Curriculum Vitae

Masayuki Abe

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Background

Date of Birth: 21 June 1967 Place of Birth: Yokohama, Japan

Nationality: Japanese

Language: Japanease, English

Office Address: 3-9-11 Midori-cho, Musashino-shi, Tokyo, 180-8585, Japan

Education

- 2002.12 Ph.D. from University of Tokyo. #15508, "Efficient Components for Cryptographic Applications in the Discrete-Log Setting" (Supervised by Prof. Hideki Imai.)
- **1992.4** M.E. in electrical engineering from Science University of Tokyo. (Supervised by Prof. Seiichiro Hangai.)
- **1990.4** B.E. in electrical enginieering from Science University of Tokyo. (Supervised by Prof. Seiichiro Hangai.)

Professional Experience

- 2018.4-present Manager of Cryptography Research Laboratory in NTT Secure Platform Laboratories.
- 2013.4-present Senior Distinguished Researcher of NTT Secure Platform Laboratories.
- 2013.4-2016.6 Group Leader of Crypto Research Group in NTT Secure Platform Laboratories.
- **2006.1-2013.3** Senior Research Scientist since October 2005 and Distinguished Scientist of NTT Information Sharing Platform Laboratories. Research on digital signatures with special features.

- **2004.4-2006.1** Visiting IBM T. J. Watson Research Center. Collaboration with the Crypto Group leaded by Tal Rabin. Research on hybrid encryption, zero-knowledge proofs, universally composable protocols.
- 1997.9-2004.3 Research Engineer of NTT Information Sharing Platform Laboratories (Senior Research Engineer since 2001, and Distinguished Scientist since 2003). Design and analysis of cryptographic primitives and protocols including electronic voting, key escrow systems, blind signatures for digital cash system, message recovery and other signature schemes with additional functionality, publicly verifiable encryption schemes, efficient multi-party computation based on cryptographic assumptions, and zero-knowledge proofs in multi-party computation.
- **1996.9-1997.8** Guest Researcher of ETH Zurich. Studied cryptography, especially multi-party computation, supervised by Professor Ueli Maurer.
- **1992.4-1996.8** Engineer of NTT Network Information Systems Laboratories. Development of fast arithmetic algorithms for cryptographic operations and their software and hardware implementation.

Professional Services

Program Committee Member for International Conferences: Asiacrypt'01, PKC'02, Asiacrypt'03, ACISP'03, ISC'03, PKC'04, FC'04, ACNS'04, CT-RSA'05, Crypto'05, PKC'06, WWW'06, VietCrypt'06, Asiacrypt'07, PKC'08, CT-RSA'08, ACNS'08, ACISP'08, Asiacrypt'08, ASIACCS'09, Asiacrypt'09, Crypto'09, ACISP'10, PKC'11, Crypto'11, Asiacrypt'11, TCC'12, SCN'12, TCC'13, CT-RSA'13, Crypto'13, PKC'14, ESORICS'14, SCN'14, Eurocrypt'14, Asiacrypt'14, Eurocrypt'15, Crypto'15, TCC'16A, FC'16, TCC'16B, Crypto'17, PKC'17, TCC'18, ACISP'18, ACNS'18, CANS'19, CT-RSA'20, RWC'20, ISC'20

Program Chair for Interantional Conferences: CT-RSA'07, ASIACCS'08, Asiacrypt'10

Steering Committee Member: Asiacrypt Steering Committee (2012-present)

General (Co-)Chair for Interantional Conferences: TCC'13

(Co-)Organiser of Local Workshops: Workshop on Cryptography (2018.1.16, NTT-JFLI-University of Tokyo), NTT SC-Lab and NTT Research Joint Workshop (2019.12.13, Kyoto, Japan)

Editorial Board :

- Journal of Cryptology (2018-present).
- International Journal of Applied Cryptography (IJACT). (2008-present).

Director of International Association of Cryptologic Research (IACR): 2015-present.

IACR School Committee: 2014-2017.

Editor in Chief: IEICE Transactions on Fundamentals, Special Section on Cryptography and Information Security, 2017.7-2019.1.

