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Education

- Ph.D. in Electrical Engineering and Computer Science, Korea Advanced Institute of Science and Technology, Republic of Korea, March, 2001 – Feb, 2007. (Feb. 2. 2007)
Thesis : Behavior-aware peer-to-peer protocol for high data durability.
Advisor : Daeyeon Park.
- M.S. in Electrical Engineering and Computer Science, Korea Advanced Institute of Science and Technology, Republic of Korea, March, 1999 – Feb, 2001. (Feb. 16. 2001)
Master Thesis: Least Popularity-per-Byte Replacement Algorithm for a Proxy Cache
- B.S. in Electrical Engineering and Computer Science, Korea Advanced Institute of Science and Technology, Republic of Korea, March, 1994 – Feb, 1999. (Feb. 19. 1999)

Career

- Associate Professor. Department of Electronics and Computer Engineering, Chonnam National University, Gwangju, South Korea, March, 2016 - Current
- Assistant Professor. Department of Electronics and Computer Engineering, Chonnam National University, Gwangju, South Korea, March, 2012 – Feb, 2016
- Post-doctor. Information Systems Group, in Computer Science, University of California Irvine, October, 2008 – February, 2012
- Post-doctor. Network and Distributed Systems Group, in Computer Science, University of California Irvine, May, 2007 – September, 2008

Research Interests

- BigData Platform and Applications : Distributed Data Collecting/Processing Architecture, Real-Time Data/Knowledge Acquisition, Disaster/Agricultural/Health Care BigData Applications
- Software Defined Infrastructure : QoS related SDN/NFV Resource Provisioning/Allocation, Security issues in SDN/NFV environments
- AI applied Cyber Physical Systems : Data/Knowledge Acquisition with Heterogeneous IoT Data, SmartBuilding/SmartCity related Disaster Management Platform, Security issues in IoT environment
- Other topics of interests : Block Chain, GRID/Cloud network/systems, Social Networking systems, Pub/Sub systems with CDN and DTN

Publications

23 papers for International Journals, 55 papers for International Conferences or Workshops, 19 paper for Domestic Journals, 64 paper for Domestic Conferences or Workshops, 3 book chapters, and 3 technical/white papers. The details are follows.

Journals

[23] Van-Quyet Nguyen, Quyet-Thang Huynh and **Kyungbaek Kim**. Estimating searching cost of regular path queries on large graphs by exploiting unit-subqueries. Journal of Heuristics, Accepted, Online First.

[22] Duc-Tiep Vu and **Kyungbaek Kim**. Gradual Switch Clustering based Virtual Middlebox Placement for Improving Service Chain Performance. IEICE Transactions on Information and Systems, Vol.E102-D, No.9, pp.1878-1881, SEP 2019.

[21] Giang-Truong Nguyen, Van-Quyet Nguyen, Sinh-Ngoc Nguyen, and **Kyungbaek Kim**. Traffic Seasonality aware Threshold Adjustment for Effective Source-side DoS Attack Detection. KIIS Transactions on Internet and Information Systems, Vol. 13, No. 5, pp.2651-2673, MAY 2019.

[20] Sinh-Ngoc Nguyen, Van-Quyet Nguyen, Giang-Truong Nguyen and **Kyungbaek Kim**. Source-Side Detection of DRDoS Attack Request with Traffic-Aware Adaptive Threshold. IEICE Transactions on Information and Systems, Vol.E101-D, No.6, pp.1686-1690, JUNE 2018.

- [19] Giang-Truong Nguyen and **Kyungbaek Kim**. A Survey about Consensus Algorithms Used in Blockchain. *Journal of Information Processing Systems*, Vol.14,No.1,pp.101-128, FEB 2018.
- [18] Van-Quyet Nguyen and **Kyungbaek Kim**. Efficient Regular Path Query Evaluation by Splitting with Unit-Subquery Cost Matrix. *IEICE Transactions on Information and Systems*, Vol.E100-D,No.10,pp.2648-2652, OCT 2017.
- [17] Duc Tiep Vu and **Kyungbaek Kim**. Flow Clustering Based Efficient Consolidated Middlebox Positioning Approach for SDN/NFV-Enabled Network. *IEICE Transactions on Information and Systems*, Vol.E99-D,No.8,pp.2177-2181, AUG 2016.
- [16] Rajashree S. Sokasane and **Kyungbaek Kim**. Predicting User Attitude by Using GPS Location Clustering. *IEICE Transactions on Information and Systems*, Vol.E98-D,No.8,pp.1600-1603, AUG 2015.
- [15] **Kyungbaek Kim**, Sharad Mehrotra and Nalini Venkatasubramanian. Efficient and Reliable Application Layer Multicast for Flash Dissemination. *IEEE Transactions on Parallel and Distributed Systems*, Vol. 25, No. 10, pp. 2571-2582, October 2014.
- [14] Rischan Mafrur, M Fiqri Muthohar, Gi Hyun Bang, Do Kyeong Lee, **Kyungbaek Kim**, and Deokjai Choi. Twitter Mining The case of 2014 Indonesian Legislative Elections. *International Journal of Software Engineering and Its Applications*, Vol.8,No.10,pp.191-202, OCT 2014.
- [13] **Kyungbaek Kim**, Two-step boosting for OSN based Sybil-resistant trust value of non-Sybil identities, *IEICE Transactions on Information and Systems*, Vol.E97-D, No.7, pp.1918-1922, July 2014..
- [12] Woo Hyun Ahn, Joon-Woo Choi, Jaewon Oh, Seung-Ho Lim, and **Kyungbaek Kim**. Paging out Multiple Clusters to Improve Virtual Memory System Performance. *IEICE Transactions on Information and Systems*, Vol.E97-D, No.7, pp.1905-1909, July 2014.
- [11] Michael Sirivianos, **Kyungbaek Kim**, Jian Wei Gan and Xiaowei Yang. Leveraging Social Feedback to Verify Online Identity Claims. *ACM Transactions on the Web*, Vol. 8 Iss. 2 No. 9 pp.1-38, MAR, 2014

