Hui HUANG

Curriculum Vitae

School of Mathematics and Statistics
Fuzhou University
No. 2, Wulongjiang North Avenue,
Fuzhou University Town,
Fuzhou, Fujian, China, 350108.
✉ *huanghui@fzu.edu.cn*
🖥 *hhuang828.github.io*

Personal Data

Gender	Female
Birthplace	Fuzhou, Fujian Province
Nationality	People's Republic of China

Academic Employment

Dec. 2023 – present	**Associate Professor**, *School of Mathematics and Statistics, Fuzhou University, Fuzhou, China.*
Aug. 2020 – Nov. 2023	**Associate Professor**, *School of Mathematical Sciences, Dalian University of Technology, Dalian, China.*
Sept. 2017 – June 2020	**Postdoctoral Fellow**, *David R. Cheriton School of Computer Science, University of Waterloo, Waterloo, Canada.* Working with Mark Giesbrecht, George Labahn and Eugene Zima
Mar. 2017 – Aug. 2017	**Postdoctoral Fellow**, *Institute for Algebra, Johannes Kepler University, Linz, Austria.* Working with Manuel Kauers

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Education Background

Sept. 2013 – Feb. 2017	**Doctorate studies in Applied Mathmetics**, *FWF Doctoral Program "Computational Mathematics", Johannes Kepler University, Linz, Austria and Academy of Mathematics and Systems Science, University of Chinese Academy of Sciences, Beijing, China (Dual degrees).* Supervisors: Manuel Kauers (JKU, Asutria) and Ziming Li (UCAS, China)
Feb. 2017	**PhD thesis**, *Definite Sums of Hypergeometric Terms and Limits of P-Recursive Sequences (Advisors: Manuel Kauers and Ziming Li).*
July 2016	**PhD thesis**, *Reduction and Creative Telescoping for Hypergeometric Terms (in Chinese) (Advisors: Manuel Kauers and Ziming Li).*
Sept. 2011 – July 2016	**Master-Doctorate studies in Applied Mathmetics**, *Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China.* Supervisor: Ziming Li

Sept. 2007 – July 2011	**Bachelor studies in Mathematics and Applied Mathmetics**, *Xiamen University*, Fujian, China.

Academic Awards

July 2016	**Distinguished Female Student Award**.
	ISSAC'16 (41st International Symposium on Symbolic and Algebraic Computation)
July 2014	**Distinguished Poster Award**, *with Shaoshi Chen and Ziming Li*.
	ISSAC'14 (39th International Symposium on Symbolic and Algebraic Computation)

Academic Service

Sept. 2022 – present	**JSSC Youth Editorial Board**.
	Journal of Systems Science and Complexity
July 2021	**ISSAC Program Committee Member**.
	ISSAC'21 (46th International Symposium on Symbolic and Algebraic Computation)
Sept. 2021	**CASC Program Committee Member**.
	CASC'21 (23rd Computer Algebra in Scientific Computing)
Sept. 2020	**CASC Program Committee Member**.
	CASC'20 (22nd Computer Algebra in Scientific Computing)

Research Funding

Jan. 2022 – Dec. 2024	**National Natural Science Foundation of China**.
	Efficient Algorithms and Structural Representation in Symbolic Summation

Research Interests

My scientific interests are computer algebra, symbolic summation and integration, Ore algebras, symbolic asymptotics and the applications of all that in combinatorics and elsewhere.

Refereed Publications

[10] Shaoshi Chen, Hao Du, Yiman Gao, Hui Huang, Ziming Li. A unified reduction for hypergeometric and q-hypergeometric creative telescoping. The Ramanujan Journal, 68:14, 2025.

[9] Shaoshi Chen, Qing-Hu Hou, Hui Huang, George Labahn, Rong-Hua Wang. Constructing minimal telescopers for rational functions in three discrete variables. Advances in Applied Mathematics, 141:102389, 2022.

