12.12.1988
Place of birth	Changzhou, Jiangsu Province, China
Nationality	Chinese
Marital Status	Single



Contact

E-mail	zhangy@amss.ac.cn
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Education

09/2013 – 02/2017	Ph.D. in Mathematics with distinction, Institute for Algebra , Johannes Kepler University Linz , Austria. (Co-supervisors: Prof. Manuel Kauers and Prof. Ziming Li)
09/2011 – 07/2016	Ph.D. in Applied Mathematics, Key Laboratory of Mathematics Mechanization , Academy of Mathematics and Systems Science , University of Academy of Sciences , Beijing, China. (Co-supervisors: Prof. Manuel Kauers and Prof. Ziming Li)

09/2007 – 07/2011 B.Sc. in Mathematics, [School of Mathematical Sciences, Soochow University](#), Suzhou, China.

I also studied as a Ph.D. student in [Research Institute for Symbolic Computation](#), Johannes Kepler University Linz from 09/2013 to 06/2015 under the supervision of Prof. Manuel Kauers.

Work Experience

03/2017 – 02/2018 Postdoc researcher, [Johann Radon Institute for Computational and Applied Mathematics \(RICAM\)](#), [Austrian Academy of Sciences](#). (Supervisor: Dr. [Christoph Koutschan](#))

Visiting Experience

May 2017 Visiting scholar, [Department of Mathematics](#), [Kobe University](#), Japan. (Host researcher: Prof. [Nobuki Takayama](#))

Awards

07/2016 [ACM Distinguished Student Author Award at ISSAC'16](#), SIGSAM, Association for Computing Machinery.

09/2009 – 07/2010 The Second Prize Scholarship of Soochow University, Suzhou, China.

09/2008 – 07/2009 The First Prize Scholarship of Soochow University, Suzhou, China.

09/2007 – 07/2008 The First Prize Scholarship of Soochow University, Suzhou, China.

09/2007 – 07/2008 The Zhu Jingwen Scholarship of Soochow University, Suzhou, China.

09/2007 – 07/2008 The Merit Student of Soochow University, Suzhou, China.

Research Interests

Computer Algebra, Computational Algebraic Geometry, Ore Algebras, Gröbner Bases, Algorithmic Combinatorics and Experimental Mathematics

PhD Thesis

- Yi Zhang. *Univariate Contraction and Multivariate Desingularization of Ore Ideals*. PhD thesis, Institute for Algebra, Johannes Kepler University Linz, 2017.

Peer-reviewed Publication

- Yi Zhang. *Contraction of Ore Ideals with Applications*. In *Proceedings of the 2016 International Symposium on Symbolic and Algebraic Computation*, pp. 413-420, ACM Press, 2016. DOI:[10.1145/2930889.2930890](https://doi.org/10.1145/2930889.2930890). (ACM Distinguished Student Author Awards)

Papers in Preperation

- Manuel Kauers, Ziming Li and Yi Zhang. *Apparent Singularities of D-finite Systems*, 2016.

Research Notes

- Ziming Li and Yi Zhang. *A Note on Gröbner Bases of Ore Polynomials over a PID*, 2016. <https://yzhang1616.github.io/GB.pdf>
- Yi Zhang. *Integer Vectors of a Fundamental Parallelepiped*, 2016.
- Yi Zhang. *Testing q -shift Equivalence of Polynomials*, July, 2017.

Other Publication

Software

- [qDesingularization.m](#), a Mathematica package for computing desingularized operators and the q -Weyl closure of a given q -difference operator in the first q -Weyl algebra. It is based on joint work with Dr. Christoph Koutschan. The package requires the availability of Koutschan's package [HolonomicFunctions.m](#) and Kauers's package [Singular.m](#). For a description of the usage of the package, see the [Example.nb](#) notebook.

Talks

6. *Apparent Singularities of D-finite Systems*. Contributed talk at ACA'17 (the 23rd Conference on Applications of Computer Algebra), Jerusalem College of Technology, Jerusalem, Israel, July, 2017.
5. *Contraction of Linear Difference and Differential Operators*. Contributed talk at ISSAC'16 (the 41st International Symposium on Symbolic and Algebraic Computation), Wilfrid Laurier University, Waterloo, Canada, July, 2016.
4. *Contraction of Linear Difference and Differential Operators*. Invited talk at the seminar of Center for Combinatorics, Nankai University, Tianjin, China, June, 2016.
3. *An Algorithm for Contraction of an Ore Ideal*. Invited talk at the seminar of Institute of Discrete Mathematics and Geometry, Vienna University of Technology, Vienna, Austria, October, 2015.
2. *The Restriction Problem for D-finite Functions*. Contributed talk at the Workshop on Computational and Algebraic Methods in Statistics, The University of Tokyo, Tokyo, Japan, March, 2015.
1. *An Algorithm for Decomposing Multivariate Hypergeometric Terms*. Contributed talk at CM'13 (the 5th National Conference of Computer Mathematics), Jilin University, Changchun, China, August, 2013.

Peer-Reviewing Activities

For each journal and conference the number of completed reviews in given in parentheses.

- International Symposia on Symbolic and Algebraic Computation (1)
- Journal of Symbolic Computation (2)

Programming Language

C, Matlab, Maple, Mathematica, Macaulay2 and Sage

Hobbies and Interests

- Sports: Table Tennis, Billiards, Tennis.
- Reading: Philosophy, History, Literature.
- Language: Chinese (native), English (fluent), German (basic).