[10] Rajashree Sokasane, Kyungbaek Kim, Reduce Authentication Delay in Eduroam Using Flat Layer Approach, International Journal of Multimedia and Ubiquitous Engineering, Vol. 9 No. 2 pp.161-169, Feb 2014.

[9] Mayur Deshpande, **Kyungbaek Kim**, Bijit Hore, Sharad Mehrotra and Nalini Venkatasubramanian, ReCREW: A Reliable Flash-Dissemination System, IEEE Transactions on Computers, Vol. 62, No. 7 pp.1432-1446, July 2013.

[8] **Kyungbaek Kim**, Assessing the impact of node churn to random-walk based overlay construction, IEICE Transactions on Information and Systems, Vol.E94-D,No.9, pp.1830-1833, SEP, 2011.

[7] **Kyungbaek Kim**, Relative MTTf-based incentive scheme for availability-based replication in P2P systems, IEICE Transactions on Information and Systems, Vol.E93-D No.12 pp.3404-3406, DEC, 2010.

[6] **Kyungbaek Kim**, Dynamic NodeID based Heterogeneity aware P2P system, Journal of Computer Communications, Vol.32 Issue.6 pp.1062-1071, APR, 2009.

[5] **Kyungbaek Kim**, Lifetime-aware Replication for Data Durability in P2P Storage Network, IEICE Transactions on communications, Vol.E91-B No.12 pp.4020-4023, DEC, 2008.

[4] **Kyungbaek Kim** and Daeyeon Park, Reducing Replication Overhead for Data Durability in DHT based P2P System, IEICE Transactions on Information and Systems, Vol.E90-D No.9 pp.1452-1455, SEP, 2007.

[3] **Kyungbaek Kim** and Daeyeon Park. Efficient and tailored resource management for the P2P web caching. IEICE Transactions on Information and Systems, Vol.E90-D No.1 pp.48-57, JAN, 2007.

[2] **Kyungbaek Kim** and Daeyeon Park. Reducing Outgoing Traffic of Proxy Cache by using Client-Cluster. Journal Of Communications and Networks, Vol.8 No.3 pp.330-338, SEP, 2006.

[1] **Kyungbaek Kim** and Daeyeon Park. Efficient and Scalable Client Clustering for Web Proxy Cache. IEICE Transactions on Information and Systems, Vol.E86-D No.9 pp.1577-1585, SEP, 2003.

Conferences and Workshops

[55] Sungwoong Yeom, **Kyungbaek Kim**, Detail Analysis on Machine Learning based Malicious Network Traffic Classification. In Proceedings of the Eighth International Conference on Smart Media & Applications (SMA 2019) , December 5-7, 2019, Guam, USA

[54] Xuan-Tung Nguyen, Phuong-Nam Cao, Van-Quyet Nguyen, **Kyungbaek Kim**, Quyet-Thang Huynh, A Genetic Algorithm for Large Graph Partitioning Problem. In Proceedings of the Tenth International Symposium on Information and Communication Technology (SoICT 2019) , December 4-6, 2019, Hanoi-Ha Long Bay, Vietnam

[53] Huu-Duy Nguyen, Van-Quyet Nguyen, Hong-Nam Quach, **Kyungbaek Kim**, Handling Spatio-Temporal QoS Requests for Dynamic Network Provisioning. In Proceedings of the 2019 KICS Korean-Vietnam International Joint Workshop on Communications and Information Sciences, November 20-22, 2019, Hanoi, Vietnam

[52] Van-Quyet Nguyen, Huu-Duy Nguyen, Quyet-Thang Huynh, Nalini Venkatasubramanian, **Kyungbaek Kim**, A Scalable Approach for Dynamic Evacuation Routing in Large Smart Buildings. In Proceedings of 2019 IEEE International Conference on Smart Computing (SMARTCOMP 2019) , June 12-14, 2019, Washington DC, USA

[51] Sinh-Ngoc Nguyen, Van-Quyet Nguyen, Jintae Choi, **Kyungbaek Kim**, Design and Implementation of Intrusion Detection System using Convolutional Neural Network for DoS Detection. In Proceedings of the 2nd International Conference on Machine Learning and Soft Computing (ICMLSC2018) , February 2-4, 2017, Phu Quoc Island, Vietnam