Awards

- 2020.6.15: 3rd Tokyo Academy of Physics Award from Tokyo University of Science
- 2019.4.10: 64th Maejima Hisoka Award for "Pioneering Research on Secure and Practical Digital Signatures and Cryptographic Protocols"
- 2018.4.24: SCIS Innovation Paper Award for "Pseudo-Code Performance Estimation for Pairing-Based Cryptographic Schemes"
- 2016.6: 53rd IEICE Achievement Award, "Pioneering Research on Cryptographic Protocols and Component Technology"
- **2016.4:** The Ichimura Prize in Science for Excellent Achievement (48th), "Pioneering Research on Structure-Preserving Crytography for Modular Design of Cryptographic Protocols"
- **2008.3:** Recognition of Service Award (for the PC Co-Chair of ASIACCS08) from Association for Computing Machinery
- 1999.1: SCIS Best Paper Award for "Robust Threshold Cramer-Shoup Cryptosystem" in 1999 Symposium on Cryptography and Information Security (SCIS '99), T1-1.3, 1999

Academic Experiences

- 2018.4-present: Guest Professor in Graduate School of Informatics, Kyoto University
- 2013.4-2018.3: Guest Associate Professor in Graduate School of Informatics, Kyoto University
- 2017.10: Lecturer of Graduate School of Science & Engineering, Tokyo Metropolitan University
- 2012.9-2013.1: Lecturer of Department of Information and Communication Engineering in University of Electro-Communications
- 2009.5-2009.7: Lecturer of Department of Complexity Science and Engineering, Graduate School of Frontier Sciences, The University of Tokyo
- **2003.5:** Lecturer of Department of Information and Communication Engineering in University of Electro-Communications
- **2002.9-2003.3:** Lecturer of Department of Information and Communication Technology in School of High Technology for Human Welfare in Tokai University.
- 1999.5: Lecturer of Department of Electronics and Computer Systems in Takushoku University.
- Ph.D. Referee: For Kun Peng in Queensland University of Technology, April 2004. For Kristiyan Halarambiev in New York University, March 2011. For Shota Yamada in University of Tokyo, January 2014.

Invited Talks in Conferences and Workshops

- 2019.12.13: "On Black-Box Extensions of Non-Interactive Zero-Knowledge Arguments", NTT SC-Lab and NTT Research Joint Workshop, Kyoto, Japan.
- 2019.10.25: "Proving Disjunctive Relations Non-Interactively", CANS 2019, Fujou University, Fuzhou, China.
- **2019.3.1:** "Improved (Almost) Tightly-Secure Simulation-Sound QA-NIZK with Applications", Public-key Workshop, AIST, Japan.
- 2018.1.16: "On the Practical Impact of Tight Security", Workshop on Cryptography, NTT-JFLI-U.Tokyo.
- 2015.11.3: "Structure-Preserving Cryptography", Asiacrypt 2015, Auckland.
- **2015.9.4:** "Fully Structure-Preserving Signatures and Shrinking Commitments", ISEC Workshop, Tokyo, Japan.
- 2015.2.20: "Structure-Preserving Signatures from Type II Pairings", 8th Public-Key Workshop, Tokyo, Japan.
- 2014.3.20: "On the Impossibility of Structure-Preserving Deterministic Primitives", 7th Public-Key Workshop, Tokyo, Japan.
- **2013.6.27:** "Tagged One-Time Signatures: Tight Security and Optimal Tag Size", 4th Jinbo-cho Cryptography Workshop, Study on PKC2013, Tokyo, Japan.
- **2012.9.26:** "Cryptographic Tools over Bilinear Groups for Modular Design of Cryptographic Tasks", The Sixth International Conference on Provable Security (ProvSec 2012), Chengdu, China.
- 2012.5.18: "Separating Short Structure-Preserving Signatures from Non-Interactive Assumptions", ISEC Workshop, Tokyo, Japan.
- **2012.2.23:** "Structure-Preserving Cryptography Part-II: Structure Preserving Commitments", 5th Workshop on Secure Construction of Public-Key Cryptosystems and its Applications, Akihabara, Japan.
- 2011.12.14: "Optimal Structure-Preserving Signatures in Asymmetric Bilinear Groups", ISEC Workshop, ISEC2011-71, Tokyo, Japan.
- 2011.5.31: "Signature Scheme with Efficient Proof of Validity", International Workshop on Coding and Cryptology, Qingdao, China.
- 2008.12.3: "Provable Security in Public-key Encryption Schemes", Tutorial Session in International Conference on Information Security and Cryptography 2008 (ICISC'08), Seoul, Korea.
- 2007.12.13: "Compact CCA-secure Encryption for Arbitrary Messages", IPA Cryptography Workshop 2007 Autumn, IPA, Tokyo, Japan.
- 2007.12.11: "Compact CCA-secure Encryption", Global COE Workshop, Tokyo Institute of Technology, Tokyo, Japan.

