Lin JIU

CURRICULUM VITAE

1 of 8

$C \cap$	NTA	CT
\mathbf{v}	IN LA	\mathbf{L}

COMME		
Assistant Professor of Mathematics	E-mails:	lin.jiu@dukekunshan.edu.cn
Zu Chongzhi Center, Duke Kunshan University		lin.jiu.work@gmail.com
8 Duke Ave, Kunshan, Suzhou,	Tel:	+86-0512-36657333
Jiangsu Province, China, 215316	Website:	https://JiuLin90.github.io

EMPLOYMENT

EMILEOIMENI				
2023.08-	Assistant Professor	of Mathematics		Duke Kunshan University
2023.08-	Assistant Professor	of the Practice of	of DKU Studies	Duke University
2024.07-	Adjunct of the Fact	alty of Graduate	Studies	Dalhousie University
2020.08-2023.07	Lecturer in Mathen	natics		Duke Kunshan University
2020.08-2023.07	Assistant Professor	of the Practice	Trinity College of A	rts & Science, Duke University
2019.09-2020.07	Research Associate	Depar	tment of Mathematics and	Statistics, Dalhousie University
2017.09-2019.08	Killam Postdoc Fel	low Depar	tment of Mathematics and	Statistics, Dalhousie University
2017.03-2017.08	Research Scientist		Johann Radon Institute	for Computational and Applied
			Mathematics	, Austrian Academy of Science
2016.06-2017.02	Postdoc Fellow	Research Institu	te for Symbolic Computati	on, Johannes Kepler University

RESEARCH INTERESTS

Symbolic Computation, Number Theory, Combinatorics, Special Functions, Information Geometry

EDUCATION

2011.08-2016.05	Tulane University, Ph.D. in Mathematics	Advisor: <u>Victor H. Moll</u>
2013.09-2014.02	Research Institute for Symbolic Computation, Johannes Kepler	Advisor: Carsten Schneider
	University, Exchange Ph.D. Student	
2008.09-2010.07	Beijing Institute of Technology, Master of Science	Advisor: Huafei Sun
2004.09-2008.06	Beijing Institute of Technology, Bachelor of Science	Thesis Advisor: Huafei Sun

GRANT AWARD	ED	
2023.07-2025.06	WHU-DKU Joint Grant Seed	Wuhan University and Duke Kunshan University
	DKU PI of "Wuhan University-Duke Kuns	shan University-Dalhousie University
	Research Platform on Combinatorics and I	Number Theory"
2023.01-2024.12	Faculty Learning Community	Duke Kunshan University
	Facilitated by Center for Teaching and Lea	arning
2022.07-2024.06	WHU-DKU Joint Grant Seed	Wuhan University and Duke Kunshan University
	Research team member of Dr. Dongmian 2	Zou, Duke Kunshan University
2022.01-2022.12	Gradescope Research Project Grant	Gradescope
	Using Gradescope in math courses, facilita	ated by Center for Teaching and Learning, Duke
	Kunshan University	
2021.07-2023.06	Interdisciplinary Seed Grant	Duke Kunshan University
	Quantum algorithms for computational nu-	mber theory, linear algebra, and combinatorics
	Joint with Dr. Myung-Joong Huang, Duke	Kunshan University
2017.09-2019.08	Killam Research Fund	Killam Trust @ Dalhousie University
	Research Support for Killam Postdocs	·

PUBLICATIONS

(While working on the projects, undergraduate students are marked with a *)

Воок

1 H. Sun, L. Peng, Y. Cheng, D. Li, and L. Jiu, Mathematical Foundations of Information Geometry, Science Press, Beijing, 2025. ISBN: 978-7-03-080107-4.

