Publications by type

The publications listed here are in *reverse chronological order*, grouped by the type of publications with a separate publication counter per named type. A total of **75** publications listed here does not include invited talks and patents. The bibliography style in use is LaTeX `IEEEtran`.

Books and book chapters

[1] S. Marsh, N. Dwyer, **A. Basu**, T. Storer, K. Renaud, K. El-Khatib, B. Esfandiari, S. Noël, and M. V. Bicakci, "Foreground Trust as a Security Paradigm: Turning Users into Strong Links," in *Information Security in Diverse Computing Environments*. IGI Global, 2014.

[2] I. Wakeman, A. Light, J. Robinson, D. Chalmers, and **A. Basu**, *Deploying Pervasive Advertising in a Farmers' Market*. Springer HCI Series, 2011, ch. Pervasive Advertising and Shopping.

Journals, magazines and other articles

[1] M. S. Rahman, **A. Basu**, and S. Kiyomoto, "Decentralized ciphertext-policy attribute-based encryption: A post-quantum construction," *Journal of Internet Services and Information Security (JISIS)*, vol. 7, no. 3, pp. 1–16, 2017.

[2] M. S. Rahman, **A. Basu**, S. Kiyomoto, and M. Z. A. Bhuiyan, "Privacy-friendly secure bidding for smart grid demand-response," *Information Sciences*, vol. 379, pp. 229–240, 2017.

[3] **A. Basu**, A. Monreale, R. Trasarti, J. C. Corena, F. Giannotti, D. Pedreschi, S. Kiyomoto, Y. Miyake, and T. Yanagihara, "A risk model for

privacy in trajectory data," *Journal of Trust Management*, vol. 2, no. 1, pp. 1–23, 2015.

[4] **A. Basu**, J. Vaidya, J. C. Corena, S. Kiyomoto, S. Marsh, G. Guo, J. Zhang, and Y. Miyake, "Opinions of People: Factoring in Privacy and Trust," *ACM SIGAPP Applied Computing Review*, vol. 14(3), September 2014.

[5] **A. Basu**, S. Fleming, J. Stanier, S. Naicken, I. Wakeman, and V. K. Gurbani, "The state of peer-to-peer network simulators," *ACM Computing Surveys*, vol. 45, no. 4, pp. 46:1–46:25, 08 2013.

[6] H. Kikuchi, D. Kagawa, **A. Basu**, K. Ishii, M. Terada, and S. Hongo, "Scalable Privacy-Preserving Data Mining with Asynchronously Partitioned Datasets," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. 96, no. 1, pp. 111–120, 01 2013.

[7] **A. Basu**, J. Vaidya, H. Kikuchi, T. Dimitrakos, and S. K. Nair, "Privacy preserving collaborative filtering for SaaS enabling PaaS clouds," *Journal of Cloud Computing: Advances, Systems and Applications*, vol. 1, no. 8, 2012.

[8] C. D. Jensen, N. Dragoni, **A. Basu**, and C. Mancini, "Frontiers in trust management," *Journal of Internet Services and Information Security (JISIS)*, vol. 1, no. 4, pp. 1–4, 11 2011.

[9] **A. Basu**, J. Vaidya, and H. Kikuchi, "Efficient privacy-preserving collaborative filtering based on the weighted Slope One predictor," *Journal of Internet Services and Information Security*, vol. 1, no. 4, 2011.

[10] J. Stanier, S. Naicken, **A. Basu**, J. Li, and I. Wakeman, "Can We Use Trust in Online Dating?" *Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications*, vol. 1, no. 4, pp. 50–61, 2010.

[11] S. Naicken, B. Livingston, **A. Basu**, S. Rodhetbhai, I. Wakeman, and D. Chalmers, "The state of peer-to-peer simulators and simulations," *ACM SIGCOMM Computer Communication Review*, vol. 37, no. 2, pp. 95–98, 2007.

[12] F. Liarokapis, N. Mourkoussis, M. White, J. Darcy, M. Sifniotis, P. Petridis, **A. Basu**, and P. F. Lister, "Web3d and augmented reality to support engineering education," *World Transactions on Engineering and Technology Education*, vol. 3, no. 1, pp. 11–14, 2004.