- **2006.2.28:** "Tag-KEM/DEM: A New Framework for Hybrid Encryption", Workshop on Secure Construction of Public-Key Cryptosystems and its Applications, AIST, Tokyo, Japan.
- 2003.3.8: "Multi-Party Protocols and Zero-Knowledge Proofs", In 3rd JST Workshop, Tokyo, Japan.
- 2001.9.18: "Trend of Electronic Commerce" (in Japanese), In IEICE Kansai-branch, Osaka, Japan.
- **2001.1.15:** "Cryptographic Solution for Electronic Voting" and "Development of Electronic Voting Systems in NTT", In the Seminar Series at the Information and Communications University, Korea.

Talks at Seminars

New York University (USA, 2005), UC Irvine (USA, 2010), École Normale Supérieure (France, 2008), Nanyang Technological University (Singapore, 2011), IBM Zurich (Switzerland, 2012), ETH Zurich (Switzerland, 2012), Karlsruhe University (Germany, 2012), Academic Center for Computing and Media Studies, Kyoto University (Japan, 2014), JAIST (Japan, 2017), Kyoto University (Japan, 2018), UESTC Chengdu (China, 2019), Nagoya University (Japan, 2019), Science University of Tokyo (Japan, 2019)

Publication

Journal Papers

- K. Yamashita, M. Tibouchi, and M. Abe, "A coin-free oracle-based augmented black box framework," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Special Section on Discrete Mathematics and Its Applications*, 2020. Accepted on March 24, 2020.
- [2] R. C. 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. Wu, B. Yang, S. Yiu, Y. Yu, and J. Zhou, "Advances in security research in the Asiacrypt region," *Communications of the Association for Computing Machinery*, vol. 63, no. 4, pp. 76–81, 2020.
- [3] J. Tomida, M. Abe, and T. Okamoto, "Efficient inner product functional encryption with fullhiding security," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 103-A, no. 1, pp. 33–40, 2020.
- [4] M. Abe, J. Camenisch, R. Dowsley, and M. Dubovitskaya, "On the impossibility of structurepreserving deterministic primitives," *Journal of Cryptology*, vol. 32, pp. 239–264, Jan. 2019.
- [5] M. Abe, J. Groth, M. Kohlweiss, M. Ohkubo, and M. Tibouchi, "Efficient fully structurepreserving signatures and shrinking commitments," *Journal of Cryptology*, vol. 32, pp. 973– 1025, July 2019.

- [6] M. Abe, F. Hoshino, and M. Ohkubo, "Fast and scalable bilinear-type conversion method for large scale crypto schemes," *IEICE Transactions on Fundamentals of Electronics, Communi*cations and Computer Sciences, vol. 102-A, no. 1, pp. 251–269, 2019.
- [7] M. Abe, F. Hoshino, and M. Ohkubo, "Opcount: A pseudo-code performance estimation system for pairing-based cryptography," *IEICE Transactions on Fundamentals of Electronics*, *Communications and Computer Sciences*, vol. 102-A, no. 9, pp. 1285–1292, 2019.
- [8] A. Takahashi, M. Tibouchi, and M. Abe, "New Bleichenbacher records: Fault attacks on qDSA signatures," *IACR Transactions on Cryptographic Hardware and Embedded Systems*, vol. 2018, no. 3, pp. 331–371, 2018. https://tches.iacr.org/index.php/TCHES/article/view/7278.
- [9] M. Abe, "Variations of Even-Goldreich-Micali framework for signature schemes," *IEICE Trans*actions on Fundamentals of Electronics, Communications and Computer Sciences, vol. 100-A, no. 1, pp. 12–17, 2017.
- [10] M. Abe, M. Chase, B. David, M. Kohlweiss, R. Nishimaki, and M. Ohkubo, "Constant-size structure-preserving signatures: Generic constructions and simple assumptions," *Journal of Cryptology*, vol. 29, pp. 833–878, Oct. 2016.
- [11] M. Abe, G. Fuchsbauer, J. Groth, K. Haralambiev, and M. Ohkubo, "Structure-preserving signatures and commitments to group elements," *Journal of Cryptology*, vol. 29, pp. 363–421, Apr. 2016.
- [12] R. Hiromasa, M. Abe, and T. Okamoto, "Packing messages and optimizing bootstrapping in GSW-FHE," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 99-A, no. 1, pp. 73–82, 2016.
- [13] M. Abe, S. S. M. Chow, K. Haralambiev, and M. Ohkubo, "Double-trapdoor anonymous tags for traceable signatures," *International Journal of Information Security*, vol. 12, no. 1, pp. 19– 31, 2013.
- [14] M. Abe, T. Okamoto, and K. Suzuki, "Message recovery signature schemes from sigmaprotocols," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 96-A, no. 1, pp. 92–100, 2013.
- [15] M. Abe and M. Ohkubo, "A framework for universally composable non-committing blind signatures," *International Journal of Applied Cryptography*, vol. 2, no. 3, pp. 229–249, 2012.
- [16] M. Abe, Y. Cui, H. Imai, and E. Kiltz, "Efficient hybrid encryption from ID-based encryption," Designs, Codes, and Cryptography, vol. 54, no. 3, pp. 205–240, 2010.
- [17] M. Abe, E. Kiltz, and T. Okamoto, "Chosen ciphertext security with optimal ciphertext overhead," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 93-A, no. 1, pp. 22–33, 2010.
- [18] M. Abe, Y. Cui, H. Imai, and K. Kurosawa, "Tag-KEM from set partial domain one-way permutations," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 92-A, no. 1, pp. 42–52, 2009.