- S. Chern, **L. Jiu**, S. Li*, and L. Wang, Leading coefficient in the Hankel determinants related to binomial and *q*-binomial transforms, submitted for publication.
- 38 L. Jiu and D. Wang*, On b-ary binomial coefficients with negative entries, Submitted for Publication.
- 37 **L. Jiu** and L. Peng, Information geometry and alpha-parallel prior of the beta-logistic distribution, *Comm. Statist. Theory Methods.* **54** (2025), 3292–3306.
- S. Chern, **L. Jiu**, and I. Simonelli, A central limit theorem for a card shuffling problem, *J. Combin. Theory Ser. A* **214** (2025), Article 106048.
- L. Jiu and Y. Li*, Hankel determinants of certain sequences of Bernoulli polynomials: A direct proof of an inverse matrix entry from Statistics, *Contrib. Discrete Math.* 19 (2024), 64–84.
- Q. Chen, S. Chern, and L. Jiu, Multi-headed lattices and Green functions, *J. Phys. A: Math. Theor.* **57** (2024) Article 465204.
- 33 S. Chern and L. Jiu, Hankel determinants and Jacobi continued fractions for *q*-Euler numbers, *C. R. Math. Acad. Sci. Paris* **362** (2024), 203–216.
- 32 K. Dilcher and L. Jiu, Hankel determinants of shifted sequences of Bernoulli and Euler numbers, *Contrib. Discrete Math.* **18** (2023), 146–175.
- Z. Bradshaw, I. Gonzalez, **L. Jiu**, V. H. Moll, and C. Vignat, Compatibility of the method of brackets with classical integration rules, *Open Math.* **21** (2023), Article number: 20220581.
- 30 **L. Jiu** and D. Y. H. Shi, Moments and cumulants on identities for Bernoulli and Euler numbers, *Math. Reports* **24** (2022), 643–650.
- 29 **L. Jiu**, I. Simonelli, and H. Yue*, Loop Decompositions of Random Walks and Nontrivial Identities of Bernoulli and Euler Polynomials, *Integers* **22** (2022), A91.
- 28 K. Dilcher and **L. Jiu**, Hankel Determinants of sequences related to Bernoulli and Euler Polynomials, *Int. J. Number Theory* **18** (2022), 331–359.
- 27 K. Dilcher and L. Jiu, Orthogonal polynomials and Hankel determinants for certain Bernoulli and Euler polynomials, *J. Math. Anal. Appl.* **497** (2021), Article 124855.
- I. Gonzales, L. Jiu, and V. H. Moll, An extension of the method of brackets. Part 2, *Open Math.* 18 (2020), 983–955.
- L. Jiu and C. Koutschan, Calculation and properties of zonal polynomials, *Math. Comput. Sci.* **14** (2020), 623–640.
- N. Takayama, L. Jiu, S. Kuriki, and Y. Zhang, Computations of the Expected Euler Characteristic for the Largest Eigenvalue of a Real Wishart Matrix, *J. Multivariate Anal.* **179** (2020), Article 104642.
- 23 **L. Jiu**, C. Vignat, and T. Wakhare, Analytic Continuation for Multiple Zeta Values using Symbolic Representations, *Int. J. Number Theory* **16** (2020), 579–602.
- 22 **L. Jiu** and C. Vignat, Connection coefficients for higher-order Bernoulli and Euler polynomials: a random walk approach, *Fibonacci Quart.* **57** (2019), 84–95.
- 21 L. Jiu and D. Y. H. Shi, Matrix representation for multiplicative nested sums, *Colloq. Math.* 158 (2019), 183–194.
- 20 **L. Jiu** and D. Y. H. Shi, Orthogonal polynomials and connection to generalized Motzkin numbers for higher-order Euler polynomials, *J. Number Theory* **199** (2019), 389–402.
- I. Gonzalez, K. Kohl, L. Jiu, and V. H. Moll, The method of brackets in experimental mathematics, Frontiers of Orthogonal Polynomials and q-Series, Z. Nashed and X. Li eds., World Scientific Publishers, 2018.
- 18 **L. Jiu**, V. H. Moll, and C. Vignat, A symbolic approach to multiple zeta values at the negative integers, *J. Symbolic Comput.* **84** (2018), 1–13.
- 17 I. Gonzales, K. Kohl, **L. Jiu**, and V. H. Moll, An extension of the method of brackets. Part 1, *Open Math.* **15** (2017), 1181–1211.
- 16 **L. Jiu**, Integral representations of equally positive integer-indexed harmonic sums at infinity, *Research in Number Theory* **3** (2017), Article 3:10.
- 15 C. Li, E. Zhang, **L. Jiu**, and H. Sun, Optimal control on special Euclidean group via natural gradient descent algorithm, *Sci. China Inf. Sci.* **59** (2016), Article: 112203.
- 14 I. Gonzalez, **L. Jiu**, and V. H. Moll, Pochhammer symbol with negative indices. A new rule for the method of brackets, *Open Math.* **14** (2016), 681–686.