[50] Giang-Truong Nguyen, Van-Quyet Nguyen, **Kyungbaek Kim**, Design of Knowledge Acquisition Subsystem with Mining Association Rules from Big Data. In Proceedings of the International Conference on Smart Media & Applications (SMA 2017) , December 17-19, 2017, Boracay, Philippines

[49] Jintae Choi, Sinh-Ngoc Nguyen, Jeongnyeo Kim, Guee-Sang Lee, **Kyungbaek Kim**, Performance Comparison of Traffic Classification Techniques for Detecting Malicious Network Traffic. In Proceedings of the International Conference on Smart Media & Applications (SMA 2017) , December 17-19, 2017, Boracay, Philippines

- [48] Van-Quyet Nguyen, **Kyungbaek Kim**, Estimating the Evaluation Cost of Regular Path Queries on Large Graphs. In Proceedings of the eight international Symposium on Information and Communication Technology (SoICT 2017), December 7-9, 2017, Nha Trang, Vietnam
- [47] Van-Quyet Nguyen, Sinh-Ngoc Nguye, Deokjai Choi, **Kyungbaek Kim**, Location-aware Dynamic Network Provisioning. In Proceedings of the 19th Asis-Pacific Network Operations and Management Symposium (APNOMS 2017), September 27-29, 2017, Seoul, South Korea
- [46] Sinh-Ngoc Nguyen, Jintae Choi, **Kyungbaek Kim**, Suspicious Traffic Detection Based on Edge Gateway Sampling Method. In Proceedings of the 19th Asis-Pacific Network Operations and Management Symposium (APNOMS 2017), September 27-29, 2017, Seoul, South Korea
- [45] Van-Quyet Nguyen, Sinh Ngoc Nguyen, **Kyungbaek Kim**, Enabling Disaster-Resilient SDN with Location Trustiness. In Proceedings of the 4th International Conference on Computer Applications and Information Processing Technology (CAIPT 2017), August 8-10, 2017, Bali, Indonesia
- [44] Seung-Joon Seok, Afaq Muhammad, **Kyungbaek Kim**, Deokjai Choi, Youn-Hee Han, Woojin Seok, Wang-Cheol Song, multiFIA Multi-dimensional future Internet architecture. In Proceedings of 2017 Ninth International Conference on Ubiquitous and Future Networks (ICUFN), July 4-7, 2017, Milan, Italy
- [43] Yungee Lee, Wangkwang Lee, Giwon Shin, **Kyungbaek Kim**, Accessing the Impact of DoS Attacks on IoT Gateway. In Proceedings of the 11th KIPS International Conference on Ubiquitous Information Technologies and Applications (CUTE 2016), December 19-21, 2016, Bangkok, Thailand
- [42] Gde Dharma N., Quyet Nguyen-Van, Tiep Vu Duc, Ngoc Nguyen-Sinh, Alvin Prayuda J.D., **Kyungbaek Kim**, Deokjai Choi, Design of Service Abstraction Model for Enhancing Network Provision in Future Network. In Proceedings of the 18th Asia-Pacific Network Operations and Management Symposium (APNOMS) 2016, October 5-7, 2016, Kanazawa, Japan
- [41] Kyle E. Benson, Qing Han, **Kyungbaek Kim**, Phu Nguyen, and Nalini Venkatasubramanian, Resilient Overlays for IoT-based Community Infrastructure Communications. In Proceedings of the First international Conference on Internet-of-Things

Design and Implementation (IoTDI), April 4-8, 2016, Berlin, Germany

[40] Quyet Nguyen-van and **Kyungbaek Kim**. Study on Location Trustiness based on Multimodal Information. In Proceedings of the 4th International Conference on Smart Media and Applications (SMA), January 11-12, Danang, Vietnam.

[39] Tiep Vu Duc and **Kyungbaek Kim**. Analysis of the Impact of Weight Parameter of Traffic Load Aware Replacement Algorithm of SDN Flow Table Cache. In Proceedings of the 4th International Conference on Smart Media and Applications (SMA), January 11-12, Danang, Vietnam.

[38] Sungmin Hwang, Hiep Tuan Nguyen Tri and **Kyungbaek Kim**. Towards a Reliable and Personalized Disaster Warning System. In Proceedings of the Ninth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM 2015), July 19-24, Nice, France.

[37] Hiep Tuan Nguyen Tri and **Kyungbaek Kim**. Assessing the Impact of Resource Attack in Software Defined Network. In Proceedings of the 29th International Conference on Information Networking (ICOIN 2015), January 12-14, Siem Reap, Cambodia.

[36] Rajashree Sokasane and **Kyungbaek Kim**. OSM-SVG Converting for Open Road Simulator. In Proceedings of the 3rd International Conference on Smart Media and Applications (SMA 2014), December 10-13, Chiang Mai, Thailand.

[35] Sungmin Hwang and **Kyungbaek Kim**. Middlebox Driven Security Threats in Software Defined Network. In Proceedings of 2014 International Symposium on Information Technology Convergence (ISITC 2014)., October 30-31, Jeounju, South Korea.