- [19] M. Abe, R. Gennaro, and K. Kurosawa, "Tag-KEM/DEM: A new framework for hybrid encryption," *Journal of Cryptology*, vol. 21, pp. 97–130, Jan. 2008.
- [20] M. Ohkubo and M. Abe, "On the definitions of anonymity for ring signatures," *IEICE Trans*actions on Fundamentals of Electronics, Communications and Computer Sciences, vol. 91-A, no. 1, pp. 272–282, 2008.
- [21] M. Abe and H. Imai, "Flaws in robust optimistic Mix-nets and stronger security notions," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 89-A, no. 1, pp. 99–105, 2006.
- [22] K. Chida and M. Abe, "Flexible-routing anonymous networks using optimal length of ciphertext," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 88-A, no. 1, pp. 211–221, 2005.
- [23] M. Abe, M. Ohkubo, and K. Suzuki, "1-out-of-n signatures from a variety of keys," *IE-ICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 87-A, no. 1, pp. 131–140, 2004. Conference version publised at Asiacrypt 2002.
- [24] M. Abe, M. Ohkubo, and K. Suzuki, "Efficient threshold signer-ambiguous signatures from variety of keys," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. E87-A, pp. 471–479, Feb. 2004.
- [25] M. Abe, "Combining encryption and proof of knowledge in the random oracle model," The Computer Journal, vol. 47, no. 1, pp. 58–70, 2004.
- [26] M. Abe and K. Suzuki, "M+1-st price auction using homomorphic encryption," *IEICE Transac*tions on Fundamentals of Electronics, Communications and Computer Sciences, Special Section on Cryptography and Information Security, vol. E86-A, pp. 136–141, Jan. 2003.
- [27] F. Hoshino, M. Abe, and T. Kobayashi, "Lenient/strict batch verification in several groups," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. E86-A, pp. 64–72, Jan. 2003.
- [28] M. Abe and M. Kanda, "A key escrow scheme with time-limited monitoring for one-way communication," *The Computer Journal*, vol. 45, no. 6, pp. 661–671, 2002.
- [29] M. Abe and T. Okamoto, "Delegation chains secure up to constant length," IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Special Section on Cryptography and Information Security, vol. E85-A, pp. 110–116, Jan. 2002.
- [30] M. Abe and T. Okamoto, "A signature scheme with message recovery as secre as discrete logarithm," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. E84-A, pp. 197–204, Feb. 2001.
- [31] M. Ohkubo and M. Abe, "A length-invariant hybrid Mix," IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Special Section on Fundamentals of Information and Communications, vol. E84-A, pp. 931–940, Apr. 2001.

