Chang Lv

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Education

2018–Now **Associate Professor**, *Institute of Information Engineering, CAS*, Beijing, China.

2015–2018 **Assistant Professor**, *Institute of Information Engineering, CAS*, Beijing, China.

2010–2015 **Ph.D.**, *Academy of Mathematics and Systems Science, CAS*, Beijing, China,
- Degree major: Applied Mathematics, Adviser: Prof. Zhexian Wan and Yingpu Deng.
- Thesis: Primality tests, ring class fields and diophantine equations, 2015

2006–2010 **B.S.**, *Nankai University*, Tianjin, China,
- Degree major: Mathematics and Applied Mathematics.

Area of research

I am interested in **computational number theory**, **computational arithmetic geometry** and **cryptography**.

Fundings

01/2018-12/2020 Existence of integral points on quadratic norm form equations over global fields and applications, NNSF of China (Grants No. 11701552)

Publications

[DL15] Yingpu Deng and Chang Lv, *Primality test for numbers of the form $Ap^n + w_n$*, Journal of Discrete Algorithms **33** (2015), 81–92.

[LD15] Chang Lv and Yingpu Deng, *On orders in number fields: Picard groups, ring class fields and applications*, Science China Mathematics **58** (2015), no. 8, 1627–1638.

[LL17] Chang Lv and Jianing Li, *On the non-existence of certain classes of generalized bent functions*, IEEE Transactions on Information Theory **63** (2017), no. 1, 738–746.

[LLP24] Xiao Li, Chang Lv, and Zhizhong Pan, *A generalized MSST algorithm for counting points of elliptic curves over $\mathbb{F}_{p^n}$*, J. Syst. Sci. Complex. **37** (2024), no. 4, 1738–1754. MR 4757054

[LSD18] Chang Lv, Junchao Shentu, and Yingpu Deng, *On the integral representation of binary quadratic forms and the Artin condition*, Tokyo J. Math. **41** (2018), no. 2, 371–384. MR 3908800

[Lv17] Chang Lv, *On the non-existence of certain classes of perfect p-ary sequences and*

perfect almost p-ary sequences, IEEE Transactions on Information Theory **63** (2017), no. 8, 5350–5359.

[Lv20a]   ———, *Diophantine equations defined by binary quadratic forms over rational function fields*, Acta Arith. **196** (2020), no. 1, 35–51. MR 4129970

[Lv20b]   ———, *A note on the Brauer group and the Brauer-Manin set of a product*, Bull. Lond. Math. Soc. **52** (2020), no. 5, 932–941. MR 4171413

[Lv21]   ———, *The second descent obstruction and gerbes*, arXiv preprint arXiv:2009.06915v2 (2021), 1–31.

[Lv22]   ———, *On commutative diagrams consisting of low term exact sequences*, arXiv preprint arXiv:2112.14386v2 (2022), 1–9.

[LW23]   Chang Lv and Han Wu, *The Brauer-Manin obstruction on algebraic stacks*, arXiv preprint arXiv:2306.14426v2 (2023), 1–16.

[LZ18]   Chang Lv and Yuqing Zhu, *Nonexistence of generalized bent functions and the quadratic norm form equations*, arXiv preprint arXiv:1804.01292 (2018), 1–13.

[WL23]   Han Wu and Chang Lv, *Genus one half stacky curves violating the local-global principle*, to appear (2023), 1–5.

[WL24]   ———, *Iterated descent obstructions for algebraic stacks*, arXiv preprint arXiv:2409.20068 (2024), 1–9.

[YL18]   Hairong Yi and Chang Lv, *On ring class fields of number rings*, arXiv preprint arXiv:1810.04810 (2018), 1–17.

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