[34] Wang-Cheol Song, Seung-Joon Seok, Deokjai Choi, **Kyungbaek Kim**, Buseung Cho, and Seunghae Kim. Policy-based Slice Embedding in a virtualized testbed on KREONET. In Proceedings of International Conference on Advances in Computer and Electronics Technology 2014 (ACET 2014), August 26-27, Hong Kong.

[33] Hiep Tuan Nguyen Tri, Rajashree S. Sokasane and **Kyungbaek Kim**. Scalable and Self-configurable Eduroam by using Distributed Hash Table. In Proceedings of the Fourth International Conference on Advanced Communications and Computation (INFOCOMP 2014).,

July 20-24, Paris, France.

[32] Sungmin Hwang, and **Kyungbaek Kim**. Message Spreading Model over Online Social Network with Multiple Channels and Multiple Groups. In Proceedings of the Ninth International Conference on Internet and Web Applications and Services (ICIW 2014)., July 20-24, Paris, France.

[31] Hiep Tuan Nguyen Tri, and **Kyungbaek Kim**. Supporting WiFi QoS with Priority-aware WiFi Handoff. In Proceedings of International Workshops on Mobile and Wireless 2014, April 15-18, Jeju, Republic of Korea.

[30] Rajashree Sokasane and **Kyungbaek Kim**. Flat Layer Radius Model: Reducing Authentication Delay in eduroam. In Proceedings of the 2nd International Conference on Smart Media and Applications (SMA 2013), October 14-17, Kota Kinabalu, Malaysia.

[29] **Kyungbaek Kim**. Using multiple verifiers to detect Sybils in a social network graph. In Proceedings of the 8th International Conference on Future Information Technology (FutureTech 2013), September 4-6, 2013, Gwangju, South Korea.

[28] Ye Zhao, **Kyungbaek Kim** and Nalini Venkatasubramanian. DYNATOPS: A Dynamic Topic-based Publish/Subscribe Architecture. In Proceedings of the 7th ACM international conference on Distributed event-based systems (DEBS 2013), June 29 - July 3, 2013, Arlington, Texas, USA

[27] **Kyungbaek Kim**. Assessing the impact of properties of a node to OSN based Sybil detection. In Proceedings of the International Conference on Computer Applications and Information Processing Technology (CAIPT 2013), June 27-29, 2013, Prague, Czech Republic

[26] **Kyungbaek Kim**, Ye Zhao and Nalini Venkatasubramanian. GSFord: Towards a Reliable Geo-Social Notification System. In Proceedings of the 31st IEEE International Symposium on Reliable Distributed Systems (SRDS 2012), October 8-11, 2012, Irvine, California, USA

[25] **Kyungbaek Kim**. Sybil-Resistant Trust Value of Social Network Graph. In Proceedings of the First International Conference on Smart Media and Applications (SMA 2012), August 21-24, 2012, Kunming, Yunnan, China

[24] Michael Sirivianos, **Kyungbaek Kim**, Jian Wei Gan and Xiaowei Yang. Assessing the Veracity of Identity Assertions via OSNs. In Proceedings of the Fourth International Conference on COMMunication Systems and NETworkS (COMSNETS 2012), January 3-7, 2012, Bangalore, India (46/168 = 27.38%)

[23] Jinsu Wang, **Kyungbaek Kim**, Sharad Mehrotra and Nalini Venkatasubramanian. Enhancing Cellular Infrastructures: A Reflective Approach. In Proceedings of the 10th ACM Middleware Workshop on Adaptive and Reflective Middleware (ARM 2011), December 12, 2011, Lisbon, Portugal, (6/12 = 50%)

[22] Michael Sirivianos, **Kyungbaek Kim** and Xiaowei yang. SocialFilter: Introducing Social Trust to Collaborative Spam Mitigation. In Proceedings of the 30th IEEE International Conference on Computer Communications (IEEE INFOCOM 2011), April 10-15, 2011, Shanghai, China, (291/1823 = 15.96%)

[21] **Kyungbaek Kim**, Sharad Mehrotra and Nalini Venkatasubramanian. FaReCast: Fast, Reliable Application Layer Multicast for Flash Dissemination, In Proceedings of ACM/IFIP/USENIX 11th International Middleware Conference (Middleware 2010), November 29 – December 3, 2010, Bangalore, India, (19/116 = 16.38%)

[20] **Kyungbaek Kim** and Nalini Venkatasubramanian, Assessing the impact of geographically correlated failures on overlay-based data dissemination, In Proceedings of IEEE Globecom 2010, December 6-10, 2010, Miami, Florida, USA, (1313/3688 = 35.60%)

[19] Michael Sirivianos, **Kyungbaek Kim** and Xiaowei Yang. SocialFilter: Introducing Social Trust to Collaborative Spam Mitigation, In Proceedings of USENIX 2010 workshop on Collaborative Methods for Security and Privacy (CollSec 2010), August 10, 2010, Washington DC, USA

[18] Do Minh Ngoc, **Kyngbaek Kim**, Sharad Mehrotra and Nalini Venkatasubramanian, Enabling Fast Reliable Notification over Multi-Networks, In Proceedings of 2nd Workshop on Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Adhoc Networks In conjunction with MDM 2010, May 23, 2010, Kansas City, USA