Conferences, workshops and symposiums

[1] A. Al Omar, M. S. Rahman, **A. Basu**, and S. Kiyomoto, "MediBchain: A Blockchain Based Privacy Preserving Platform for Healthcare Data," in *International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage.* Guangzhou, China: Springer, 2017, pp. 534–543.

[2] **A. Basu**, R. Xu, J. C. Corena, and S. Kiyomoto, "Hypercubes and private information retrieval," in *Proceedings of the 19th International Conference on Information and Communications Security (ICICS).* Beijing, China: Springer, 2017, pp. 469–475.

[3] K. Suksomboon, A. Tagami, **A. Basu**, and J. Kurihara, "IPRES: in-device proxy re-encryption service for secure ICN," in *Proceedings of the 4th ACM Conference on Information-Centric Networking (ICN).* Berlin, Germany: ACM, 2017, pp. 176–177.

[4] R. Xu, K. Morozov, **A. Basu**, M. S. Rahman, and S. Kiyomoto, "Security analysis of a verifiable server-aided approximate similarity computation," in *International Workshop on Security (IWSEC).* Hiroshima, Japan: Springer, 2017, pp. 159–178.

[5] **A. Basu**, M. S. Rahman, R. Xu, K. Fukushima, and S. Kiyomoto, "VI-Graph – A Framework for Verifiable Information," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM),* Göteborg, Sweden, 2017, pp. 12–20.

[6] S. Kiyomoto, M. S. Rahman, and **A. Basu**, "On blockchain-based anonymized dataset distribution platform," in *15th International Conference on Software Engineering Research, Management and Applications (SERA).* London, UK: IEEE, 2017, pp. 85–92.

[7] **A. Basu**, J. J. Daniel, S. Ruj, M. S. Rahman, T. Dimitrakos, and S. Kiyomoto, "Accountability and integrity for data management using blockchains," in *Poster at the 21st International Conference on Financial Cryptography and Data Security (FC),* Malta, 2017.

[8] M. S. Rahman, **A. Basu**, and S. Kiyomoto, "Broker-mediated trade finance with blockchains," in *Poster at the 21st International Conference on Financial Cryptography and Data Security (FC),* Malta, 2017.

[9] M. S. Rahman, A. Basu, and S. Kiyomoto, "Towards outsourced privacy-preserving multiparty dbscan," in *22nd Pacific Rim International Symposium on Dependable Computing (PRDC)*. Christchurch, New Zealand: IEEE, 2017, pp. 225–226.

[10] **A. Basu**, R. Xu, M. S. Rahman, and S. Kiyomto, "User-in-a-context: A blueprint for context-aware identification," in *Proceedings of the Privacy, Security and Trust (PST)*. Auckland, New Zealand: IEEE, 2016, pp. 329–334.

[11] M. S. Rahman, **A. Basu**, and S. Kiyomoto, "Decentralized ciphertext-policy attribute-based encryption from learning with errors over rings," in *Proceedings of the Trustcom/BigDataSE/ISPA*. Tianjin, China: IEEE, 2016, pp. 1759–1764.

[12] **A. Basu**, S. Kiyomoto, J. Vaidya, and S. Marsh, "Prefrank: Quantification and aggregation of subjective user preferences," in *Proceedings of the Trustcom/BigDataSE/ISPA*. Tianjin, China: IEEE, 2016, pp. 7–13.

[13] T. Mimoto, **A. Basu**, and S. Kiyomoto, "Towards practical k-anonymization: Correlation-based construction of generalization hierarchy," in *Proceedings of the International Joint Conference on e-Business and Telecommunications (SECRYPT)*, Lisbon, Portugal, 2016, pp. 411–418.

[14] **A. Basu**, S. Marsh, M. S. Rahman, and S. Kiyomoto, "A model for personalised perception of policies," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Darmstadt, Germany, 2016, pp. 52–62.

[15] M. S. Rahman, **A. Basu**, and S. Kiyomoto, "Privacy-friendly secure bidding scheme for demand response in smart grid," in *Proceedings of the IEEE First International Smart Cities Conference (ISC2)*, Guadalajara, Mexico, 2015, pp. 1–6.

[16] ——, "Secure and private bidding protocol for incentive-based demand-response system of smart grid," in *Proceedings of the International Symposium on Stabilization, Safety, and Security of Distributed Systems: SSS*, vol. 9212. Edmonton, AB, Canada: Springer, 2015, p. 269.

