

Journal or Formally Refereed Conference Articles

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1. L.-J. Jian, T.-Y. Wang, B.-Y. YANG *, and M.-S. Chen, *Jumping for Bernstein-Yang Inversion*, ACISP 2024, LNCS 14896, pp. 1-21.
2. L.-C. Lai, J. Liu, X. Shi, M.-H. Tsai, B.-Y. Wang and B.-Y. YANG, *Automatic Verification of Cryptographic Block Function Implementations with Logical Equivalence Checking* <https://eprint.iacr.org/2023/1861>, to appear in ESORICS 2024.
3. V. Hwang, C.-T. Liu, and B.-Y. YANG, *Algorithmic Views of Vectorized Polynomial Multipliers - NTRU Prime*, ACNS 2024 (22nd International Conference on Applied Cryptography and Network Security, Abu Dhabi, UAE, 5-8 March), LNCS 14584, pp. 1-23. https://doi.org/10.1007/978-3-031-54773-7_2.
4. R. Chen, J. Liu, X. Shi, M.-H. Tsai, B.-Y. Wang, B.-Y. YANG, *llvm2CryptoLine, Verifying Arithmetic in Cryptographic C Programs*, Proc. ACM ESEC/SIGSOFT FSE 2023 (22nd ESEC/31st SIGSOFT FSE, San Francisco, December 3-9), pp. 2167-2171. <https://doi.org/10.1145/3611643.3613096>.
5. H.-T. Chen, Y.-H. Chung, V. Hwang, and B.-Y. YANG, *Algorithmic Views of Vectorized Polynomial Multipliers - NTRU*, Indocrypt (24th International Conference on Cryptology in India 2023, December 10-13), LNCS 14460, pp. 177-196. <https://eprint.iacr.org/2023/1637>.
6. M.-H. Tsai, Y.-F. Fu, J. Liu, X. Shi, B.-Y. Wang, and B.-Y. YANG, *Certified Verification for Algebraic Abstraction*, CAV 2023 (35th International Conference on Computer Aided Verification), LNCS 13966, pp. 329-343. https://doi.org/10.1007/978-3-031-37709-9_16.
7. M.-H. Tsai, Y.-F. Fu, J. Liu, X. Shi, B.-Y. Wang, and B.-Y. YANG, *COQCRYPTOLINE: A Verified Model Checker with Certified Results*, CAV 2023 (ibid.). https://doi.org/10.1007/978-3-031-37703-7_11, LNCS 13966, pp. 329-343.
8. W. Beullens, M.-S. Chen, S.-H. Hung, Matthias J. Kannwischer, B.-Y. Peng, C.-J. Shih, B.-Y. YANG, *Oil and Vinegar: Modern Parameters and Implementation*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2023(3)**, pp. 321-365. <https://doi.org/10.46586/tches.v2023.i3.321-365>.
9. J. Ding, S. Kim, T. Takagi, Y. Wang and B.-Y. YANG, *A physical study of the LLL algorithm*, J. of Number Theory **244**(Mar. 2023), pp. 339-368, <https://doi.org/10.1016/j.jnt.2022.09.013>.
10. B.-Y. Peng, A. Marotzke, M.-H. Tsai, B.-Y. YANG, and H.-L. Chen, *Streamlined NTRU Prime on FPGA*, Journal of Cryptographic Engineering **13(2)**, pp. 167-186 (2023), <https://doi.org/10.1007/s13389-022-00303-z>.
11. E. Alkim, V. Hwang, and B.-Y. YANG, *Multi-Parameter Support with NTTs for NTRU and NTRU Prime on Cortex-M4*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2022(4)**, pp. 349-371. <https://doi.org/10.46586/tches.v2022.i4.349-371>

12. V. Hwang, J. Liu, G. Seiler, X. Shi, M.-H. Tsai, B.-Y. Wang, and B.-Y. YANG, Verified NTT Multiplications for NISTPQC KEM Lattice Finalists: Kyber, SABER, and NTRU, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2022(4)**, pp. 718-750.
<https://doi.org/10.46586/tches.v2022.i4.718-750>
13. T.-H. Chang, Y.-T. Kuo, J.-P. Chen, and B.-Y. YANG, Secure Boolean Masking of Gimli - Optimization and Evaluation on the Cortex-M4, ICICS 2022 (24th International Conference on Information and Communications Security, Sept. 5–8, U. of Kent, Canterbury), LNCS 13407, pp. 376-393.
14. H. Becker, V. Hwang, M. J. Kannwischer, L. Panny, and B.-Y. YANG, Efficient Multiplication of Somewhat Small Integers Using Number-Theoretic Transforms. IWSEC 2022 (17th International Workshop on Security, IWSEC 2022, Tokyo, Japan, August 31 – September 2): LNCS 13504, 3-23, **best paper**.