[17] Hojjat Jafarpour, Jay Lickfett, **Kyungbaek Kim**, Bo Xing, Sharad Mehrotra and Nalini Venkatasubramanian, A Policy Driven Meta-Alert System for Crisis Communications, In

Proceedings of Workshop on Emergency Management: Incident, Resource, and Supply Chain Management (EMWS09), November 5-6, 2009, Irvine, USA

[16] Michael Sirivianos, **Kyungbaek Kim** and Xiaowei Yang. FaceTrust: Assessing the Credibility of Online Personas via Social Networks, In Proceedings of 4th USENIX Workshop on Hot Topics in Security (HotSec 2009), August 11, 2009

[15] Michael Sirivianos, Xiaowei Yang and **Kyungbaek Kim**, FaceTrust: Collaborative Unwanted Traffic Mitigation Using Social Networks, In SIGCOMM 2008, August 17-22, 2008.

[14] **Kyungbaek Kim**, Time-related replication for p2p storage system, In Proceedings of The Seventh International Conference on Networking (ICN2008), April 13-18, 2008

[13] Hyunbin Lee, YongJoo Song, **Kyungbaek Kim**, Donggook Kim and Daeyeon Park. CriStore : Dynamic Storage System for Heterogeneous Devices in Offsite Ubiquitous Communities. In Proceedings of The 22nd Annual ACM Symposium on Applied Computing (SAC 2007), March 11 - 15, 2007.

[12] **Kyungbaek Kim** and Daeyeon Park. Reducing Data Replication Overhead in DHT Based Peer-to-Peer System. In Proceedings of International Conference on High Performance Computing and Communications 2006 (HPCC 2006), pp.915-924 , September 13-15, 2006 (LNCS).

[11] **Kyungbaek Kim** and Daeyeon Park. Heterogeneity aware P2P algorithm by using mobile nodeID. In Proceedings of International Conference on Information Networking 2006 (ICOIN 2006), pp. 975-984, January 16-19, 2006 (LNCS).

[10] **Kyungbaek Kim** and Daeyeon Park. Mobile NodeID based P2P Algorithm for the Heterogeneous Network. In Proceedings of International Conference on Embedded Software and Systems 2005 (ICESS 2005), pp. 485-495, December 16-18, 2005.

[9] **Kyungbaek Kim** and Daeyeon Park. Efficient Resource Management for the P2P web Caching. In Proceedings of Service Assurance with Partial and Intermittent Resources Conference (AICT/SAPIR/ELETE 2005), pp. 382-387, July 17 - 20, 2005.

[8] **Kyungbaek Kim** and Daeyeon Park. Efficient Caching Policies for the P2P Web Caching.

In Proceeding of International Conference of Computational Science and its Applications 2005 (ICCSA 2005), May 9-12, 2005.

[7] Byoung-Jip Kim, **Kyungbaek Kim** and Daeyeon Park. The Content-Aware Caching For Cooperative Transcoding Proxies. In Proceedings of International Conference on Information Networking 2005 (ICOIN 2005), pages 766-775, January 31 - February 2, 2005 (LNCS).

[6] **Kyungbaek Kim** and Daeyeon Park. Caching large files by using p2p based client-cluster for web proxy cache. In Proceedings of IASTED International Conference on Parallel and Distributed Computing and Networks 2004 (PDCN 2004), page 643-648, February 17-19, 2004.

[5] Woo Jin Kim, **Kyungbaek Kim**, Jaesun Han, Keuntae Park and Daeyeon Park. Thread-Aware Garbage Collection for Server Applications. In Proceedings of 2004 International Symposium of Applications and the Internet (SAINT 2004), pages 81-87, January 26-30, 2004.

[4] **Kyungbaek Kim**, Woo Jin Kim and Daeyeon Park. Efficient and Scalable Client-Clustering for Proxy Cache. In Proceedings of 6th IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC 2003), pages 83-92, July 23-25, 2003 (LNCS).

[3] **Kyungbaek Kim** and Daeyeon Park. Subway : Peer-To-Peer Clustering of Clients for Web Proxy. In Proceedings of The 2003 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA 2003), pages 1683-1688, June 23-26, 2003.

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Domestic (Korean) Journals

[19] 김연수, 고영훈, 엄익채, 김경백(Kyungbaek Kim), 페이로드 임베딩 사전학습 기

반의 웹 공격 분류 모델 (Web Attack Classification Model Based on Payload Embedding Pre-Training). 한국정보보호학회논문지 (Journal of The Korea Institute of Information Security and Cryptology), 30권 4호, pp. 669-667, August, 2020.

[18] 박지연, 김현지, 김경백(Kyungbaek Kim), CNN 기반 토마토 질병 분류를 위한 DCGAN 이미지 데이터 확장 영향 평가 (Assessing Impact of DCGAN Image Data Augmentation for CNN based Tomato Disease Classification). 디지털콘텐츠학회논문지 (Journal of Digital Contents Society), 21권 5호, pp. 959-967, May, 2020.

[17] 염성웅, 뉘엔 반 퀴엣, 김경백(Kyungbaek Kim), 컨볼루션 신경망 기반 유해 네트워크 트래픽 탐지 기법 평가 (Assessing Convolutional Neural Network based Malicious Network Traffic Detection Methods). KNOM REVIEW, 22권 1호, pp. 20-29, August, 2019.

