

GEYANG WANG

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EDUCATION

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- Southern University of Science and Technology, China, *M.Eng.*** 2019.9 - 2022.6
- **Major:** Computer Science and Engineering
 - **Supervisor:** [Prof. Qi Wang](#)
- Southern University of Science and Technology, China, *B.Eng.*** 2015.9 - 2019.6
- **Major:** Computer Science and Engineering
 - **GPA** 3.67/4.0, Rank: 14/108

RESEARCH PROJECTS

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- Joint Radar Communication Sequence Design** 2020.9 - now
- This project aims to design dual-function digital signals (sequences) that suitable for joint radar and communication systems. I surveyed on known results about sequence sets with low ambiguity function values.
- Non-overlapping Codes for DNA Storage - Master Thesis** 2020.10 - now
- This project aims to study the non-overlapping codes (cross-bifix-free codes) that used in DNA storage system.
 - Find a simple way to generalize non-overlapping binary codes to q -ary; use generating functions to analyze the cardinalities of constructed non-overlapping codes; solve an open problem proposed by Bilotta (see publication 2).
- Codes for Insertion/Deletion Channel** 2021.10 - now
- Study the size distribution of Levenshtein ball (deletion-insertion sphere).

PUBLICATIONS

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1. **Geyang Wang** and Qi Wang: “On the size distribution of Levenshtein balls with radius one”, in *12th International Workshop on Coding and Cryptography (WCC 2022)*.
 2. **Geyang Wang** and Qi Wang: “ Q -ary non-overlapping codes: a generating function approach,” *IEEE transactions on Information Theory*, accepted ([arXiv:2108.06934](https://arxiv.org/abs/2108.06934)).
 3. **Geyang Wang** and Qi Wang: “An OACF-preserving operation based on Parker’s transformation,” in *9th International Workshop on Signal Design and its Applications in Communications (IWSDA)*, Dongguan, China, 2019.

AWARDS

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- Graduate Student Scholarship, SUSTech 2019 - now
- 1st Prize in South Central China, National Crypto-Math Contest 2019, 2020
- Outstanding Graduate of Residential College, SUSTech 2019
- Outstanding student at *Cryptography and math summer school*, with Ph.D. Offer, University of Chinese Academy of Sciences 2018
- Held by the state key laboratory of information security, and University of Chinese Academy of Sciences (UCAS);
- Undergraduate Student Scholarship, SUSTech 2016 - 2019

MATHEMATICAL BACKGROUND

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- **Related Courses:** *Linear Algebra, Calculates, Complex Analysis, Abstract Algebra, Discrete Mathematics, Probabilistic Theory, Mathematical Statistics, Combinatorics, Cryptography, Information Theory and Coding*
 - **Self-studied textbooks:**
 - R. Lidl, and H. Niederreiter *Finite Fields*. Cambridge university press, 1997
 - Z X. Wan *Lectures on finite fields and Galois rings*. World Scientific Publishing Company, 2003.
 - N. Alon, and J.H. Spencer. *The probabilistic method*. John Wiley & Sons, 2016.
 - W C. Huffman, and V. Pless *Fundamentals of error-correcting codes*. Cambridge university press, 2010.

SKILLS

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- **Programming Languages:** *Java, Python.*
 - **Tools:** *LaTex, Magma.*
 - **Languages:** Chinese (native); English, (fluent, TOEFL 103).