15. H. Becker, V. Hwang, M. J. Kannwischer, B.-Y. YANG, and S.-Y. Yang, *Neon NTT: Faster Dilithium, Kyber, and Saber on Cortex-A72 and Apple M1*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2022(1)**, pp. 221–244.
<https://doi.org/10.46586/tches.v2022.i1.221-244>, IACR e-Print 2021/986.
16. A. Abdulrahman, J.-P. Chen, Y.-J. Chen, V. Hwang, M. J. Kannwischer, and B.-Y. YANG, *Moduli NTTs for Saber on Cortex-M3 and Cortex-M4*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2022(1)**, pp. 127–151.
<https://doi.org/10.46586/tches.v2022.i1.127-151>, IACR e-Print 2021/995.
17. X. Shi, Y.-F. Fu, J. Liu, M.-H. Tsai, B.-Y. Wang, and B.-Y. YANG, *CoqQFBV: A Scalable Certified SMT Quantifier-Free Bit-Vector Solver*, CAV 2021 (Virtual Conference, July 18–24), LNCS 12760, pp. 149–171.
18. P.-C. Kuo, Y.-W. Chen, Y.-C. Hsu, C.-M. Cheng, W.-D. Li, and B.-Y. YANG, *High Performance Post-Quantum Key Exchange on FPGAs*, J. of Information Science and Engineering 37(5), pp. 1211–1229.
19. P.-C. Kuo, C.-M. Cheng, W.-D. Li, and B.-Y. YANG, *Parallelization on Gauss Sieve Algorithm over Ideal Lattice*, J. of Information Science and Engineering 37(5), pp. 1187–1209.
20. T. Chou, M. J. Kannwischer, and B.-Y. YANG, *Rainbow on Cortex-M4*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2021(4)**, pp.650–675.
<https://doi.org/10.46586/tches.v2021.i4.650-675>, IACR e-Print 2021/532.
21. R. Gonzalez, A. Hülsing, M. J. Kannwischer, J. Krämer, T. Lange, M. Stöttinger, E. Waitz, T. Wiggers, and B.-Y. YANG, *Verifying Post-Quantum Signatures in 8 kB of RAM*. PQCrypto 2021 (virtual conference, July 20–22): LNCS 12841, pp. 215-233.
22. J. Ding, J. Deaton, Vishakha, and B.-Y. YANG, *The Nested Subset Differential Attack — A Practical Direct Attack Against LUOV Which Forges a Signature Within 210 Minutes*, Eurocrypt 2021 (Hybrid: Online and Zagreb, Croatia, October 17–21), LNCS 12696, pp. 329–347.
23. C.-M. M. Chung, V. Hwang, M. J. Kannwischer, G. Seiler, C.-J. Shih and B.-Y. YANG, *NTT Multiplication for NTT-unfriendly Rings, New Speed Records for Saber and NTRU on Cortex-M4 and AVX2*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2021(2)**,

- pp. 159–188. <https://doi.org/10.46586/tches.v2021.i2.159-188>, IACR e-Print 2020/1397.
24. E. Alkim, D. Y.-L. Cheng, C.-M. M. Chung, H. Evkan, L. W.-L. Huang, V. Hwang, C.-L. T. Li, R. Niederhagen, C.J. Shih, J. Wälde, and B.-Y. YANG, *Polynomial Multiplication in NTRU Prime, Comparison of Optimization Strategies on Cortex-M4*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2021(1)**, pp. 217-238.
<https://doi.org/10.46586/tches.v2021.i1.217-238>. Full version: IACR e-Print 2020/1216.
 25. W.-L. Huang, J.-P. Chen, and B.-Y. YANG, *Power Analysis on NTRU Prime*, IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), 2020(1), pp. 123–151. <https://doi.org/10.13154/tches.v2020.i1.123-151>.
 26. Y.-F. Fu, J. Liu, X. Shi, M.-H. Tsai, B.-Y. Wang, and B.-Y. YANG, *Signed Cryptographic Program Verification with Typed CryptoLine*, ACM CCS 2019 (26th ACM Conference on Computer and Communications Security, November 11–15, London, UK), pp. 1591-1606.
 27. J. Liu, X. Shi, M.-H. Tsai, B.-Y. Wang, and B.-Y. YANG, *Verifying Arithmetic in Cryptographic C Programs*, ASE 2019 (34th IEEE/ACM Conference on Automated Software Engineering, November 11–15, San Diego, CA, USA), pp. 552-564.