[16] Giang-Truong Nguyen, Van-Quyet Nguyen, Sing-Ngoc Nguyen, 김경백(Kyungbaek Kim), 빅데이터 플랫폼을 위한 SON알고리즘 기반의 효과적인 연관 룰 마이닝 (Efficient Association Rule Mining based SON Algorithm for a Bigdata Platform). 디지털콘텐츠학회논문지 (Journal of Digital Contents Society), 18권 8호, pp. 1593-1601, December, 2017.

[15] Van Quan Nguyen, Hyung-jeong Yang, Young-chul Kim, Soo-hyung Kim, 김경백(Kyungbaek Kim), Social Media based Real-time Event Detection by using Deep Learning Methods. 한국스마트미디어학회(KISM) 스마트미디어저널(Smart Media Journal), 6권 3호, pp. 41-48, September, 2017.

[14] 최진태, 뉘엔 신 응역, 김경백(Kyungbaek Kim), SDN기반 IoT 게이트웨이에서 DoS 공격 영향 평가 (Assessing the impact of DoS Attack on SDN based IoT Gateway). KNOM REVIEW, 20권 1호, pp. 24-33, August, 2017.

[13] Van-Quyet Nguyen, Giang-Truong Nguyen, Sinh Ngoc Nguyen, 김경백(Kyungbaek Kim), 재난 관련 위치 신뢰도 향상을 위한 소셜 미디어 활용 (Leveraging Social Media for Enriching Disaster related Location Trustiness). 디지털콘텐츠학회논문지 (Journal of Digital Contents Society), 18권 3호, pp. 567-575, June, 2017.

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1호, pp. 149-158, February 28, 2017.

[11] Sinh Ngoc Nguyen, Van-Quyet Nguyen, **김경백(Kyungbaek Kim)**, 레거시 미들박스에 의한 소프트웨어 정의 네트워크 보안 위협 분석 (Analysis of Legacy Middlebox Driven Security Threats of Software Defined Network). KNOM Review, 19권 2호, pp. 13-25, December 31, 2016.

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Tiep Vu Duc, Quyet Nguyen-Van, **김경백(Kyungbaek Kim)**, 지오소셜 정보 기반 개인맞춤형 경고 알림 시스템의 설계와 구현 (Design and Implementation of Geo-Social information based Personalized Warning Notification system). 한국스마트미디어학회(KISM) 스마트미디어저널(Smart Media Journal), 5권 2호, pp. 42-50, June 30, 2016.

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[2] 이명국, **김경백 (Kyungbaek Kim)**, 효과적인 모빌리티 인지 퍼브-서브 시스템을 위한 Q+R 트리 기반의 브로커 네트워크, (Q+R tree based broker network for efficient mobility aware pub-sub system). In Proceedings of 2012년도 정보처리학회(KIPS) 추계학술대회, November 22-23, 2012, 제주대학교, 제주

[1] **김경백 (Kyungbaek Kim)**, 예측하기 힘든 광범위 지역 장애에 대응하기 위한 안정적인 오버레이 메시지 전송 (Reliable Overlay Message Dissemination under Unexpected Large Scale Geo-Correlated Failure). In Proceedings of 2012년도 한국스마트미디어 춘계학술발표대회, April 20, 2012, 제주.

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[2] **Kyungbaek Kim** and Daeyeon Park, Efficient and Scalable Client-Clustering for Proxy Cache, In Chapter of Encyclopedia of Internet Technologies and Applications, pages 172-178, 2007

[1] **Kyungbaek Kim**, Byungjip kim and Daeyeon Park, Content-Aware Caching for Cooperative Transcoding Proxies, In Chapter of Encyclopedia of Internet Technologies and Applications, pages 112-118, 2007

Technical Papers and White Papers

[3] Michael Sirivianos, Xiaowei Yang, and **Kyungbaek Kim**, SocialFilter: Collaborative Spam Mitigation using Social Networks, CoRR(Computing Research Repository) arXiv, August 2009.

[2] Michael Sirivianos, Xiaowei Yang, and **Kyungbaek Kim**, FaceTrust: Assessing the Credibility of Online Personas via Social Networks, Duke Technical Report, 2009.

[1] Michael Sirivianos, Xiaowei Yang, and **Kyungbaek Kim**, FaceTrust: Collaborative Threat Mitigation Using Social Networks, Duke Technical Report, 2008.

Talks

[9] Empowerment of Teachers in AI era (AI시대의 교사 역량 강화), Invited talk at Chonnam National University, Gwangju, Korea, November 14, 2019

[8] Improving Situation Awareness in Smart Infrastructure, Invited talk at INRIA, Paris, France, July 31, 2019.

[7] Today and Future of Artificial Intelligence of our lives (생활속의 인공지능 현재 그리고 미래), Invited talk at Chosun University, Gwangju, Korea, November 2017.