[17] **A. Basu**, T. Nakamura, S. Hidano, and S. Kiyomoto, "k-anonymity: Risks and the reality," in *Proceedings of the IEEE Trustcom/BigDataSE/ISPA*, vol. 1, Helsinki, Finland, 2015, pp. 983–989.

[18] **A. Basu**, J. C. Corena, J. Vaidya, J. Crowcroft, S. Kiyomoto, S. Marsh, Y. S. Van Der Sype, and T. Nakamura, "Lightweight practical private one-way anonymous messaging," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Hamburg, Germany, 2015.

[19] **A. Basu**, J. C. Corena, J. Vaidya, J. Crowcroft, S. Kiyomoto, Y. S. Van Der Sype, and Y. Miyake, "Practical Private One-way Anonymous Message Routing," in *Proceedings of the ACM AsiaCCS*, Singapore, 2015.

[20] J. Vaidya, I. Yakut, and **A. Basu**, "Efficient Integrity Verification for Outsourced Collaborative Filtering," in *Proceedings of the IEEE International Conference on Data Mining (ICDM)*, Shenzhen, China, 2014.

[21] **A. Basu**, J. C. Corena, A. Monreale, D. Pedreschi, F. Giannotti, S. Kiyomoto, J. Vaidya, and Y. Miyake, "CF-inspired privacy-preserving prediction of next location in the cloud," in *Poster in the IEEE Cloudcom*, Singapore, 2014.

[22] J. C. Corena, **A. Basu**, Y. Nakano, S. Kiyomoto, and Y. Miyake, "Data storage on the cloud under user control," in *Poster in the IEEE Cloudcom*, Singapore, 2014.

[23] J. C. Corena, **A. Basu**, Y. Nakano, S. Kiyomoto, Y. Miyake, and T. Ohtsuki, "A Multiple-Server Efficient Reusable Proof of Data Possession from Private Information Retrieval Techniques," in *Proceedings of the International conference on Security and Cryptography (SECRYPT)*, Vienna, Austria, 2014.

[24] J. C. Corena, **A. Basu**, S. Kiyomoto, Y. Miyake, and T. Ohtsuki, "Beyond Proofs of Data Possession: Finding Defective Blocks in Outsourced Storage," in *Proceedings of IEEE Global Communications Conference (Globecom)*, Austin, USA, 2014.

[25] Y. Nakano, **A. Basu**, S. Kiyomoto, and Y. Miyake, "Key extraction attack using statical analysis of memory dump data," in *Proceedings of the International Conference on Risks and Security of Internet and Systems (CRiSIS)*, Trento, Italy, 2014.

[26] **A. Basu**, A. Monreale, J. C. Corena, F. Giannotti, D. Pedreschi, S. Kiyomoto, Y. Miyake, T. Yanagihara, and R. Trasarti, "A privacy risk model for trajectory data," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Singapore, 2014.

[27] **A. Basu**, J. C. Corena, S. Kiyomoto, J. Vaidya, S. Marsh, and Y. Miyake, "PrefRank: fair aggregation of subjective user preferences," in *Poster in the ACM Symposium on Applied Computing (SAC) RS track*, Gyeongju, Korea, 2014.

[28] **A. Basu**, J. C. Corena, S. Kiyomoto, S. Marsh, J. Vaidya, G. Guo, J. Zhang, and Y. Miyake, "Privacy preserving trusted social feedback," in *Proceedings of the ACM Symposium on Applied Computing (SAC) TRECK track*, Gyeongju, Korea, 2014.

Last updated: January 18, 2018

[29] G. Guo, J. Zhang, D. Thalmann, **A. Basu**, and N. Yorke-Smith, "From Ratings to Trust: an Empirical Study of Implicit Trust in Recommender Systems," in *Proceedings of the ACM Symposium on Applied Computing (SAC) RS track*, Gyeongju, Korea, 2014.

[30] J. C. Corena, **A. Basu**, S. Kiyomoto, Y. Miyake, and T. Ohtsuki, "XOR Network Coding Pollution Prevention Without Homomorphic Functions," in *Proceedings of the IEEE Consumer Communications and Networking Conference*, Las Vegas, USA, 2014.