 28. D. J. Bernstein and B.-Y. YANG, *Fast constant-time gcd computation and modular inversion*. IACR Transactions on Cryptographic Hardware and Embedded Systems (TCHES), **2019(3)**, pp. 340-398. <https://doi.org/10.13154/tches.v2019.i3.340-398>
 29. A. Polyakov, M.-H. Tsai, B.-Y. Wang, and B.-Y. YANG, *Verifying Arithmetic Assembly Programs in Cryptographic Primitives*, Invited Talk and Paper, CONCUR 2018 (September 4–7, Beijing, China): Leibniz International Proceedings in Informatics 118, pp. 4:1–4:16.
 30. W.-D. Li, M.-S. Chen, P.-C. Kuo, C.-M. Cheng, and B.-Y. YANG, *Frobenius Additive Fast Fourier Transform*, Proc. ACM ISSAC 2018 (July 15–18, New York City) pp. 1973–1987.
 31. D. J. Bernstein and B.-Y. YANG, *Asymptotically faster quantum algorithms to solve multivariate quadratic equations*, PQCrypto 2018 (April 9–11, Fort Lauderdale, Florida, USA), LNCS 10786, pp. 487–506.
 32. R. Niederhagen, K.-C. Ning and B.-Y. YANG, *Implementing Joux-Vitse’s Crossbred Algorithm for Solving MQ Systems on GPUs*, PQCrypto 2018, *ibid.* pp. 121–141.
 33. M.-S. Chen, W.-D. Li, B.-Y. Peng, B.-Y. YANG, and C.-M. Cheng, *Implementing 128-bit Secure MPKC Signatures*, IEICE Transactions vol. E101-A(2018) No. 3, pp. 553–569.
 34. M.-H. Tsai, B.-Y. Wang, and B.-Y. YANG *Certified Verification of Algebraic Properties on Low-Level Mathematical Constructs in Cryptographic Programs*, proc. ACM CCS 2017 (24th ACM Conference on Computer and Communications Security, Dallas, TX, USA, Oct. 30-Nov. 3), pp. 1973–1987.
 35. A. Petzoldt, M.-S. Chen, J. Ding, and B.-Y. YANG, *HMFEV - An Efficient Multivariate Signature Scheme*, PQCrypto 2017 (Utrecht, the Netherlands, Jun. 26-28), LNCS 10346, pp. 205–223.

36. S.-Y. Yang, P.-C. Kuo, C.-M. Cheng, and B.-Y. YANG, *Gauss Sieve Algorithm on GPUs*, CT-RSA 2017 (San Francisco, Feb. 14–17), LNCS 10159, pp. 39–57.
37. B.-Y. Peng, Y.-C. Hsu, Y.-J. Chen, D.-C. Chueh, C.-M. Cheng, and B.-Y. YANG, *Multi-core FPGA Implementation of ECC with Homogeneous Co-Z Coordinate Representation*, CANS 2016, (Milan, Italy, Nov. 14-16), LNCS 10052, pp. 637–647.
38. A. Petzoldt, M.-S. Chen, B.-Y. YANG, C. Tao, J. Ding: *Design Principles for HFEv- Based Multivariate Signature Schemes*, Asiacrypt 2015 (Auckland, New Zealand, Nov. 29-Dec. 3), LNCS 9452, pp. 311-334.
39. Y.-A. Chang, M.-S. Chen, J.-S. Wu and B.-Y. YANG, *Postquantum SSL/TLS for Embedded Systems*, IoTS workshop at IEEE SOCA 2014 (Matsue, Japan, Nov. 17-19).
40. Y.-F. Chen, C.-H. Hsu, H.-H. Lin, P. Schwabe, M.-H. Tsai, B.-Y. Wang, B.-Y. YANG, and S.-Y. Yang, *Verifying Curve25519 Software*, presented at ACM CCS 2014 (21st ACM Conference on Computer and Communications Security, Scottsdale, Arizona, USA, Nov. 3-7, 2014).
41. Y.-J. Huang, W.-C. Hong, C.-M. Cheng, J.-M. Chen, and B.-Y. YANG, *Memory Efficient Variant of an Implementation of the F_4 Algorithm for Computing Gröbner Bases*. INTRUST 2014 (6th Trusted Systems Conference, Dec. 16–17, Beijing, China), LNCS 9473, pp. 374-393.
42. R. Fitzpatrick, C. Bischof, J. Buchmann, Ö. Dagdelen, F. Göpfert, A. Mariano, B.-Y. Yang, *Tuning Gauss Sieve for Speed*, Latincrypt 2014 (3rd Latin American Conference on Cryptography and Information Security, Florianopolis, Brazil, Sept. 17-19), LNCS 8895, pp. 288-305.