- [32] M. Abe, "Universally verifiable Mix-net with verification work independent of the number of Mix-servers," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Special Section on Cryptography and Information Security*, vol. E83-A, pp. 1431–1440, July 2000.
- [33] M. Abe, "Non-interactive and optimally resilient distributed multiplication," *IEICE Transac*tions on Fundamentals of Electronics, Communications and Computer Sciences, Special Section on Discrete Mathematics and Its Applications, vol. E83-A, pp. 598–605, Apr. 2000.

Conferences and Workshops with Review

- Masayuki Abe, Miguel Ambrona, and Miyako Ohkubo. On black-box extensions of noninteractive zero-knowledge arguments, and signatures directly from simulation soundness. In Aggelos Kiayias, Markulf Kohlweiss, Petros Wallden, and Vassilis Zikas, editors, *PKC 2020:* 23rd International Conference on Theory and Practice of Public Key Cryptography, Part I, volume 12110 of Lecture Notes in Computer Science, pages 558–589, Edinburgh, UK, May 4–7, 2020. Springer, Heidelberg, Germany.
- [2] Masayuki Abe, Charanjit S. Jutla, Miyako Ohkubo, Jiaxin Pan, Arnab Roy, and Yuyu Wang. Shorter QA-NIZK and SPS with tighter security. In Steven D. Galbraith and Shiho Moriai, editors, Advances in Cryptology – ASIACRYPT 2019, Part III, volume 11923 of Lecture Notes in Computer Science, pages 669–699, Kobe, Japan, December 8–12, 2019. Springer, Heidelberg, Germany.
- [3] Kyosuke Yamashita, Mehdi Tibouchi, and Masayuki Abe. A coin-free oracle-based augmented black box framework. In Ron Steinfeld and Tsz Hon Yuen, editors, *ProvSec 2019: 13th International Conference on Provable Security*, volume 11821 of *Lecture Notes in Computer Science*, pages 265–272, Cairns, QLD, Australia, October 1–4, 2019. Springer, Heidelberg, Germany.
- [4] Masayuki Abe, Charanjit S. Jutla, Miyako Ohkubo, and Arnab Roy. Improved (almost) tightlysecure simulation-sound QA-NIZK with applications. In Thomas Peyrin and Steven Galbraith, editors, Advances in Cryptology – ASIACRYPT 2018, Part I, volume 11272 of Lecture Notes in Computer Science, pages 627–656, Brisbane, Queensland, Australia, December 2–6, 2018. Springer, Heidelberg, Germany.
- [5] Masayuki Abe, Miguel Ambrona, Miyako Ohkubo, and Mehdi Tibouchi. Lower bounds on structure-preserving signatures for bilateral messages. In Dario Catalano and Roberto De Prisco, editors, SCN 18: 11th International Conference on Security in Communication Networks, volume 11035 of Lecture Notes in Computer Science, pages 3–22, Amalfi, Italy, September 5–7, 2018. Springer, Heidelberg, Germany.
- [6] Masayuki Abe, Dennis Hofheinz, Ryo Nishimaki, Miyako Ohkubo, and Jiaxin Pan. Compact structure-preserving signatures with almost tight security. In Jonathan Katz and Hovav Shacham, editors, Advances in Cryptology – CRYPTO 2017, Part II, volume 10402 of Lecture Notes in Computer Science, pages 548–580, Santa Barbara, CA, USA, August 20–24, 2017. Springer, Heidelberg, Germany.