[31] J. C. Corena, **A. Basu**, S. Kiyomoto, Y. Miyake, and T. Ohtsuki, "Decodability Attacks in XOR Network Coding," in *Proceedings of the IEICE Society Conference*, vol. 2013, no. 2. Fukuoka, Japan: IEICE, 2013.

[32] J. Vaidya, B. Shafiq, **A. Basu**, and Y. Hong, "Differentially Private Naïve Bayes Classification," in *Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence*. Atlanta, GA, USA: IEEE Computer Society, 2013, pp. 571–576.

[33] **A. Basu**, J. Vaidya, H. Kikuchi, and T. Dimitrakos, "Privacy-preserving collaborative filtering on the cloud – practical implementation experiences," in *Proceedings of the IEEE Cloud*, Santa Clara, CA, USA, 2013.

[34] N. Dwyer, **A. Basu**, and S. Marsh, "Reflections on measuring the trust empowerment potential of a digital environment," in *Proceedings of the IFIP WG11.11 International Conference on Trust Management (IFIPTM)*, Malaga, Spain, 2013.

[35] S. Marsh, **A. Basu**, and N. Dwyer, "Security enhancement with foreground trust, comfort, and ten commandments for real people," in *Theories and Intricacies of Information Security Problems*, Anne V. D. M. Kayem and C. Meinel, Eds., vol. Technische Berite Nr 63. Hasso-Plattner Instituts fur Softwaresystemtechnick and der Universitat Potsdam, 2013, pp. 1–7.

[36] **A. Basu**, N. Dwyer, and S. Naicken, "A concordance framework for building trust evidences," in *Proceedings of the Annual Conference on Privacy, Security and Trust (PST)*, Paris, France, 2012.

[37] S. Marsh, **A. Basu**, and N. Dwyer, "Rendering unto Cæsar the Things that are Cæsar's: Complex Trust Models and Human Understanding," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Surat, India, 2012.

[38] **A. Basu**, J. Vaidya, and H. Kikuchi, "Perturbation based privacy preserving Slope One predictors for collaborative filtering," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Surat, India, 2012.

Last updated: January 18, 2018

[39] **A. Basu**, J. Vaidya, T. Dimitrakos, and H. Kikuchi, "Feasibility of a privacy preserving collaborative filtering scheme on the Google App Engine – a performance case-study," in *Proceedings of the ACM Symposium on Applied Computing (SAC) Cloud Computing track*, Trento, Italy, 2012.

[40] **A. Basu**, J. Vaidya, H. Kikuchi, and T. Dimitrakos, "Privacy-preserving collaborative filtering for the cloud," in *Proceedings of the IEEE International Conference on Cloud Computing Technology and Science (Cloudcom)*, Athens, Greece, 2011.

[41] ——, "Practical privacy preserving collaborative filtering on the Google App Engine," in *Proceedings of the Computer Security Symposium (CSS)*, Niigata, Japan, 2011.

[42] **A. Basu**, H. Kikuchi, J. Vaidya, and T. Dimitrakos, "Privacy-Preserving Item Recommendation System in Cloud Computing," in *Poster in the International Workshop on Security (IWSEC)*, Tokyo, Japan, 2011.

[43] **A. Basu**, H. Kikuchi, and J. Vaidya, "Privacy-preserving weighted Slope One predictor for Item-based Collaborative Filtering," in *Proceedings of the International Workshop on Trust and Privacy in Distributed Information Processing (workshop at the IFIPTM 2011)*, Copenhagen, Denmark, 2011.

[44] H. Kikuchi, D. Kagawa, **A. Basu**, K. Ishii, M. Terada, and S. Hongo, "Scalable Privacy-Preserving Data Mining with Asynchronously Partitioned Datasets," in *Proceedings of the International Information Security Conference (IFIPSEC)*, Lucerne, Switzerland, 06 2011.

[45] I. Wakeman, A. Light, J. Robinson, D. Chalmers, and **A. Basu**, "Deploying Ubiquitous Computing Applications in a Farmers' Market," in *Proceedings of Pervasive Advertising and Shopping 2010i (workshop at Pervasive 2010)*, Helsinki, Finland, 2010.