43. Y.-A. Chang, W.-C. Hong, M.-C. Hsiao, B.-Y. YANG, A.-Y. Wu and C.-M. Cheng, *Hydra: An energy-efficient programmable cryptographic coprocessor supporting elliptic-curve pairings over fields of large characteristics*, IWSEC 2014 (The 9th International Workshop on Security, Hirosaki, Japan, Aug. 27-29, 2014), LNCS 8639, pp. 174–186.
44. J. Y.-C. Yeh, C.-M. Cheng, B.-Y. YANG, *Operating Degrees for XL vs. F_4/F_5 for Generic MQ with Number of Equations Linear in That of Variables*, Number Theory and Cryptography Workshop 2013 (November 21-22, TU Darmstadt, Germany), LNCS 8260, pp. 19–33.
45. Y.-H. Chiu, W.-C. Hong, L.-P. Chou, J. Ding, B.-Y. YANG, C.-M. Cheng, *A Practical Attack on Patched MIFARE Classic*. Inscrypt 2013 (Guangzhou, China, November 27-30), Revised Selected Papers. LNCS 8567, pp. 150-164.
46. C. Bouillaguet, C.-M. Cheng, T. Chou, R. Niederhagen and B.-Y. YANG, *Fast Exhaustive Search for Quadratic Systems in F_2 on FPGAs*, SAC 2013 (20th workshop on Selected Areas in Cryptography, Aug. 14–16, Simon Fraser University, Burnaby, BC, Canada); LNCS 8282, pp. 205–222. Current version at ePrint 2014/436.
47. M.-S. Chen, C.-M. Cheng, B.-Y. YANG, *RAIDq: A software-friendly, multiple-parity RAID*, USENIX HotStorage 2013 (USENIX Federated Workshops, June 27-28, San Jose, CA, USA).
48. J. Ding, B.-Y. YANG, *Degree of Regularity for HFEv and HFEv-*, PQCrypto 2013 (5th Post-Quantum Cryptography Workshop, June 4–6, Limoges, France), LNCS 7932, pp. 52–66.

49. J.-R. Shih, Y. Hu, M.-C. Hsiao, M.-S. Chen, W.-T. Shen, B.-Y. YANG, and C.-M. Cheng, *Securing M2M with Post-Quantum Public-Key Cryptography*, IEEE Journal on Emerging and Selected Topics in Circuits and Systems, **3:1**(2013), pp. 106–116.
50. T. Chou, C.-M. Cheng, R. Niederhagen, and B.-Y. YANG, *Solving Quadratic Equations with XL on Parallel Architectures*, CHES 2012 (14th workshop on Cryptographic Hardware and Embedded Systems, September 9–12, Leuven, Belgium), LNCS 7428, pp. 356–373.
51. C.-H. Yu and B.-Y. YANG, *Probabilistically Correct Secure Arithmetic Computation for Modular Conversion, Zero Test, Comparison, MOD and Exponentiation*, to appear at SCN 2012 (8th Conference on Security and Cryptography for Networks, September 5-7, Amalfi, Italy), LNCS 7485, pp. 426–444.
52. S. Tanaka, T. Chou, B.-Y. YANG, C.-M. Cheng, K. Sakurai: *Efficient Parallel Evaluation of Multivariate Quadratic Polynomials on GPUs*, WISA 2012 (13th Workshop on Information Security Applications, August 16–18, Jeju Island, Korea), LNCS 7690, pp. 28–42.
53. D. J. Bernstein, N. Duif, T. Lange, P. Schwabe, and B.-Y. YANG, *High-speed high-security signatures*, Journal of Cryptographic Engineering **2:2**(2012), pp. 77–89. Earlier version presented at CHES 2011 (13th Workshop on Cryptographic Hardware and Embedded Systems, September 28 – October 1, Nara, Japan), LNCS 6917, pp. 124–142. Also ePrint 2011/368.
54. P. Schwabe, S.-Y. Yang, and B.-Y. YANG, *SHA-3 on ARM11 processors*, Africacrypt 2012 (July 10-12, Ifrane, Morocco), LNCS 7374, pp. 324–341.
55. F.-H. Liu, Y.-J. Huang, and B.-Y. YANG, *Public-Key Cryptography from New Multivariate Quadratic Assumptions*, PKC 2012 (15th International Workshop for Public Key Cryptography, IACR, May 21–23, Darmstadt, Germany), and LNCS 7293, pp. 190–205.
