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温州大学数理学院
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教育背景

- 学士 山东大学 2004/9–2008/7
- 硕士 华东师范大学 2008/9–2011/6
- 博士 华东师范大学 2014/9–2017/6

工作经历

- 2017/6–2019/11 讲师 温州大学数理学院
- 2019/12–现在 副教授 硕士生导师 温州大学数理学院

讲授课程

- 本科生课程: 《高等代数》、《高等数学》
- 研究生课程: 《计数组合学》、《特殊函数论》、《组合数论》

研究方向

- 数论
- 组合数学
- 特殊函数论

学术项目

- 2022–2025 组合同余式与模形式傅里叶系数
国家自然科学基金面上项目 (12171370), 50万元, 主持, 在研
- 2019–2021 带 p -adic Gamma 函数的组合同余式研究
国家自然科学基金青年项目 (11801417), 22万元, 主持, 已结题

荣誉奖励

- 温州大学东湖学者 (2021)
- 温州市“瓯越特支计划”青年拔尖人才 (2021)
- 温州大学瓯江特聘教授 CII 类 (2022)
- 温州大学优秀教师 (2022)
- 物华教学基金会物华园丁奖 (2022)

学术兼职

- 美国《数学评论》(Mathematical Reviews) 评论员
- 德国《数学文摘》(zbMATH) 评论员
- SCI 期刊审稿人: 《Journal of Symbolic Computation》, 《Journal of Mathematical Analysis and Applications》, 《Monatshefte für Mathematik》, 《Results in Mathematics》, 《Revista Matemática Complutense》, 《Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas》, 《Bulletin of the Australian Mathematical Society》, 《Journal of Difference Equations and Applications》, 《Publicationes Mathematicae Debrecen》, 《Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie》, 《Chinese Annals of Mathematics, Series B》, 《Electronic Research Archive》, 《Filomat》, 《Turkish Journal of Mathematics》, 《AIMS Mathematics》.....

学术会议

- 2019年9月20-22日, 洛阳师范学院, 第六届全国组合数论会议
报告题目: q -Supercongruences on sums of Catalan numbers and central binomial coefficients (邀请报告)
- 2020年11月20-22日, 浙江师范大学, 第五届组合数学与符号计算研讨会
报告题目: Some congruences on sums of Apéry-like numbers (邀请报告)
- 2021年11月5-8日, 河南大学, 第七届全国组合数论会议
报告题目: Some supercongruences on q -lacunary harmonic sums and q -trinomial coefficients (邀请报告)
- 2023年6月21-23日, 安徽师范大学, 第八届全国组合数论会议
报告题目: Supercongruences involving Motzkin numbers and central trinomial coefficients (邀请报告)

—— 指导硕士生 (已毕业)

2020级 姜雪婷 (东华理工大学) 赵姗姗 (绍兴中芯) 赵媛媛 (永嘉第二职业中学)

—— 指导硕士生 (在读)

2021级 李燕倪 祁伟伟

2022级 章安妮 刘 静

2023级 廖孔练 刘 欢

—— 学术论文 (*标记通讯作者)