[6] SDN NFV and 5G, Invited talk for Strategy of ICT Industry Seminar, Gwangju, Korea, April 5, 2017

[5] Database and BigData, Invited talk at Chonnam National University Hospital, Korea, September 1, 2015

[4] Leveraging Online Social Network as Trust Inferences, Invited talk at KAIST, Korea, March 11, 2014

[3] Social Network Assisted Distributed Systems, Tutorial talk at 2012 KIPS fall conference, Jeju University, Korea, November 22, 2012

[2] Introduction to P2P Systems, Invited talk at Chonnam National University, Korea, April 16, 2010

[1] Social Network and Beyond, Invited talk at Chonnam National University, Korea, September 8, 2009.

Teaching Activities

GR17309, Distributed System, Chonnam National University, Fall' 12, Fall' 13, Fall' 14, Fall'

15, Fall' 17, Spring' 19

GR16446, Topics in Distributed Systems, Chonnam National University, Fall' 14, Fall' 16, Fall' 19

GR18068, Security in Distributed Systems, Chonnam National University, Fall' 17, Spring' 19

GR21002, Next Generation Network Security, Chonnam National University, Fall' 16

GR17446, Security in Information and Communication, Chonnam National University, Fall' 19

GR20039, Web Mining, Chonnam National University, Spring' 13, Spring' 14, Spring' 16

GR18007, Distributed Application System, Chonnam National University, Spring' 15, Spring' 17

ECE3044, Embedded Software, Chonnam National University, Fall' 13, Fall' 14, Fall' 15, Fall' 16, Fall' 17, Fall' 19

CIS2001, Operating System, Chonnam National University, Spring' 13, Spring' 14, Spring' 16

CIS2013, Object Oriented Project, Chonnam National University, Fall' 12, Fall' 13, Fall' 14, Fall' 15, Fall' 16, Fall' 17, Fall' 19

CIS2010, Linux System, Chonnam National University, Spring' 12, Spring' 13, Spring' 14, Spring' 15, Spring' 16, Spring' 17, Spring' 19

ECE2010, Logic Circuit, Chonnam National University, Spring' 12, Spring' 15, Spring' 17, Spring' 19

ECE4058, RTOS, Chonnam National University, Spring' 13

ECE3043, System Programming, Chonnam National University, Fall' 12

ECE3057, File Structures, Chonnam National University, Spring' 12

CLT0670, Life Applied Computer, Chonnam National University, Spring' 16, Fall' 16, Spring' 17

CompSci234, Advanced Topics in Networking, UCI, Spring' 11
– Teaching Assistant, Project Manager, Lecturer (cover 1/2 contents)

CompSci295, Middleware Pervasive & Ubiquitous Computing, UCI, Winter' 11
– Teaching Assistant

CompSci230, Distributed Systems, UCI, Winter' 11
– Teaching Assistant, Project Manager

CompSci295, Middleware Pervasive & Ubiquitous Computing, UCI, Winter' 10
– Teaching Assistant, Project Manager, Lecturer (cover 1/5 contents)

CompSci230, Distributed Systems General Information, UCI, Winter' 10
– Teaching Assistant, Project Manager, Lecturer (cover 1/4 contents)

CompSci295, Next generation information dissemination system, UCI, Winter' 09
– Teaching Assistant, Project Manager

ComSci237, Middleware Network and Distributed System, UCI, Fall' 08
– Teaching Assistant, Project Manager

ComSci235, Internet Technology, UCI, Fall' 07
– Teaching Assistant

EE205, Data Structures and Algorithms for Electrical Engineering, KAIST, Fall'06
– Teaching Assistant, Lectures

EE311, Operating Systems and System Programming for Electrical Engineering, KAIST, Spring'06
– Teaching Assistant

EE205, Data Structures and Algorithms for Electrical Engineering, KAIST, Fall'05
– Teaching Assistant

EE311, Operating Systems and System Programming for Electrical Engineering, KAIST, Spring'05
– Teaching Assistant

Academic Projects

- Research of SDN based Disaster Responsive Highly Reliable Network, March 2017 ~ , NRF (National Research Foundation of Korea), MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Development of digital twin platform for precision oncology, July 2019 ~ ,NRF (National Research Foundation of Korea), MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Core Talent Training of Convergence Security for Regional Strategic Industries (지역전략 산업 융합보안 핵심인재 양성 사업), April 2019 ~ , KISA (Korea Internet & Security Agency), IITP (Institute for Information & Communications Technology Promotion), MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Research on ICT Convergence System for Urban Disaster, ITRC(Information Technology Research Center), June 2016 ~ , IITP (Institute for Information & Communications Technology Promotion), MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Research on Path Explosion of Concolic Testing, April 2019 ~ October 2019, NSRI (National Security Research Institute), Republic of Korea
- Open Platform DevOps on KOREN SDI, April 2018 ~ December 2018, NIA (National