56. P.-C. Kuo, M. Schneider, Ö. Dagdelen, J. Reichelt, J. Buchmann, C.-M. Cheng, and B.-Y. YANG, *Extreme Enumeration on GPU and in Clouds*, CHES 2011 (*ibid.*), pp. 176–191.
57. D. J. Bernstein, H.-C. Chen, C.-M. Cheng, T. Lange, R. Niederhagen, P. Schwabe, and B.-Y. YANG, *ECC2K-130 on NVIDIA GPUs*, Indocrypt 2010 (December 13-15, Hyderabad, India) LNCS 6498, pp. 328–344.
58. K.-M. Chung, F.-H. Liu, C.-J. Lu, and B.-Y. YANG, *Efficient String-Commitment from Weak Bit-Commitment*, Asiacrypt 2010 (December 5-9, Singapore), LNCS 6477, pp. 268–282.
59. C. Bouillaguet, H.-C. K. Chen, C.-M. Cheng, T. Chou, R. Niederhagen, A. Shamir, and B.-Y. YANG, *Fast Exhaustive Search for Polynomial Systems in F_2* , CHES 2010 (12th Workshop on Cryptographic Hardware and Embedded Systems, August 17-20, UC Santa Barbara), LNCS 6225, pp. 203–218.
60. Y.-H. Lin, A. Studer, Y.-H. Chen, H.-C. Hsiao, E. L.-H. Kuo, J. Lee, J. McCune, K.-H. Wang, M. Krohn, A. Perrig, B.-Y. YANG, H.-M. Sun, and P.-L. Lin, *SPATE: Small-group PKI-less Authenticated Trust Establishment*, IEEE Trans on Mobile Computing **9:12**(2010), pp. 1666-1681 (SCI). [Note: IEEE Trans. TMC. invited this paper as best paper of MobiSys 2009 (7th Int’l Conference on Mobile Systems, Applications, and Services, June 22–25, Wroclaw, Poland), ACM proceedings pp. 1–14 *SPATE: Small-group PKI-less Authenticated Trust Establishment.*]

61. C.-I Lee, T.-C. Wu, B.-Y. YANG and W.-G. Tzeng, *New Secure Broadcasting Scheme Realizing Information Granularity*, J. of Info. Sci. and Eng., **26:4**(2010) pp. 1509–1523.
62. H.-C. Hsiao, Y.-H. Lin, A. Studer, C. Studer, K.-H. Wang, H. Kikuchi, A. Perrig, H.-M. Sun, B.-Y. YANG, *A Study of User-Friendly Hash Comparison Schemes*, pp. 105-114, Proc. ACSAC 2009 (December 7–11, Honolulu).
63. A. I.-T. Chen, M.-S. Chen, T.-R. Chen, C.-M. Cheng, J. Ding, E. L.-H. Kuo, F. Y.-S. Lee, and B.-Y. YANG, *SSE Implementation of Multivariate PKCs on Modern x86 CPUs*, CHES 2009 (11th Workshop on Cryptographic Hardware and Embedded Systems, Sept. 6–9, Lausanne, Switzerland), pp. 33–48, LNCS 5747.
64. D. J. Bernstein, T.-R. Chen, C.-M. Cheng, T. Lange, and B.-Y. YANG, *ECM on Graphics Cards*, Eurocrypt 2009 (April 25–29, Köln, Germany) LNCS 5479, pp. 483–501.
65. J. Baena, M.-S. Chen, C. Clough, J. Ding, and B.-Y. YANG, *Square, a New Multivariate Encryption Scheme*, CT-RSA 2009 (10th Cryptographer’s Track RSA Conference, April 20–24, San Francisco), LNCS 5473, pp. 252–264.
66. A. I.-T. Chen, C.-H. Chen, M.-S. Chen, C.-M. Cheng and B.-Y. YANG, *Practical-Sized Instances of Multivariate PKCs: Rainbow, and ℓ IC-derivatives*, PQCrypto 2008 (Second Post-Quantum Cryptography Workshop, Oct. 17–19, Cincinnati, USA) and LNCS 5299, pp. 95–106.
67. F.-H. Liu, C.-J. Lu, and B.-Y. YANG, *Secure PRNGs from Specialized Polynomial Maps over Any F_q* , PQCrypto’08 and LNCS 5299 (*ibid.*), pp. 181–202.
68. C.-H. Chen, C.-W. Chen, C. Kuo, Y.-H. Lai, J. McCune, A. Perrig, A. Studer, and B.-Y. YANG, *GAnGS: Gather, Authenticate ’n Group Securely*, Proc. MobiCom 2008 (14th Annual International Conference on Mobile Computing and Networking, ACM SigMobile, September 14–19, San Francisco), pp. 92–103.
