Min Kyung An
Assistant Professor
Department of Computer Science
College of Science & Engineering Technology

Degrees Earned

Ph.D. in Computer Science, University of Texas at Dallas, 2013

M.S. in Computer Science, University of Texas at Arlington, 2007

B.S. in Computer Science and Statistics, Jeju National University, Jeju, South Korea, 2004

Peer-Review Publications and Artistic Performances/Exhibitions

Articles

Tien Tran, Min Kyung An, and Dung T. Huynh, "Antenna Orientation and Range Assignment Algorithms in Directional WSNs" *IEEE/ACM Transactions on Networking (ToN)*, Vol. 25(6): 3368-3381, Sep 2017.

Tien Tran, Min Kyung An, and Dung T. Huynh, "Establishing Symmetric Connectivity in Directional Wireless Sensor Networks Equipped with 2π/3 Antennas" *Journal of Combinatorial Optimization (JOCO)*, 34(4): 1029-1051, Nov 2017.

Min Kyung An, and Hyuk Cho, "Efficient Data Collection in Interference-Aware Wireless Sensor Networks." *Journal of Networks*, Vol. 10(12): 658-667, Dec 2015.

Nhat X. Lam, Tien Tran, Min Kyung An, and Dung T. Huynh, "A Note on the Complexity of Minimum Latency Data Aggregation Scheduling with Uniform Power in Physical Interference Model." *Theoretical Computer Science (TCS)*, 569:70-73, March 2015.

Hyuk Cho, and Min Kyung An, "Co-clustering-based Clustering and Segmentation for Pattern Discovery from Time Course Data." *International Journal of Information and Electronics Engineering (IJIEE)*, Vol.4(5): 358-364, 2014.
(Presented in International Conference on Signal and Information Processing (ICSIP), **Outstanding Paper Presentation Award**)

Hyuk Cho, and Min Kyung An, "Co-clustering Algorithm: Batch, Mini-batch, and Online." *International Journal of Information and Electronics Engineering (IJIEE)*, Vol.4(5): 340-346, 2014 (Presented in International Conference on Signal and Information Processing (ICSIP), **Outstanding Paper Presentation Award**)

Nhat X. Lam, Min Kyung An, Dung T. Huynh, and Trac N. Nguyen, "Broadcast Scheduling Problem in SINR Model," *International Journal of Foundations of Computer Science (IJFCS)*, 25(03): 331-342, Apr. 2014.

Wei Wang, Donghyun Kim, Min Kyung An, Wei Gao, Xianyue Li, Zhao Zhang, and Weili Wu, "On Construction of Quality Fault-Tolerant Virtual Backbone in Wireless Networks," *IEEE/ACM Transactions on Networking (ToN)*, 21(5): 1499 – 1510, Oct. 2013.

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Bounded-Degree Minimum-Radius Spanning Trees in Wireless Sensor Networks," *Theoretical Computer Science (TCS)*, 498: 46 – 57, August 2013.

Nhat X. Lam, Trac N. Nguyen, Min Kyung An, and Dung T. Huynh, "Dual Power Assignment Optimization and Fault Tolerance in WSNs," *Journal of Combinatorial Optimization (JOCO)*, Published online, June 2013.

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Latency Data Aggregation in the Physical Interference Model," *Computer Communications (COMCOM)*, 35(18):2175 – 2186, Nov. 2012.

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Data Aggregation Schedule in Wireless Sensor Networks," *International Journal of Computers and Their Applications (IJCA)*, 18(4):254 – 262, Dec. 2011.

Proceedings
Min Kyung An, Hyuk Cho, and Lei Chen, "Hierarchical Agglomerative Aggregation Scheduling in Directional Wireless Sensor Networks." In *Proceedings of the IEEE International Conference on Computing, Networking and Communications (ICNC)*, March 5-8, 2018, Maui, Hawaii, USA.

Min Kyung An, "Aggregation Scheduling Algorithms in Wireless Sensor Networks." In *Proceedings of the 19th International Conference on Computer, Communication and Information Sciences, and Engineering (ICCCISE)*, May 11-12, 2017, Montreal, Canada.

Tien Tran, Min Kyung An, and Dung T. Huynh, "Symmetric Connectivity in WSNs Equipped with Multiple Directional Antennas." In *Proceedings of the IEEE International Conference on Computing, Networking and Communication (ICNC)*, Jan 26-29, 2017, Silicon Valley, USA.

Min Kyung An, "Data Collection with Bounded-Sized Messages in Wireless Sensor Networks." In *Proceedings of the International Conference on Computing, Control and Networking (ICCCN)*, 2016, San Francisco, CA, USA.

Min Kyung An, and Hyuk Cho, "Efficient Broadcasting in Wireless Sensor Networks." In *Proceedings of the International Conference on Sensor Networks (ICSN)*, 2016, New York, NY, USA.

Tien Tran, Min Kyung An, and Dung T. Huynh, "Antenna Orientation and Range Assignment in WSNs with Directional Antennas." In *Proceedings of the IEEE International Conference Computer Communications (INFOCOM)*, 2016, San Francisco, CA, USA.

