Ke Luo

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Ph.D. in Computer Architecture Huazhong University of Science and Technology (HUST)
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Highly-motivated Ph.D. in Computer Science(Computer Architecture) with good foundations of math and statistics. Proficient in storage channel modeling, analysis, and signal processing and enthusiastic about data storage technologies and deep learning inspired information theory. Skilled in Matlab/Octave, Python, and C/C++ programming. Passionate about computer science, hiking, and photography.

Education

Till now	Wuhan National Laboratory for Optoelectronics, **Huazhong University of Science and Technology**
March 2023	Postdoc. in Optical Engineering
December 2022	Wuhan National Laboratory for Optoelectronics, **Huazhong University of Science and Technology**
September 2016	Ph.D. in Computer Architecture
June 2016	College of Electronics and Information, **South-Central Minzu University**
September 2012	Bechelor in Electronics and Information Engineering

Research Projects

- National Natural Science Foundation of China, General Program, No. 62272178, Study of Write Mechanism of Ultra-high Density Three-Dimensional Heat-Assisted Magnetic Recording, 2023/01∼ 2026/12, Active, Join
- National Natural Science Foundation of China, General Program, No. 61672246, Key Technologies of Read Heads Array and The Recording System for Two-Dimensional Magnetic Recording at Ultra-high Density, 2017/01∼2020/12, Finished, Join
- Enterprise Cooperation Project, BDXL Standard Based PRML Model Design and Implementation, 2022/08∼2023/06, Finished, Join
- Enterprise Cooperation Project, HDD Prototype Algorithms and Innovative Magnetic Record Technology, 2022/03∼2023/03, Finished, Join
- National Natural Science Foundation of China, General Program, No. 61272068, Key Technologies of Ultra-high Density Shingled Magnetic Recording on Bit Patterned Media, 2013/01∼2016/12, Finished, Join

Research Achievements

References

[1] K. Luo, Y. Jian, Y. Liao, K. Zhang, J. Chen, and P. Lu, "A graded precompensation scheme by pattern classification on nonlinear transition shift for perpendicular magnetic recording," *IEEE Transactions on Magnetics*, pp. 1–1, 2023.

[2] K. Luo, S. Wang, G. Xie, W. Chen, J. Chen, P. Lu, and W. Cheng, "Read channel modeling and neural network block predictor for two-dimensional magnetic recording," *IEEE Transactions on Magnetics*, vol. 56, no. 1, pp. 1–5, 2020.

[3] K. Luo, S. Wang, K. S. Chan, W. Chen, J. Chen, P. Lu, and W. Cheng, "A study on block-based neural network equalization in tdmr system with ldpc coding," *IEEE Transactions on Magnetics*, vol. 55, no. 11, pp. 1–5, 2019.

[4] G. Xie, K. Luo, S. Wang, P. Lu, W. Cheng, and J. Chen, "Rounded corner effect on write performance for shingled magnetic recording system," in *2018 Asia-Pacific Magnetic Recording Conference (APMRC)*, no. S01-

A01, USST, China, Nov. 2018, pp. 1–2.

[5] K. Luo, S. Wang, G. Xie, J. Chen, P. Lu, and W. Cheng, "Read channel modeling and neural network block predictor for tdmr," in *2018 Asia-Pacific Magnetic Recording Conference (APMRC)*, no. S05-A01, USST, China, Nov. 2018, pp. 1–2.

[6] W. Chen, J. Chen, Z. Gan, K. Luo, Z. Huang, and P. Lu, "High-field enhancement of plasmonics antenna using ring resonator for hamr," *IEEE Transactions on Magnetics*, vol. 56, no. 7, pp. 1–5, 2020.

[7] S. Wang, J. Chen, K. Luo, G. Xie, P. Lu, and W. Cheng, "Joint four-reader array equalization and detection for a single track in tdmr," *IEEE Transactions on Magnetics*, vol. 55, no. 12, pp. 1–6, 2019.

[8] S. Wang, J. Chen, K. Luo, P. Lu, and W. Cheng, "Four-reader array detection for two-dimensional magnetic recording," in *2018 Asia-Pacific Magnetic Recording Conference (APMRC)*, no. S08-B01, USST, China, Nov. 2018, pp. 1–2.

[9] J. Chen, G. Xie, K. Luo, W. Cheng, P. Lu, and Y. Wang, "Study of erase band and write performance in shingled mag-netic recording with exchanged coupled composite media," in *2018 IEEE International Magnetics Conference (INTERMAG)*, no. BQ-05, Singapore, Apr. 2018, pp. 1–1.

[10] J. Chen, G. Xie, K. Luo, S. Wang, P. Lu, and Y. Wang, "Study of erase band and write performance for shingled magnetic recording with fept-based exchanged coupled composite media," *IEEE Transactions on Magnetics*, vol. 54, no. 11, pp. 1–6, 2018.

[11] K. Luo, S. Wang, K. S. Chan, W. Chen, J. Chen, P. Lu, and W. Cheng, "A study on block-based neural network equalization in tdmr systemwith ldpc coding," in *The 30th Magnetic Recording Conference (TMRC 2019)*, no. P1-7, Minneapolis, UM, USA, Jul. 2019, pp. 1–2.

[12] S. Wang, J. Chen, L. Ke, G. Xie, P. Lu, and W. Cheng, "Performance evaluation of four-reader array detection for two-dimensional magnetic recording," *Science of Advanced Materials*, vol. 11, no. 6, pp. 835–841, Jun. 2019.

[13] J. Chen, K. Luo, P. Lu, Z. Gan, S. Wang, W. Chen, X. Liu, and J. Bao, "Two-dimensional channel equalization model training method and two-dimensional channel equalization methods," National Invention Patent of China, 2019, CN 110211611 B.

[14] Y. Jian, K. Luo, W. Li, V. Lomakin, J. Chen, and P. Lu, "Pattern constraints limiting nonlinear transition shift in high density magnetic recording," *Journal of Magnetism and Magnetic Materials*, vol. 588, p. 171370, 2023.

[15] K. Luo, K. Zhang, Y. Jian, W. Li, Y. Liao, Y. Wu, H. Gao, J. Chen, and P. Lu, "A classification compensation method for non-linear transition shift in the process of disk data writing," National Invention Patent of China, Nov. 2023, CN 117059134 A.

[16] Y. Liao, K. Zhang, Y. Jian, S. Wang, J. Chen, P. Lu, and K. Luo, "Decision-feedback single-layer read reconstruction and separation for three-dimensional magnetic recording," in *2024 IEEE International Magnetics Conference (INTERMAG)*, no. AD-03, Rio de Janeiro, Brazil, May 2024, pp. 1–2.

[17] K. Luo, Y. Wu, Y. Liao, S. Wang, Y. Jian, J. Chen, and P. Lu, "Quaternary neural network equalization for three-dimentional magnetic recording," in *2024 IEEE International Magnetics Conference (INTERMAG)*, no. AD-11, Rio de Janeiro, Brazil, May 2024.