69. J. Ding, V. Dubois, B.-Y. YANG, C.-H. Chen, and C.-M. Cheng. *Can SFLASH be Repaired?*, ICALP 2008 (35th International Colloquium on Automata, Languages and Programming, July 6–13, Reykjavik, Iceland), LNCS 5126, pp. 691–701.
70. J. Ding, B.-Y. YANG, C.-H. Chen, M.-S. Chen, and C.-M. Cheng, *New Differential-Algebraic Attacks and Reparametrization of Rainbow*, ACNS 2008 (6th Applied Cryptography and Network Security Conference, June 3–6, New York, USA), LNCS 5037, pp. 242–257. Updates at ePrint 2008/108.
71. J. Ding and B.-Y. YANG, *Multivariate Polynomials for Hashing*, Inscrypt 2007, Aug. 31–Sep. 5, Xining, China, LNCS 4990, pp. 358–371.
72. B.-Y. YANG, C.-H. Chen, D. J. Bernstein, and J.-M. Chen, *Analysis of QUAD*, FSE 2007 (14th International Workshop for Fast Software Encryption, IACR, Mar. 26–28, Luxemburg City, Luxemburg), LNCS 4593, pp. 290–307.
73. J. Ding, C. Wolf, and B.-Y. YANG, *ℓ -Invertible Cycles for Multivariate Quadratic Public Key Cryptography*, PKC 2007 (10th International Workshop for Public Key Cryptography, IACR, Apr. 21–24, Beijing, China), LNCS 4450, pp. 266–281. [Prior version at Post-Quantum Crypto Workshop ’06, KU Leuven, Belgium.]

74. W. Yan, B.-Y. YANG, and Y.-N. Yeh, *The Behavior of Wiener Indices and Polynomials of Graphs under Five Graph Operators*, Appl. Math. Lett. **20**(2007) pp. 290–295.
75. I. Gutman, W. Yan, B.-Y. YANG, and Y.-N. Yeh, *Generalized Wiener Indices of Zigzagging Pentachains*, J. Math. Chem. **42:2**(2007) pp. 103–117.
76. B.-Y. YANG, C.-M. Cheng, B.-R. Chen, and J.-M. Chen, *Implementing Minimized Multivariate Public-Key Cryptosystems on Low-Resource Embedded Systems*, SPC 2006 (3rd Security of Pervasive Computing Conference, Apr. 18–21, York, UK) LNCS 3934, pp. 73–88.
77. L.-C. Wang, B.-Y. YANG, Y.-H. Hu, and F.-P. Lai, A “Medium-Field” Multivariate Public-Key Encryption Scheme, CT-RSA 2006 (7th Cryptographer’s Track RSA Conference, Feb. 13–17, San Jose CA), LNCS 3860, pp. 132–149.
78. S.-P. Eu, B.-Y. YANG, and Y. Yeh, *Computing the Generalized Wiener Indices of Hex Chains*, Int’l J. of Quant. Chem. **106**(2006), pp. 426–435 .
79. B.-Y. YANG and J.-M. Chen, *Building Secure Tame-Like Multivariate Public-Key Cryptosystems: the New TTS*, ACISP 2005 (10th Australasian Conference on Info. Sec. and Privacy, July 4–6, Brisbane), LNCS 3574, pp. 518–531.
80. B.-Y. YANG and J.-M. Chen, *All in the XL Family: Theory and Practice*, ICISC 2004 (7th International Conference on Information Security and Cryptology, Dec. 2–3, Seoul, Korea), LNCS 3506, pp. 67–86.
81. L.-C. Wang, Y.-H. Hu, F.-P. Lai, C.-Y. Chou, and B.-Y. YANG, *Tractable Rational Map Signature*, PKC 2005 (8th Int’l Workshop for Public-Key Cryptography, IACR, Jan. 26–28, Diablerets, Switzerland), LNCS 3386, pp. 244–257.
82. B.-Y. YANG, J.-M. Chen, and N. Courtois, *On Asymptotic Security Estimates in XL and Gröbner Bases-Related Algebraic Cryptanalysis*, ICICS 2004 (6th International Conference on Information and Communications Security, Oct. 27–29, Malaga, Spain), LNCS 3269, pp. 401–413.
83. B.-Y. YANG, J.-M. Chen, and Y.-H. Chen, *TTS: High-Speed Signatures on a Low-Cost Smart Card*, CHES 2004 (6th Workshop on Cryptographic Hardware and Embedded Systems, IACR, Aug. 11–13, Boston MA); LNCS 3156, pp. 371–385.