1. **Ji-Cai Liu***, Xue-Ting Jiang, Yeong-Nan Yeh, On super Catalan numbers modulo 8, Bull. Math. Soc. Sci. Math. Roumanie (N.S.), to appear.
2. **Ji-Cai Liu**, A supercongruence related to Ramanujan-type formula for $1/\pi$, Bull. Math. Soc. Sci. Math. Roumanie (N.S.), to appear.
3. **Ji-Cai Liu***, Yuan-Yuan Zhao, Combinatorial proofs of two q -binomial coefficient identities, Bull. Math. Soc. Sci. Math. Roumanie (N.S.), to appear.
4. **Ji-Cai Liu***, Wei-Wei Qi, Two new q -supercongruences arising from Carlitz's identity, Proc. Amer. Math. Soc., to appear.
5. **Ji-Cai Liu***, Yan-Ni Li, On the divisibility of sums of q -super Catalan numbers, Bull. Aust. Math. Soc., in press, doi: 10.1017/S0004972723000400.
6. **Ji-Cai Liu**, On the divisibility of q -trinomial coefficients, Ramanujan J. 60 (2023), 455–462.
7. Victor J.W. Guo, **Ji-Cai Liu***, Michael J. Schlosser, An extension of a supercongruence of Long and Ramakrishna, Proc. Amer. Math. Soc. 151 (2023), 1157–1166.
8. **Ji-Cai Liu***, Shan-Shan Zhao, Truncations of Gauss' square exponent theorem, Czechoslovak Math. J. 72 (2022), 1183–1189.
9. Sheng Yang, **Ji-Cai Liu***, On the divisibility of sums involving Apéry-like polynomials, Bull. Aust. Math. Soc. 106 (2022), 203–208.
10. **Ji-Cai Liu**, A variation of the q -Wolstenholme theorem, Ann. Mat. Pura Appl. 201 (2022), 1993–2000.
11. **Ji-Cai Liu***, Xue-Ting Jiang, On the divisibility of sums of even powers of q -binomial coefficients, Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. 116 (2022), Art. 76.

12. **Ji-Cai Liu**, Ramanujan-type supercongruences involving Almkvist–Zudilin numbers, *Results Math.* 77 (2022), Art. 67.
13. Long Li, **Ji-Cai Liu***, On two supercongruences of double binomial sums, *Period. Math. Hungar.* 83 (2021), 159–164.
14. **Ji-Cai Liu***, He-Xia Ni, On two supercongruences involving Almkvist–Zudilin sequences, *Czechoslovak Math. J.* 71 (2021), 1211–1219.
15. **Ji-Cai Liu**, On two supercongruences for sums of Apéry-like numbers, *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat.* 115 (2021), Art. 151.
16. **Ji-Cai Liu**, Supercongruences for sums involving Domb numbers, *Bull. Sci. Math.* 169 (2021), Art. 102992.
17. **Ji-Cai Liu**, Supercongruences arising from transformations of hypergeometric series, *J. Math. Anal. Appl.* 497 (2021), Art. 124915.
18. **Ji-Cai Liu**, A supercongruence relation among Apéry-like numbers, *Colloq. Math.* 163 (2021), 333–340.
19. Moa Apagodu, **Ji-Cai Liu***, Congruence properties for the trinomial coefficients, *Integers* 20 (2020), Art. 38.
20. **Ji-Cai Liu***, Zhong-Yu Huang, A truncated identity of Euler and related q -congruences, *Bull. Aust. Math. Soc.* 102 (2020), 353–359.
21. **Ji-Cai Liu**, On two congruences involving Franel numbers, *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat.* 114 (2020), Art. 201.
22. **Ji-Cai Liu**, On a congruence involving q -Catalan numbers, *C. R. Math. Acad. Sci. Paris* 358 (2020), 211–215.
23. **Ji-Cai Liu**, Proof of Sun’s conjectural supercongruence involving Catalan numbers, *Electron. Res. Arch.* 28 (2020), 1023–1030.
24. **Ji-Cai Liu**, Some supercongruences arising from symbolic summation, *J. Math. Anal. Appl.* 488 (2020), Art. 124062.
25. **Ji-Cai Liu**, On a sum of Apéry-like numbers arising from spectral zeta functions, *Colloq. Math.* 160 (2020), 1–6.
26. **Ji-Cai Liu**, Supercongruences arising from hypergeometric series identities, *Acta Arith.* 193 (2020), 175–182.
27. **Ji-Cai Liu***, Fedor Petrov, Congruences on sums of q -binomial coefficients, *Adv. in Appl. Math.* 116 (2020), Art. 102003.
28. Victor J.W. Guo, **Ji-Cai Liu***, Some congruences related to a congruence of Van Hamme, *Integral Transforms Spec. Funct.* 31 (2020), 221–231.