- [7] Masayuki Abe, Fumitaka Hoshino, and Miyako Ohkubo. Design in type-I, run in type-III: Fast and scalable bilinear-type conversion using integer programming. In Matthew Robshaw and Jonathan Katz, editors, Advances in Cryptology – CRYPTO 2016, Part III, volume 9816 of Lecture Notes in Computer Science, pages 387–415, Santa Barbara, CA, USA, August 14–18, 2016. Springer, Heidelberg, Germany.
- [8] Junichi Tomida, Masayuki Abe, and Tatsuaki Okamoto. Efficient functional encryption for inner-product values with full-hiding security. In Matt Bishop and Anderson C. A. Nascimento, editors, ISC 2016: 19th International Conference on Information Security, volume 9866 of Lecture Notes in Computer Science, pages 408–425, Honolulu, HI, USA, September 3–6, 2016. Springer, Heidelberg, Germany.
- [9] Masayuki Abe, Markulf Kohlweiss, Miyako Ohkubo, and Mehdi Tibouchi. Fully structurepreserving signatures and shrinking commitments. In Elisabeth Oswald and Marc Fischlin, editors, Advances in Cryptology – EUROCRYPT 2015, Part II, volume 9057 of Lecture Notes in Computer Science, pages 35–65, Sofia, Bulgaria, April 26–30, 2015. Springer, Heidelberg, Germany.
- [10] Ryo Hiromasa, Masayuki Abe, and Tatsuaki Okamoto. Packing messages and optimizing bootstrapping in GSW-FHE. In Jonathan Katz, editor, *PKC 2015: 18th International Conference* on Theory and Practice of Public Key Cryptography, volume 9020 of Lecture Notes in Computer Science, pages 699–715, Gaithersburg, MD, USA, March 30 – April 1, 2015. Springer, Heidelberg, Germany.
- [11] Masayuki Abe, Jens Groth, Miyako Ohkubo, and Takeya Tango. Converting cryptographic schemes from symmetric to asymmetric bilinear groups. In Juan A. Garay and Rosario Gennaro, editors, Advances in Cryptology – CRYPTO 2014, Part I, volume 8616 of Lecture Notes in Computer Science, pages 241–260, Santa Barbara, CA, USA, August 17–21, 2014. Springer, Heidelberg, Germany.
- [12] Masayuki Abe, Jens Groth, Miyako Ohkubo, and Mehdi Tibouchi. Structure-preserving signatures from type II pairings. In Juan A. Garay and Rosario Gennaro, editors, Advances in Cryptology – CRYPTO 2014, Part I, volume 8616 of Lecture Notes in Computer Science, pages 390–407, Santa Barbara, CA, USA, August 17–21, 2014. Springer, Heidelberg, Germany.
- [13] Masayuki Abe, Jan Camenisch, Rafael Dowsley, and Maria Dubovitskaya. On the impossibility of structure-preserving deterministic primitives. In Yehuda Lindell, editor, TCC 2014: 11th Theory of Cryptography Conference, volume 8349 of Lecture Notes in Computer Science, pages 713–738, San Diego, CA, USA, February 24–26, 2014. Springer, Heidelberg, Germany.
- [14] Masayuki Abe, Jens Groth, Miyako Ohkubo, and Mehdi Tibouchi. Unified, minimal and selectively randomizable structure-preserving signatures. In Yehuda Lindell, editor, TCC 2014: 11th Theory of Cryptography Conference, volume 8349 of Lecture Notes in Computer Science, pages 688–712, San Diego, CA, USA, February 24–26, 2014. Springer, Heidelberg, Germany.
- [15] Masayuki Abe, Bernardo David, Markulf Kohlweiss, Ryo Nishimaki, and Miyako Ohkubo. Tagged one-time signatures: Tight security and optimal tag size. In Kaoru Kurosawa and Goichiro Hanaoka, editors, PKC 2013: 16th International Conference on Theory and Practice

of Public Key Cryptography, volume 7778 of Lecture Notes in Computer Science, pages 312–331, Nara, Japan, February 26 – March 1, 2013. Springer, Heidelberg, Germany.