- T. Amdeberhan, A. Dixit, X. Guan, **L. Jiu**, A. Kuznetsov, V. H. Moll, and C. Vignat, The integrals in Gradshteyn and Ryzhik. Part 30: trigonometric functions, *Scientia Series A: Mathematical Sciences* **27** (2016), 47–74.
- T. Amdeberhan, A. Dixit, X. Guan, L. Jiu, V. H. Moll, and C. Vignat, A series involving Catalan numbers. Proofs and demonstrations, *Elem. Math.* **71** (2016), 109–121.
- 11 **L. Jiu** and C. Vignat, On binomial identities in arbitrary bases, *J. Integer Seq.* **19** (2016), Article 16.5.5.
- 10 **L. Jiu**, V. H. Moll, and C. Vignat, A symbolic approach to some identities for Bernoulli-Barnes polynomials, *Int. J. Number Theory* **12** (2016), 649–662.
- 9 A. Dixit, **L. Jiu**, V. H. Moll, and C. Vignat, The finite Fourier transform of classical polynomials, *J. Aust. Math. Soc.* **98** (2015), 145–160.
- 8 T. Amdeberhan, A. Dixit, X. Guan, **L. Jiu** and V. H. Moll, The unimodality of a polynomial coming from a rational integral. Back to the original proof, *J. Math. Anal. Appl.* **420** (2014), 1154–1166.
- A. Byrnes*, **L. Jiu**, V. H. Moll, and C. Vignat, Recursion rules for the hypergeometric zeta functions, *Int. J. Number Theory* **10** (2014), 1761–1782.
- 6 **L. Jiu**, V. H. Moll, and C. Vignat, Identities for generalized Euler polynomials, Integral Transforms *Spec. Funct.* **25** (2014), 777–789.
- 5 Z. Zhang, H. Sun, **L. Jiu**, and L. Peng, A natural gradient algorithm for stochastic distribution systems, *Entropy* **16** (2014), 4338–4352.
- 4 F. Zhang, H. Sun, **L. Jiu**, and L. Peng, The arc length variational formula on the exponential manifold, *Math. Slovaca* **63** (2013), 1101–1112.
- L. Peng, H. Sun, and **L. Jiu**, The geometric structure of the Pareto distribution, *Bol. Asoc. Mat. Venez.* **14** (2007), 5–13.
- 2 L. Jiu and H. Sun, On minimal homothetical hypersurfaces, *Collog. Math.* 109 (2007), 239–249.
- 1 X. Wang and **L. Jiu**, Characterizing hypersurfaces of generalized rotation through its normal lines, *Journal of Ningde Normal University (Natural Science)* **02** (2006), 117–119.

ACADEMIC TALKS

- 48 **Hankel Determinants and Big** *q***-Jacobi Polynomials for** *q***-Euler Numbers** *The Third Joint SIAM/CAIMS Annual Meetings (AN25)*, Montréal, QC, Canada, July 28—Aug. 1, 2025.
- 47 **Examples of Computer Proofs: From Elementary to Recent Ones** *Invited Honours Seminar Talk*, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Jan. 15, 2025.
- 46 Multi-headed Lattices and Green Functions
 Invited Seminar Talk, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Oct. 8, 2024.
- 45 *q*-Analogue on Hankel Determinants: the *q*-Euler Numbers and the *q*-Binomial Transform *Canadian Number Theory Association XVI*, Fields Institute, Toronto, ON, Canada, June 10–14, 2024.
- 44 **Shuffle to One, Shuffle to Normal**Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Jan. 31, 2024.
- 43 Random Walk Models for Identities Involving Bernoulli and Euler Polynomials

 Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Mar. 6, 2023.
- 42 **Random Walk Model on Finite Number of Sites**Seminar, School of Mathematics, Anhui University, Online, Oct. 19, 2022.
- 41 **Bernoulli Symbol and Multiple Zeta Function at Non-negative Integers** *The First International Conference on Multiple Zeta Values and Related Topics*, Online, Aug. 08–09, 2022.
- 40 Hankel Determinants of Certain Sequences of Bernoulli and Euler Polynomials

 Seminar, Department of Mathematics, Zhejiang Sci-Tech University, Online, June 12, 2022.

- 39 **Bernoulli and Euler Symbols: Umbral Calculus, Random Variables, and Multiple Zeta Values**Duke Kunshan University-Shanghai Jiao Tong University Joint Workshop for Mathematics and Data Science, Shanghai, P. R. China, Jan. 5, 2022.
- 38 Random Walk Models for Non-trivial Identities Involving Bernoulli and Euler Polynomials of Higher-orders

Suzhou Area Youth Mathematicians 2nd Annual Workshop, Soochow University, Kunshan, Suzhou, Jiangsu Province, P. R. China, Sept. 25–26, 2021.

- 37 **Random Walks and Identities Involving Bernoulli and Euler Polynomials of Higher-order**Seminar, Institute of Statistics and Big Data, Renmin University of China, Beijing, P. R. China, June 18, 2021.
- 36 Examples on Computer Proofs

Seminar, Wuhan University, Wuhan, Hubei Province, P. R. China, May 28, 2021.

- 35 **Hankel Determinant of Sequences Related to Bernoulli and Euler Polynomials** *DKU-WHU Math and Stat Academic Conference*, Wuhan University, Wuhan, Hubei Province, P. R. China, May 27, 2021.
- 34 Hankel Determinant on Sequences Related to Bernoulli and Euler Polynomials

 Suzhou Area Youth Mathematicians 1st Annual Workshop, Duke Kunshan University, Kunshan, Suzhou,
 Jiangsu Province, P. R. China, Nov. 14–15, 2020.
- 33 Three Examples on Computer Proofs

Zu Chongzhi Colloquium Series, Duke Kunshan University, Kunshan, Suzhou, P. R. China, Nov. 6, 2020.

- 32 Introduction to Four Symbolic Integration Methods: Two Examples
 Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS,
 Canada, Sept. 23, 2019
- 31 On b-ary Binomial Coefficients

Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Sept. 16, 2019

- 30 Orthogonal Polynomials for Higher-order Euler Polynomials
 15th International Symposium on Orthogonal Polynomials, Special Functions and Applications, Hagenberg,
 - 15th International Symposium on Orthogonal Polynomials, Special Functions and Applications, Hagenberg Austria, July 22–26, 2019.
- 29 On Harmonic Sums: Integral and Matrix Representations with Connections to Partition-theoretic Generalization of the Riemann Zeta-function and Random Walks

 Analytic and Combinatorial Number Theory: The Legacy of Ramanujan (A conference in honor of Bruce C. Berndt's 80th birthday), University of Illinois at Urbana-Champaign, Urbana, IL, U. S. A., June 6–9,
- 2019.
 Random Walk Approaches to Identities on Higher-order Bernoulli and Euler Polynomials
 American Mathematical Society Spring Southeastern Sectional Meeting, Auburn University, Auburn, AL,
 U. S. A., Mar. 15–17, 2019.
- 27 Random Walk & Identities

Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Feb. 25, 2019

- 26 **Matrix Representation for Multiplicative Nested Sums** 2019 Joint Mathematics Meetings, Baltimore, MD, U. S. A., Jan. 16–19, 2019.
- 25 Orthogonal Polynomials for Bernoulli and Euler Polynomials Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Jan. 7, 2019
- 24 Three Examples of Computer Proofs of Combinatorial Results Honours Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Oct. 17, 2018
- 23 Matrix Representation for Multiplicative Nested Sums

 Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Sept. 21, 2018.