[8] Hui Huang, Manuel Kauers, Gargi Mukherjee. Order-degree-height surfaces for linear operators. In *Proceedings of the 2022 International Symposium on Symbolic and Algebraic Computation*, pages 91–99, ACM, New York, 2022.

[7] Mark Giesbrecht, Hui Huang, George Labahn, Eugene Zima. Efficient rational creative telescoping. Journal of Symbolic Computation, 109:57–87, 2022.

[6] Mark Giesbrecht, Hui Huang, George Labahn, Eugene Zima. Efficient q-integer linear decomposition of multivariate polynomials. Journal of Symbolic Computation, 107:122–144,

2021.

[5] Mark Giesbrecht, Hui Huang, George Labahn, Eugene Zima. Efficient integer-linear decomposition of multivariate polynomials. In *Proceedings of the 2019 International Symposium on Symbolic and Algebraic Computation*, pages 171–178, ACM, New York, 2019.

[4] Hui Huang, Manuel Kauers. D-finite numbers. International Journal of Number Theory, 14(7):1827–1848, 2018.

[3] Hao Du, Hui Huang, Ziming Li. A q-analogue of the modified Abramov-Petkovšek reduction, Advances in Computer Algebra, In Honour of Sergei Abramov's 70th Birthday, edited by C. Schneider, E. Zima, Springer Proceedings in Mathematics and Statistics 226, 105–129, 2018.

[2] Hui Huang. New bounds for hypergeometric creative telescoping. In *Proceedings of the 2016 International Symposium on Symbolic and Algebraic Computation*, pages 279–286. ACM, New York, 2016. (Distinguished Female Student Award.)

[1] Shaoshi Chen, Hui Huang, Manuel Kauers, Ziming Li. A modified Abramov-Petkovšek reduction and creative telescoping for hypergeometric terms. In *Proceedings of the 2015 International Symposium on Symbolic and Algebraic Computation*, pages 117–124. ACM, New York, 2015.

Selected Conference, Workshop and Colloquium Talks

July 2022 **Order-Degree-Height Surfaces for Linear Operators**.
ISSAC'22 (47th International Symposium on Symbolic and Algebraic Computation), Université de Lille, Lille, France.

July 2021 **Constructing Minimal Telescopers for Rational Functions in Three Discrete Variables**.
ACA'21 (26th International Conference on Applications of Computer Algebra), Virtual, Online.

June 2021 **Efficient Rational Creative Telescoping**.
CM'21 (Computer Mathematics 2021), Guilin University Of Electronic Technology, Guilin, China.

July 2019 **Efficient Integer-Linear Decomposition of Multivariate Polynomials**.
ISSAC'19 (44th International Symposium on Symbolic and Algebraic Computation), Beihang University, Beijing, China.

July 2017 **D-finite numbers**.
ACA'17 (23rd International Conference on Applications of Computer Algebra), Jerusalem College of Technology, Jerusalem, Israel.

July 2016 **New Bounds for Hypergeometric Creative Telescoping**.
ISSAC'16 (41st International Symposium on Symbolic and Algebraic Computation), Wilfrid Laurier University, Waterloo, Canada.

June 2016 **Reduction and Creative Telescoping for Hypergeometric Terms**.
Center for Combinatorics Seminar, Nankai University, Tianjin, China.

Nov. 2015 **Two Applications of the Modified Abramov-Petkovšek Reduction**.
CM'15 (Computer Mathematics 2015), University of Science and Technology of China, Hefei, China.

July 2015   **A Modified Abramov-Petkovšek Reduction and Creative Telescoping for Hypergeometric Terms**.
ISSAC'15 (40th International Symposium on Symbolic and Algebraic Computation), The University of Bath, Bath, United Kingdom.

June 2015   **Creative Telescoping via Abramov's Reduction**.
CanaDAM'15 (Canadian Discrete and Algorithmic Mathematics Conference), University of Saskatchewan, Saskatoon, Canada.

Aug. 2013   **An Improved Abramov-Petkovšek Reduction for Hypergeometric Terms**.
CM'13 (Computer Mathematics 2013), Jilin University, Changchun, China.