[46] A. Light, I. Wakeman, J. Robinson, **A. Basu**, and D. Chalmers, "Chutney and Relish: Designing to Augment the Experience of Shopping at a Farmers' Market," in *Proceedings of OzCHI, QUT*, Brisbane, Australia, 2010.

[47] ——, "Can We Use Trust in Online Dating?" in *Proceedings of the International Workshop on Trusted Communications in Decentralised Computing (workshop in IFIPTM 2010)*, Morioka, Japan, 2010.

[48] **A. Basu**, I. Wakeman, and D. Chalmers, "A Framework for Developing and Sharing Client Reputations," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Morioka, Japan, 2010.

[49] I. Wakeman, A. Light, J. Robinson, D. Chalmers, and **A. Basu**, "Bringing the Virtual to the Farmers' Market: Designing for Trust in Pervasive

Computing Systems," in *Proceedings of the IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, Morioka, Japan, 2010.

[50] **A. Basu**, I. Wakeman, D. Chalmers, and J. Robinson, "A Behavioural Model for Client Reputation," in *Proceedings of Trust in Mobile Environments (workshop in IFIPTM 2008)*, Trøndheim, Norway, 2008.

[51] J. Robinson, I. Wakeman, D. Chalmers, and **A. Basu**, "The north laine shopping guide: A case study in modelling trust in applications," in *Proceedings of Joint iTrust and PST Conference on Privacy, Trust Management and Security (IFIPTM)*. Trøndheim, Norway: Springer, 2008, pp. 183–197.

[52] **A. Basu**, I. Wakeman, and D. Chalmers, "A behavioural model for consumer reputation," in *Poster in the International Workshop on Self-Organizing Systems*, The Lake District, UK, 2007.

[53] S. Naicken, **A. Basu**, B. Livingston, S. Rodhetbhai, and I. Wakeman, "Towards Yet Another Peer-to-Peer Simulator," in *Proceedings of the International Working Conference on Performance Modelling and Evaluation of Heterogeneous Networks (HET-NETs)*, Ilkley, UK, 2006.

[54] S. Naicken, **A. Basu**, B. Livingston, and S. Rodhetbhai, "A Survey of Peer-to-Peer Network Simulators," in *Proceedings of the Annual Postgraduate Symposium (PGNet)*, vol. 2, Liverpool, UK, 2006.

[55] P. Petridis, M. White, N. Mourkousis, F. Liarokapis, M. Sifniotis, **A. Basu**, and C. Gatzidis, "Exploring and Interacting with Virtual Museums," in *Proceedings of Computer Applications and Quantitative Methods in Archaeology*, Tomar, Portugal, 2005.

[56] N. Mourkoussis, F. Liarokapis, **A. Basu**, M. White, and P. F. Lister, "Using XML Technologies to Present Digital Content with Augmented Reality," in *Proceedings of the Eurographics Ireland Chapter Workshop*, vol. 3, Cork, Ireland, 2004.

[57] F. Liarokapis, S. Sylaiou, **A. Basu**, N. Mourkoussis, M. White, and P. F. Lister, "An Interactive Visualisation Interface for Virtual Museums," in *Proceedings of the International Symposium on Virtual Reality, Archaeology and Cultural Heritage, Eurographics Association*, Brussels, Belgium, 2004.

[58] M. White, F. Liarokapis, N. Mourkoussis, **A. Basu**, J. Darcy, P. Petridis, M. Sifniotis, and P. Lister, "ARCOLite – an XML based system for building and presenting Virtual Museums using Web3D and Augmented Reality," in *Proceedings of Theory and Practice of Computer Graphics (TPCG)*. Bournemouth, UK: IEEE, 2004, pp. 94–101.

[59] M. White, F. Liarokapis, N. Mourkoussis, **A. Basu**, J. Darcy, P. Petridis, and P. F. Lister, "A lightweight XML driven architecture for the presentation of virtual cultural exhibitions (ARCOLite)," in *Proceedings of IADIS International Conference of Applied Computing*, Lisbon, Portugal, 2004.

Last updated: January 18, 2018

Theses and technical reports

[1] **A. Basu**, "A Reputation Framework for Behavioural History," Ph.D. dissertation, University of Sussex, UK, 02 2010.

[2] **A. Basu**, "ARCOLite – a visualisation system for viewing museum artefacts," University of Sussex, UK, Bachelor of Engineering thesis, 04 2004.