22 Bernoulli Symbol and Sum of Powers

6th International Congress on Mathematical Software, University of Notre Dame, Notre Dame, IN, U. S. A., July 24–27, 2018.

21 Random Walks and Identities for High-order Bernoulli and Euler Polynomials

18th International Conference on Fibonacci Numbers and Their Applications, Dalhousie University, Halifax, NS, Canada, July 1–8, 2018.

20 Matrix Representations for Bernoulli and Euler Polynomials

2018 Canadian Mathematical Society Summer Meeting, University of New Brunswick, Fredericton, NB, Canada, June 1–4, 2018.

19 Two Sequences Related to Bernoulli and Euler Numbers

Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, May 30, 2018.

18 Hidden Walks

Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Feb. 26, 2018.

17 Introduction to Zonal Polynomials

Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Jan. 22, 2018.

16 The Probabilistic and Combinatorial Interpretations of the Bernoulli Symbol

2017 Canadian Mathematical Society Winter Meeting, University of Waterloo, Waterloo, ON, Canada, Dec. 8–11, 2017.

15 Bernoulli Symbol on Multiple Zeta Values at Negative Integers

23rd Conference on Applications of Computer Algebra (Commemorating the heritage of Jonathan Michael Borwein), Jerusalem College of Technology, Jerusalem, Israel, July 17–21, 2017.

14 Bernoulli Symbol B: from Umbral Calculus to Random Variable and Combinatorics

Number Theory Seminar, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Oct. 13, 2017.

13 Visualization of Bernoulli Numbers

Colloquium, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada, Oct. 12, 2017.

12 On Bernoulli Symbol \mathcal{B}

Klagenfurt-Linz-Wien Workshop, Riefnitz, Austria, May 3-6, 2017.

11 The Method of Brackets (MoB) and Integrating by Differentiating (IbD) Method

Laboratoire des Signaux et Systemès, Université Paris Sud XI, Orsay, France, Dec. 9, 2016.

10 "Random Walks" for Harmonic Sums

SFB Statusseminar, Strobl, Austria, Nov. 27–30, 2016.

9 A Hot Pot

Algorithmic Combinatorics Seminar, Research Institute for Symbolic Computations, Johannes Kepler University, Hagenberg im Mühlkreis, Austria, Oct. 5, 2016.

8 On Binomial Identities in Arbitrary Bases

Beijing Key Laboratory on Mathematical Characterization, Analysis and Applications of Complex Information, Beijing Institute of Technology, Beijing, China, July 26, 2016.

7 Random Walk: A Probabilistic and Geometric Approach to Number Theory

International Conference on Mathematical Characterization, Analysis and Applications of Complex Information, Beijing Institute of Technology, Beijing, China, July 19–20, 2016.

6 The Method of Brackets

5th International Congress on Mathematical Software, The Zuse Institute Berlin, Berlin, Germany, July 11–14, 2016.

5 The Method of Brackets

Algorithmic Combinatorics Seminar, Research Institute for Symbolic Computations, Johannes Kepler University, Hagenberg im Mühlkreis, Austria, June 22, 2016.

CURRICULUM VITAE

4 Binomial Identities in Arbitrary Bases

Graduate Students Colloquium, Department of Mathematics, Tulane University, New Orleans, LA., U. S. A., Mar. 8, 2016

3 On Bernoulli Symbol \mathcal{B} and Its Applications

Center for Combinatorics, Nankai University, Tianjin, China, July 8, 2015.

2 Recursion Rules for the Hypergeometric Zeta Functions

Midwest Number Theory Conference for Graduate Students and Recent PhDs, X, University of Illinois at Urbana-Champaign, Urbana, IL, U. S. A., June 3–4, 2014.