29. Ke-Yu Lin, **Ji-Cai Liu***, Congruences for the truncated Appell series F_3 and F_4 , *Integral Transforms Spec. Funct.* 31 (2020), 10–17.
30. **Ji-Cai Liu**, Supercongruences for truncated Appell series, *Colloq. Math.* 158 (2019), 255–263.
31. **Ji-Cai Liu***, Chen Wang, Congruences for the $(p - 1)$ th Apéry number, *Bull. Aust. Math. Soc.* 99 (2019), 362–368.
32. **Ji-Cai Liu**, Semi-automated proof of supercongruences on partial sums of hypergeometric series, *J. Symbolic Comput.* 93 (2019), 221–229.
33. **Ji-Cai Liu**, On Van Hamme’s (A.2) and (H.2) supercongruences, *J. Math. Anal. Appl.* 471 (2019), 613–622.
34. **Ji-Cai Liu**, Congruences on sums of super Catalan numbers, *Results Math.* 73 (2018), Art. 140.
35. Victor J.W. Guo, **Ji-Cai Liu***, q -Analogues of two Ramanujan-type formulas for $1/\pi$, *J. Difference Equ. Appl.* 24 (2018), 1368–1373.
36. **Ji-Cai Liu**, A generalized supercongruence of Kimoto and Wakayama, *J. Math. Anal. Appl.* 467 (2018), 15–25.
37. **Ji-Cai Liu**, Supercongruences involving p -adic Gamma functions, *Bull. Aust. Math. Soc.* 98 (2018), 27–37.
38. **Ji-Cai Liu***, Long Li, Su-Dan Wang, Some congruences on Delannoy numbers and Schröder numbers, *Int. J. Number Theory* 14 (2018), 2035–2041.
39. **Ji-Cai Liu**, Some supercongruences on truncated ${}_3F_2$ hypergeometric series, *J. Difference Equ. Appl.* 24 (2018), 438–451.
40. **Ji-Cai Liu**, Some finite generalizations of Gauss’s square exponent identity, *Rocky Mountain J. Math.* 47 (2017), 2723–2730.
41. **Ji-Cai Liu***, Jichun Liu, Some Extensions of the Prabhu-Srivastava Theorem Involving the (p, q) -Gamma Function, *Filomat* 31 (2017), 4507–4513.
42. **Ji-Cai Liu**, A p -adic supercongruence for truncated hypergeometric series ${}_7F_6$, *Results Math.* 72 (2017), 2057–2066.
43. **Ji-Cai Liu**, Proof of some divisibility results on sums involving binomial coefficients, *J. Number Theory* 180 (2017), 566–572.
44. **Ji-Cai Liu**, Some finite generalizations of Euler’s pentagonal number theorem, *Czechoslovak Math. J.* 142 (2017), 525–531.
45. **Ji-Cai Liu**, Congruences for truncated hypergeometric series ${}_2F_1$, *Bull. Aust. Math. Soc.* 96 (2017), 14–23.

46. **Ji-Cai Liu***, Wilberd van der Kallen, Proof of Sun's conjectures on Schröder-like numbers, *Int. J. Number Theory* 13 (2017), 1627–1638.
47. Victor J.W. Guo*, **Ji-Cai Liu**, Proof of a congruence on sums of powers of q -binomial coefficients, *Int. J. Number Theory* 13 (2017), 1571–1577.
48. **Ji-Cai Liu**, Some congruences for Schröder type polynomials, *Colloq. Math.* 146 (2017), 187–195.
49. **Ji-Cai Liu**, On two conjectural supercongruences of Apagodu and Zeilberger, *J. Difference Equ. Appl.* 22 (2016), 1791–1799.
50. **Ji-Cai Liu**, A supercongruence involving Delannoy numbers and Schröder numbers, *J. Number Theory* 168 (2016), 117–127.
51. Victor J.W. Guo*, **Ji-Cai Liu**, Proof of some conjectures of Z.-W. Sun on the divisibility of certain double sums, *Int. J. Number Theory* 12 (2016), 615–623.
52. Victor J.W. Guo*, **Ji-Cai Liu**, Proof of a conjecture of Z.-W. Sun on the divisibility of a triple sum, *J. Number Theory* 156 (2015), 154–160.

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