

# 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	<a href="mailto:zhangy@amss.ac.cn">zhangy@amss.ac.cn</a>
Address	<a href="#">Johann Radon Institute for Computational and Applied Mathematics (RICAM)</a> Austrian Academy of Sciences Altenbergerstraße 69, A-4040 Linz, Austria
Office	S2 0435 (Science Park II)
Phone	+43 732 2468 5235
Homepage	<a href="https://yzhang1616.github.io/">https://yzhang1616.github.io/</a>

## Education

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

## 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 Kauer's package [Singular.m](#). For a description of the usage of the package, see the [Example.nb](#) notebook.

## Talks

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).