1 Implementation of an Algorithm on Converting Sums into Nested Sums

Laboratoire des Signaux et Systemes, Université Paris Sud XI, Orsay, France, Jan. 8, 2014.

HONORS AND AWARDS

2016	Tea Doctor (for organizing Tea Time)	Depart. of Math., Tulane University
2015	Tea Master (for organizing Tea Time)	Depart. of Math., Tulane University
2014	Excellence in Mathematics	Depart. of Math., Tulane University
2013	Excellent Graduate Student Teacher	Depart. of Math., Tulane University
2008	Outstanding Graduates	Beijing Institute of Technology
2007	National Scholarship	Department of Education, P. R. China
2006	China Aerospace Science and Technology	China Aerospace Science and Technology
	Corporation Scholarship, 2nd Prize	Corporation

TEACHING EXPERIENCE

2024 FallMATH 307Complex AnalysisDuke Kunshan University2023 FallMATH 105CalculusDuke Kunshan UniversityMATH 202Linear AlgebraDuke Kunshan UniversityMATH 105CalculusDuke Kunshan UniversityMATH 301Advanced Introduction to ProbabilityDuke Kunshan University2023 SpringMATH 205Probability and StatisticsDuke Kunshan UniversityMINITERM 102Experimental Mathematics and SymbolicDuke Kunshan UniversityComputationDuke Kunshan University2022 FallINDSTU 391Introduction to Algebraic GeometryDuke Kunshan UniversityMATH 306Number TheoryDuke Kunshan UniversityMATH 301Advanced Introduction to ProbabilityDuke Kunshan University2022 SpringINDSTU 391Variational Quantum AlgorithmsDuke Kunshan UniversityMATH 201Multivariable CalculusDuke Kunshan UniversityMATH 201Multivariable CalculusDuke Kunshan University2021 FallMATH 105CalculusDuke Kunshan University1NDSTU 391Riemann Zeta-FunctionDuke Kunshan University1NDSTU 391Quantum AlgorithmDuke Kunshan UniversityMATH 306Number TheoryDuke Kunshan University1NDSTU 391CombinatoricsDuke Kunshan University2021 SpringMATH 205Probability and StatisticsDuke Kunshan University2021 SpringMATH 301Advanced Introduction to ProbabilityDuke Kunshan University2020 FallMATH 105<	2025 Winter	MATH 6200	Integer Partitions and <i>q</i> -Series	Dalhousie University
MATH 202 Linear Algebra Duke Kunshan University MATH 105 Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University Computation 2022 Fall INDSTU 391 Introduction to Algebraic Geometry Duke Kunshan University MATH 306 Number Theory Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University AATH 306 Number Theory Duke Kunshan University Duke Kunshan University AATH 306 Number Theory Duke Kunshan University Duke Kunshan University AATH 301 Advanced Introduction to Probability Duke Kunshan University Duke Kunshan University AATH 301 Advanced Introduction to Probability Duke Kunshan University Duk	2024 Fall	MATH 307	Complex Analysis	Duke Kunshan University
MATH 105 Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University 2023 Spring MATH 205 Probability and Statistics Duke Kunshan University MINITERM 102 Experimental Mathematics and Symbolic Computation 2022 Fall INDSTU 391 Introduction to Algebraic Geometry Duke Kunshan University MATH 105 Calculus Duke Kunshan University MATH 306 Number Theory Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University INDSTU 391 Advanced Introduction to Probability Duke Kunshan University	2023 Fall	MATH 105	Calculus	Duke Kunshan University
MATH 301 Advanced Introduction to Probability Duke Kunshan University MINITERM 102 Experimental Mathematics and Symbolic Computation INDSTU 391 Introduction to Algebraic Geometry MATH 306 Number Theory MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 202	Linear Algebra	Duke Kunshan University
MATH 205 Probability and Statistics Duke Kunshan University		MATH 105	Calculus	Duke Kunshan University
MINITERM 102 Experimental Mathematics and Symbolic Computation 2022 Fall INDSTU 391 Introduction to Algebraic Geometry Duke Kunshan University MATH 105 Calculus Duke Kunshan University MATH 306 Number Theory Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University MATH 306 Number Theory Duke Kunshan University MATH 305 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 301	Advanced Introduction to Probability	Duke Kunshan University