- [16] Masayuki Abe, Melissa Chase, Bernardo David, Markulf Kohlweiss, Ryo Nishimaki, and Miyako Ohkubo. Constant-size structure-preserving signatures: Generic constructions and simple assumptions. In Xiaoyun Wang and Kazue Sako, editors, Advances in Cryptology – ASIACRYPT 2012, volume 7658 of Lecture Notes in Computer Science, pages 4–24, Beijing, China, December 2–6, 2012. Springer, Heidelberg, Germany.
- [17] Masayuki Abe, Kristiyan Haralambiev, and Miyako Ohkubo. Group to group commitments do not shrink. In David Pointcheval and Thomas Johansson, editors, Advances in Cryptology - EUROCRYPT 2012, volume 7237 of Lecture Notes in Computer Science, pages 301–317, Cambridge, UK, April 15–19, 2012. Springer, Heidelberg, Germany.
- [18] Masayuki Abe. Tools over bilinear groups for modular design of cryptographic tasks (invited talk). In Tsuyoshi Takagi, Guilin Wang, Zhiguang Qin, Shaoquan Jiang, and Yong Yu, editors, *ProvSec 2012: 6th International Conference on Provable Security*, volume 7496 of *Lecture Notes in Computer Science*, page 1, Chengdu, China, September 26–28, 2012. Springer, Heidelberg, Germany.
- [19] Masayuki Abe, Jens Groth, and Miyako Ohkubo. Separating short structure-preserving signatures from non-interactive assumptions. 7073:628–646, December 4–8, 2011.
- [20] Masayuki Abe, Sherman S. M. Chow, Kristiyan Haralambiev, and Miyako Ohkubo. Doubletrapdoor anonymous tags for traceable signatures. In Javier Lopez and Gene Tsudik, editors, ACNS 11: 9th International Conference on Applied Cryptography and Network Security, volume 6715 of Lecture Notes in Computer Science, pages 183–200, Nerja, Spain, June 7–10, 2011. Springer, Heidelberg, Germany.
- [21] Masayuki Abe, Jens Groth, Kristiyan Haralambiev, and Miyako Ohkubo. Optimal structurepreserving signatures in asymmetric bilinear groups. In Phillip Rogaway, editor, Advances in Cryptology – CRYPTO 2011, volume 6841 of Lecture Notes in Computer Science, pages 649–666, Santa Barbara, CA, USA, August 14–18, 2011. Springer, Heidelberg, Germany.
- [22] Masayuki Abe, Kristiyan Haralambiev, and Miyako Ohkubo. Efficient message space extension for automorphic signatures. In Mike Burmester, Gene Tsudik, Spyros S. Magliveras, and Ivana Ilic, editors, ISC 2010: 13th International Conference on Information Security, volume 6531 of Lecture Notes in Computer Science, pages 319–330, Boca Raton, FL, USA, October 25–28, 2011. Springer, Heidelberg, Germany.
- [23] Masayuki Abe, Georg Fuchsbauer, Jens Groth, Kristiyan Haralambiev, and Miyako Ohkubo. Structure-preserving signatures and commitments to group elements. In Tal Rabin, editor, Advances in Cryptology – CRYPTO 2010, volume 6223 of Lecture Notes in Computer Science, pages 209–236, Santa Barbara, CA, USA, August 15–19, 2010. Springer, Heidelberg, Germany.
- [24] Masayuki Abe and Miyako Ohkubo. A framework for universally composable non-committing blind signatures. In Mitsuru Matsui, editor, Advances in Cryptology – ASIACRYPT 2009, volume 5912 of Lecture Notes in Computer Science, pages 435–450, Tokyo, Japan, December 6– 10, 2009. Springer, Heidelberg, Germany.

- [25] Masayuki Abe, Eike Kiltz, and Tatsuaki Okamoto. Compact CCA-secure encryption for messages of arbitrary length. In Stanislaw Jarecki and Gene Tsudik, editors, *PKC 2009: 12th International Conference on Theory and Practice of Public Key Cryptography*, volume 5443 of *Lecture Notes in Computer Science*, pages 377–392, Irvine, CA, USA, March 18–20, 2009. Springer, Heidelberg, Germany.
- [26] Masayuki Abe, Eike Kiltz, and Tatsuaki Okamoto. Chosen ciphertext security with optimal ciphertext overhead. In Josef Pieprzyk, editor, Advances in Cryptology – ASIACRYPT 2008, volume 5350 of Lecture Notes in Computer Science, pages 355–371, Melbourne, Australia, December 7–11, 2008. Springer, Heidelberg, Germany.
- [27] Masayuki Abe and Serge Fehr. Perfect NIZK with adaptive soundness. In Salil P. Vadhan, editor, TCC 2007: 4th Theory of Cryptography Conference, volume 4392 of Lecture Notes in Computer Science, pages 118–136, Amsterdam, The Netherlands, February 21–24, 2007. Springer, Heidelberg, Germany.
- [28] Masayuki Abe, Yang Cui, Hideki Imai, and Kaoru Kurosawa. Tag-KEM from set partial domain one-way permutations. In Lynn Margaret Batten and Reihaneh Safavi-Naini, editors, ACISP 06: 11th Australasian Conference on Information Security and Privacy, volume 4058 of Lecture Notes in Computer Science, pages 360–370, Melbourne, Australia, July 3–5, 2006. Springer, Heidelberg, Germany.
- [29] Miyako Ohkubo and Masayuki Abe. On the definition of anonymity for ring signatures. In Phong Q. Nguyen, editor, Progress in Cryptology - VIETCRYPT 06: 1st International Conference on Cryptology in Vietnam, volume 4341 of Lecture Notes in Computer Science, pages 157–174, Hanoi, Vietnam, September 25–28, 2006. Springer, Heidelberg, Germany.
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