84. B.-Y. YANG and J.-M. Chen, *Theoretical Analysis of XL over Small Fields*, ACISP 2004 (9th Australasian Conference on Info. Sec. and Privacy, July 13–15, Sydney); LNCS 3108, pp. 277–288.
85. B.-Y. YANG and Y. Yeh, *Wiener Polynomials of some Chemically Interesting Graphs*, International J. of Quantum Chem. **99:2**(2004), pp. 80–91.
86. B.-Y. YANG and Y. Yeh, *A Crowning Moment for Wiener Indices*, Studies in Applied Mathematics, **112**(2004), pp. 333–340.
87. J.-M. Chen and B.-Y. YANG, *A More Secure and Efficacious TTS Signature Scheme*, ICISC 2003 (6th Int’l Conference on Info. Sec. & Cryptology, Nov. 27–28, Seoul, Korea), LNCS 2971, pp. 320–338.
88. H.-K. Hwang, B.-Y. YANG, and Y. Yeh, *Presorting algorithms: an average-case point of view*, Theo. Comp. Sci. **242**(2000), no. 1–2, pp. 29–40.

89. W.-C. Huang, B.-Y. YANG, and Y. Yeh, *From Ternary Strings to Wiener indices of Benzenoid Chains*, *Discrete Appl. Math.* **73**(1997), pp. 113–131. (SCI)
90. I-W. Huang, B.-Y. YANG, and Y. Yeh, *Wiener Indices of Hex Carpets— from Hexagon Models to Square Grids*, *SE Asia Bull. of Math.* **20**(1996), pp. 81-102.
91. B.-Y. YANG, and Y. Yeh, *Zigging and Zagging in Pentachains*, *Adv. in Appl. Math.* **16**(1995) pp. 72-94. (SCI)

Conference Articles without Journal Proceedings, Books/Book Chapters, Tech Reports

1. W. Beullens, M.-S. Chen, J. Ding, B. Gong, M. J. Kannwischer, J. Patarin, B.-Y. Peng, D. Schmidt, C.-J. Shih, C. Tao, B.-Y. YANG, *UOV: Unbalanced Oil and Vinegar*, technical report and specifications, 2023.05.31. <https://csrc.nist.gov/csrc/media/Projects/pqc-dig-sig/documents/round-1/spec-f>
2. M.-S. Chen, J. Ding, M. J. Kannwischer, J. Patarin, D. Schmidt, B.-Y. YANG, *Response to Ward Bellens's new Rainbow Attacks*, technical report, 2020.12.01.
3. D. J. Bernstein, B. B. Brumley, M.-S. Chen, C. Chuengsatiansup, T. Lange, A. Marotzke, B.-Y. Peng, N. Taveri, C. van Vredendaal, and B.-Y. YANG, *NTRU Prime 3rd Round Submission* <http://ntruprime.cr.yt.nist.gov/nist/ntruprime-20201007.pdf>, NIST submission document, 2020.10.07. Also available at: <https://csrc.nist.gov/CSRC/media/Projects/post-quantum-cryptography/documents/> (warning: large file).
4. J. Ding, M.-S. Chen, M. J. Kannwischer, A. Petzoldt, J. Patarin, D. Schmidt, B.-Y. YANG, *Rainbow 3rd Round Submission* troll.iis.sinica.edu.tw/~by-publ/recent/Rainbow3round.pdf, NIST submission document, 2020.10.01. Also available at: <https://csrc.nist.gov/CSRC/media/Projects/post-quantum-cryptography/documents/round-3/submissions/Rainbow-Round3.zip> (warning: large file).
5. R. C.-W. Phan, M. Abe, L. Batten, J. H. Cheon, E. Dawson, S. D. Galbraith, J. Guo, L. C. K. Hui, K. Kim, X. Lai, D. H. Lee, M. Matsui, T. Matsumoto, S. Moriai, P. Q. Nguyen, D. Pei, D. H. Phan, J. Pieprzyk, H. Wang, H. Wolfe, D. S. Wong, T.-C. Wu, B.-Y. Yang, S.-M. Yiu, Y. Yu, J. Zhou: *Advances in security research in the Asiacrypt region*. *Commun. ACM* **63:4**(2020), pp. 76-81.
6. M.-S. Chen, J. Ding, M. Kannwischer, J. Patarin, A. Petzoldt, D. Schmidt, B.-Y. YANG, *Modified Parameters of Rainbow in Response to a Refined Analysis of the Rainbow Band Separation Attack by the NIST Team and the Recent New MinRank attacks*, technical report.
7. M.-S. Chen, J. Ding, A. Petzoldt, D. Schmidt, B.-Y. YANG, *Rainbow 2nd Round Submission*, NIST submission document and technical report, 2018.04.30.