Computation 2022 Fall INDSTU 391 Introduction to Algebraic Geometry MATH 105 Calculus Duke Kunshan University MATH 306 Number Theory Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University MATH 305 Probability and Statistics Duke Kunshan University	2023 Spring	MATH 205	Probability and Statistics	Duke Kunshan University
2022 Fall INDSTU 391 Introduction to Algebraic Geometry Duke Kunshan University		MINITERM 102	Experimental Mathematics and Symbolic	Duke Kunshan University
MATH 105 Calculus MATH 306 Number Theory Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University Duke Kunshan University Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 105 Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University			Computation	•
MATH 306 Number Theory MATH 301 Advanced Introduction to Probability 2022 Spring INDSTU 391 Variational Quantum Algorithms MATH 201 Multivariable Calculus MATH 301 Advanced Introduction to Probability MATH 301 Advanced Introduction to Probability MATH 201 Multivariable Calculus MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function INDSTU 391 Quantum Algorithm MATH 306 Number Theory INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University MATH 306 Number Theory Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University	2022 Fall	INDSTU 391	Introduction to Algebraic Geometry	Duke Kunshan University
MATH 301 Advanced Introduction to Probability 2022 Spring INDSTU 391 Variational Quantum Algorithms Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 105	Calculus	Duke Kunshan University
2022 Spring INDSTU 391 Variational Quantum Algorithms Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University ATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 306	Number Theory	Duke Kunshan University
MATH 201 Multivariable Calculus Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University MATH 201 Multivariable Calculus Duke Kunshan University 2021 Fall MATH 105 Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University 2021 Spring MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 301	Advanced Introduction to Probability	Duke Kunshan University
MATH 301 Advanced Introduction to Probability MATH 201 Multivariable Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University Duke Kunshan University Duke Kunshan University Advanced Introduction to Probability Duke Kunshan University Duke Kunshan University Duke Kunshan University Duke Kunshan University	2022 Spring	INDSTU 391	Variational Quantum Algorithms	Duke Kunshan University
MATH 201 Multivariable Calculus Duke Kunshan University MATH 105 Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 201	Multivariable Calculus	Duke Kunshan University
2021 Fall MATH 105 Calculus Duke Kunshan University INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University 2021 Spring MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 301	Advanced Introduction to Probability	Duke Kunshan University
INDSTU 391 Riemann Zeta-Function Duke Kunshan University INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 201	Multivariable Calculus	Duke Kunshan University
INDSTU 391 Quantum Algorithm Duke Kunshan University MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University Duke Kunshan University MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University	2021 Fall	MATH 105	Calculus	Duke Kunshan University
MATH 306 Number Theory Duke Kunshan University INDSTU 391 Combinatorics Duke Kunshan University 2021 Spring MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		INDSTU 391	Riemann Zeta-Function	Duke Kunshan University
INDSTU 391 Combinatorics Duke Kunshan University 2021 Spring MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		INDSTU 391	Quantum Algorithm	Duke Kunshan University
2021 Spring MATH 205 Probability and Statistics Duke Kunshan University MATH 301 Advanced Introduction to Probability Duke Kunshan University		MATH 306	Number Theory	Duke Kunshan University
MATH 301 Advanced Introduction to Probability Duke Kunshan University		INDSTU 391	Combinatorics	Duke Kunshan University
·	2021 Spring	MATH 205	Probability and Statistics	Duke Kunshan University
2020 Fall MATH 105 Calculus Duke Kunshan University		MATH 301	Advanced Introduction to Probability	Duke Kunshan University
•	2020 Fall	MATH 105	Calculus	Duke Kunshan University