Information Society Agency), Republic of Korea

- Personalized warning notification system based on geosocial big data, May 2014 ~ April 2017, NRF (National Research Foundation of Korea), MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Research on Big Data Collecting/Storing/Processing Platform and Field Demonstration Test Process, January 2016 ~ December 2017, RDA (Rural Development Administration), Republic of Korea
- KOREN Open Platform for the Industry Internet Spread, April 2017 ~ December 2017, NIA (National Information Society Agency), Republic of Korea
- Study on the multi-dimensional Future Network System Architecture for diversity of Services, Terminals and Networks, April 2016 ~ December 2016, IITP (Institute for Information & Communications Technology Promotion), MSIP (Ministry of Science, ICT & Future Planning), Republic of Korea
- Substantiation of Detection and Prevention of Network Attacks under SDN/NFV Environment, July 2015 ~ December 2015, NIA (National Information Society Agency), Republic of Korea
- Global SDN Testbed and Its Test for Corresponding to Disasters using APII/TEIN, July 2015 ~ December 2015, NIA (National Information Society Agency), Republic of Korea
- Research on Evaluation Methods for NFV/Cloud based Security Product, April 2015 ~ November 2015, NSRI (National Security Research Institute), Republic of Korea
- Global Trade Platform: Manufactures x Buyer, July 2014 ~ January 2015, LINC (Leaders in Industry-university Cooperation), NRF (National Research Foundation of Korea), Republic of Korea
- Intelligent User Interface Platform for Next Generation Mobile Devices, as part of ITRC (Information Technology Research Center) support program, January 2013 ~ December 2014, MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Analysis of security holes of SDN and study on effective counter plans, March 2014 ~ October 2014, NSRI (National Security Research Institute), Republic of Korea
- Study on user management and service deployment for virtualization service of Advanced research networks, March 2014 ~ October 2014, KISTI (Korea Institute of Science and Technology Information), Republic of Korea
- WiFi Handover Technique Development, July 2013 ~ February 2014, MSIP (Ministry of Science, ICT&Future Planning), Republic of Korea
- Research of correlation between network layers in multi-layer overlay networks, June 2012 ~ May 2014, Chonnam National University, Republic of Korea
- GeoAlerting: An Exploratory Case Study in Socio-Technical Alerting, 2010 ~ 2012,

Granted by NSF #1057928, USA.

- Collaborative Research: Pervasive Computing for Disaster Response, 2011 ~ 2012 Granted by NSF #1143705, USA
- Customized Content Dissemination in Large, 2008 ~ 2010, Granted by multiple sources including NSF, USA.
- FaceTrust, December 2007 – December 2010, Granted by NSF #0845858, and Initiates a new NSF project (#1017858 NeTS: Small: Exploiting Social Networks to Build Trustworthy Distributed Systems), USA.
- Wearable Ubiquitous Computing, March 2005 ~ December 2005, KAIST, Republic of Korea
- Data Synchronization and Transformation for Wireless Mobile Terminals, March 2004 ~ December 2004, ETRI, Republic of Korea.
- Development of the web-based distributed system for the network management, April 2001 ~ March 2002, TMaxSoft, Republic of Korea.
- Development of the network management system, October 2000 ~ September 2001, TMaxSoft, Republic of Korea.
- Development of real-time OS disk file system, March 2000 ~ December 2000, ETRI, Republic of Korea.
- Non DEC based Distributed PC Monitor with TxRPC, July 1999 ~ June 2000, KDC Soft, Republic of Korea.
- Development of Enterprise Web Application Server, February 1999 ~ November 1999, ETRI, Republic of Korea.

Professional Activities

Member of ACM, IEEE, USENIX, IEICE, KIISE, KIPS, KSII, KICS, KIISC and KISM

Editor of Journals

Transaction on Internet and Information Systems, Journal of Information Processing Systems

Reviewer of Journals

Journal of Communications and Networks, Journal of Computer Communications, IEEE Transactions on Mobile Computing, IEEE Communication Magazine, Multimedia Tools and Application

Review of Conferences and Workshops

MoViD 2009 with INFOCOM, ICN 2009 2010, P2P 2009, ACM Multimedia 2009, SSS 2009, ICDCS 2010, IPTPS 2010, ICDCS 2011, Percom 2011, Middleware 2011, Infocom

2012, ACMMM 2012, ICUIMC 2014, FutureTech 2014, SRDS 2015, FutureTech 2019

Committee for Conferences

ICN 2009 (TPC), ICN 2010 (TPC), ACMMM 2012 (TPC), SMA 2012 (OC), FutureTech 2014 (TPC), SRDS 2015 (TPC)

Other activities

농림축산식품 핵심전략기술 수준평가 위원, 2014

한국전력공사 정보보안 자문위원, 2015 ~

한국정보처리학회 대학협력위원, 2016

Honors and Awards

- Best Teaching Award, Chonnam National University : 2015, 2016
- Best Oral Presentation on ICMLSC 2018
- Best Paper Award on 2012 KIPS fall conference, 2014 KISM fall conference, 2016 SMA, 2016 KIPS fall conference, 2017 KIPS spring conference, 2019 KIISC spring conference, 2019 KISM spring conference
- Bronze Prize in the Human-tech Paper Competition of Samsung, 2004.
- Lab master at System Software Lab, 2003.
- Full Scholarship from Hanaro Telecom, March 1999 - Feb 2006.
- Full Scholarship from Korea Advanced Institute of Science and Technology, March 1994 - December 1998.

Personal

Nationality : Republic of Korea.

Family : Wife and two daughters(2002, 2006).

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Facebook : Kyungbaek kim