8. B.-Y. YANG, W.-J. Wang, S.-Y. Yang, C.-S. Miou, C.-M. Cheng, *Fast Exhaustive Search for Polynomial Systems over \mathbf{F}_3* , updated version of *Masters Thesis by Wei-Jeng Wang, National Taiwan University, 2016*.

9. M.-S. Chen, B.-Y. YANG, and D. Smith-Tone, *PFLASH - secure asymmetric signatures on smart cards*. NIST Lightweight Cryptography Workshop 2015
csrc.nist.gov/groups/ST/lwc-workshop2015/papers/session3-smith-tone-paper.pdf.
10. D. J. Bernstein, S. Josefsson, T. Lange, P. Schwabe and B.-Y. YANG, EdDSA for more curves, IACR e-Print Archive, <http://eprint.iacr.org/2015/677>.
11. B.-Y. YANG, ed., *Post-Quantum Cryptography*, Proc. 4th Post-Quantum Cryptography Workshop, Nov. 29–Dec. 2, 2011, Taipei, Taiwan, LNCS 7071, Springer, ISBN 978-3-642-25404-8.
12. L. Goubin, J. Patarin, and B.-Y. YANG, *Multivariate Cryptosystems*, pp. 824–828, in *Encyclopedia of Cryptography and Security*, H. van Tillborg and S. Jajodia, eds., Springer 2011, ISBN 978-1-4419-5905-8.
13. D. J. Bernstein, H.-C. Chen, M.-S. Chen, C.-M. Cheng, C.-H. Hsiao, Z.-C. Lin, T. Lange, and B.-Y. YANG, *The 1 Billion-Mulmod Personal Computer*, Presented at SHARCS 2009 (Sept. 9–10, Lausanne, Switzerland).
14. J. Ding, B.-Y. YANG, F. Werner, C.-H. Chen, M.-S. Chen, *Odd-Field Multivariate Hidden Field Equations*, poster at Eurocrypt 2009, ePrint 2008/543.
15. J. Ding and B.-Y. YANG, *Multivariate Public-Key Cryptography*, chapter in *Post-Quantum Cryptography*, pp. 193–241, D. J. Bernstein, J. Buchmann and E. Dahmen, eds., Springer 2009, ISBN: 978-3-540-88701-0.
16. C.-H. Chen, B.-Y. YANG, and J.-M. Chen, *Exploring the Limits of Lazard-Faugère Gröbner Bases Methods*, PQCrypto'06 (First Post-Quantum Crypto Workshop), KU Leuven, Belgium.
17. S.-Y. Wang, C.-S. Lai, and B.-Y. YANG, *Partially Ordered Signature Schemes*, TFIT'06 (third Taiwan-France Info Tech Conference, Mar. 28–30, Nancy, France).
18. M. Bardet, J.-C. Faugère, B. Salvy, and B.-Y. YANG, *Asymptotic Expansion of the Degree of Regularity for Semi-Regular Systems of Equations*, MEGA '05 (8th Conférence des Méthodes Effectives en Géométrie Algébrique, May 27– June 1, Porto Conte, Sardinia, Italy); being re-edited for journal submission.
19. B.-Y. YANG and J.-M. Chen, *Cryptanalysis Today*, Chap. 6 in Book 19 of the third Information and Communications Security Series, W.-G. Tzeng, ed., C-S. Lai, series editor, published by the National Science of Council of Taiwan, 2004.
20. B.-Y. YANG and J.-M. Chen, *XL: A Brief on the State of the Art*, **Best Paper Award**, Chinese (Taipei) Cryptology and Info. Sec. Assoc. (CCISA) 2004 conference.
21. J.-M. Chen, B.-Y. YANG, and B.-Y. Peng, *Tame Transformation Signatures and Topsy-Turvy Hashes* IWAP '02 (11/29–12/01, Taipei), pp. 93-100.
22. B.-Y. YANG, and Y. Yeh, *About Wiener Numbers and Polynomials*, Sec. 5 in *Lie Algebras, Rings and Related Topics: Proc. of Second International Tainan-Moscow Algebra Workshop (Tainan, 1997)*, pp. 203–226, Y. Fong, A. Mikhalev, and E. Zelmanov, eds., Springer-Verlag (Berlin) 2000.

23. B.-Y. YANG, and Y. Yeh, *Chains of Motley Gems and their Wiener Indices*, in Proc. of *First International Tainan-Moscow Algebra Workshop (Tainan, 1994)*, pp. 329–349, de Gruyter (Berlin), Y. Fong *et al* ed., De Gruyter (Berlin) 1996.