August	12, 2025
	7 of 8

Lin JIU

CURRICULUM VITAE

	MATH 201	Multivariable Calculus	Duke Kunshan University
2019 Summer	MATH 1030	Matrix Theory and Linear Algebra I	Dalhousie University
2019 Winter	MATH 3080	Introduction to Complex Variables	Dalhousie University
2016 Spring	MATH 1060	Long Calculus II	Tulane University
2015 Fall	MATH 1310	Consolidated Calculus	Tulane University
2015 Spring	MATH 1210	Long Calculus I	Tulane University
2014 Summer	MATH 1160	Long Calculus II	Tulane University

ACADEMIC SERVICES AND MEMBERSHIPS

- 2025 Reviewer for Mathematical Reviews @ AMS
- Organizer of the mini-symposium *Special Functions with Applications in Number Theory and Combinatorics* at The Third Joint SIAM/CAIMS Annual Meetings, July 27—Aug. 1, 2025, Montreal, QC, Canada
- 2014 Reviewer for journals including: Journal of Number Theory, International Journal of Number Theory, Journal of Difference Equations and Applications, etc.

DEPARTMENTAL AND UNIVERSITY SERVICE

2021-	Organizer of the Discrete Math Seminar	Duke Kunshan University
2024	Member of 2025 Undergraduate Recruitment & Admissions Evaluation	Duke Kunshan University
2017-2020	Organizer of the Number Theory Seminar	Dalhousie University
2012-2016	Organizer of the Tee Time	Tulane University

STUDENT MENTORING, ADVISING, AND RESEARCH ACTIVITIES

UNDERGRADUATE ACADEMIC ADVISOR @ DUKE KUNSHAN UNIVERSITY

Class of	Number of Students	Names
2022	1	Ziang Zhou
2023	6	Heng Yue, Junyu Shi, Lezhen Qin, Mengfan Gong, Yushan Gu, Shi Wang
2024	3	Jeff Ulmasov, Jing Gu, Yuekang Li
2025	1	Jiaqi Wang
2026	3	Baoguanyan Kang, Dalia Guerrero Flores, Lei Wu,
2027	4	Jinggege Li, Rui Ling, Shengjie Bai, Yunjie Guo
2028	5	Binghan Cheng, Feiyang Zhong, Rustam Safaev, Shengyu Xu, Yihang Yin
2029	2	Zidi Gao, Wangzi Ding
TOTAL	25	

Undergraduate Signature Work $(SW)^1$ (\cong Honor Thesis) Mentor @ Duke Kunshan University

Class of	Number of Projects	Names
2023	7	Heng Yue, Junyu Shi, Lezhen Qin, Mengfan Gong, Siyuan Wu, Ye Li,
		Youzhang He
2024	3	Hongkai Zhu, Matilde Molinari Giglietti, Shuhan Li
TOTAL	10	

UNDERGRADUATE STUDENT RESEARCH PROJECTS

¹https://signature-work.dukekunshan.edu.cn/signature-work-overview/

CURRICULUM VITAE

Year	Student(s)	Project(s)	Result/Comments
2021	Heng Yue Ye Li	Loop Decomposition of Random Walks Hankel Determinants on Some sequences	[29] in the Publication section[35] in the Publication section
2022	Siyuan Wu Duanduan Wang	The Method of Brackets b-ary Related Sequences	Methematica Package [38] in the Publication section
2023	Shuhan Li Hongkai Zhu	Hankel Determinants and Continued Fractions Weakly Increasing Trees on a Multiset	[39] in the Publication section Mathematica Package
2024	Jonah Barrington Julius Frizzell	On Cyclotomic Polynomials Factorization of Large Primes	Co-mentored with K. Dilcher @ Dalhousie University

RELEVANT SKILLS

Language: Mandarin (native), English (fluent)

Computer: Mathematica, SageMath, Python, Maple, LATEX, LXX

Packages: Zonal.sage https://jiulin90.github.io/Packages/Zonal.sage

BNE.sage https://jiulin90.github.io/Packages/BNE.sage