Tien Tran, Min Kyung An, and Dung T. Huynh, "Symmetric Connectivity in Wireless Sensor Networks with Directional Antennas." In *Proceedings of the IEEE International Conference on Communications (IEEE ICC)*, 2015, London, UK.

Min Kyung An, and Hyuk Cho, "Minimum Latency Data Collection in Interference-Aware Wireless Sensor Networks." In *Proceedings of International Conference on Computer, Information, and Telecommunication Systems (IEEE CITS)*, 2014, Jeju, South Korea.
(Best Paper Award)

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Latency Aggregation Scheduling in Interference-Aware 3-Dimensional WSNs." In *Proceedings of International Conference on Wireless Networks (ICWN)*, 2013, Las Vegas, Nevada, USA.

Nhat X. Lam, Min Kyung An, Dung T. Huynh, and Trac N. Nguyen, "Scheduling Problems in Interference-Aware Wireless Sensor Networks." In *Proceedings of the International Conference on Computing, Networking and Communications (IEEE ICNC)*, 2013, San Diego, California, USA.

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Connectivity in Wireless Sensor Networks in the SINR Model." In *Proceedings of the IEEE 20th International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (ACM MASCOTS)*, 2012, Washington D.C., USA.

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Latency Gossiping in Wireless Sensor Networks." In *Proceedings of the 11th International Conference on Wireless Networks (ICWN)*, 2012, Las Vegas, Nevada, USA.

Nhat X. Lam, Min Kyung An, Dung T. Huynh, and Trac N. Nguyen, "Minimum Latency Data Aggregation in the Physical Interference Model." In *Proceedings of the 14th International Symposium on Modeling Analysis and Simulation of Wireless and Mobile Systems (ACM MSWiM)*, 2011, Miami Beach, Florida, USA.

Trac N. Nguyen, Min Kyung An, Nhat X. Lam, and Dung T. Huynh, "The Complexity of Minimizing Receiver-Based and SINR Edge Interference." In *Proceedings of the 20th International Conference on Computer Communications and Networks (IEEE ICCCN)*, 2011, Maui, Hawaii, USA. **(NSF Travel Grant Award)**

Nhat X. Lam, Trac N. Nguyen, Min Kyung An, and Dung T. Huynh, "Dual Power Assignment Optimization for *k*-Edge Connectivity in WSNs." In *Proceedings of the 8th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (IEEE SECON)*, 2011, Salt Lake City, Utah, USA.

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Data Aggregation Schedule in Wireless Sensor Networks." In *Proceedings of the ISCA 23rd International Conference on Computer Applications in Industry and Engineering (CAINE)*, 2010, Las Vegas, Nevada, USA.

Peer-Review Presentations/Posters

Min Kyung An, "Aggregation Scheduling Algorithms in Wireless Sensor Networks." In *Proceedings of the 19th International Conference on Computer, Communication and Information Sciences, and Engineering (ICCCISE)*, May 11-12, 2017, Montreal, Canada.

Tien Tran, Min Kyung An, and Dung T. Huynh, "Symmetric Connectivity in WSNs Equipped with Multiple Directional Antennas." In *Proceedings of the IEEE International Conference on Computing, Networking and Communication (ICNC)*, Jan 26-29, 2017, Silicon Valley, USA.

Min Kyung An, "Data Collection with Bounded-Sized Messages in Wireless Sensor Networks." In *Proceedings of the International Conference on Computing, Control and Networking (ICCCN)*, 2016, San Francisco, CA, USA.

Min Kyung An, and Hyuk Cho, "Efficient Broadcasting in Wireless Sensor Networks." In *Proceedings of the International Conference on Sensor Networks (ICSN)*, 2016, New York, NY, USA.

Tien Tran, Min Kyung An, and Dung T. Huynh, "Symmetric Connectivity in Wireless Sensor Networks with Directional Antennas." *IEEE International Conference on Communications (ICC)*, June 8-12, 2015, London, UK

Min Kyung An, and Hyuk Cho, "Minimum Latency Data Collection in Interference-Aware Wireless Sensor Networks." *IEEE International Conference on Computer, Information, and Telecommunication Systems (CITS)*, 2014, July 7-9, 2014, South Korea

Hyuk Cho, and Min Kyung An, "Co-clustering-based Clustering and Segmentation for Pattern Discovery from Time Course Data." *International Conference on Signal and Information Processing (ICSIP)*, July 3-4, 2014, Jeju, South Korea

Hyuk Cho, and Min Kyung An, "Co-clustering Algorithm: Batch, Mini-batch, and Online." *International Conference on Signal and Information Processing (ICSIP)*, July 3-4, 2014, Jeju, South Korea

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Connectivity in Wireless Sensor Networks in the SINR Model." *IEEE 20th International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS)*, Aug 7-9, 2012, Washington D.C., USA

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Latency Gossiping in Wireless Sensor Networks." *The 11th International Conference on Wireless Networks (ICWN)*, July 16-19, 2012, Las Vegas, Nevada, USA

Nhat X. Lam, Min Kyung An, Dung T. Huynh, and Trac N. Nguyen, "Minimum Latency Data Aggregation in the Physical Interference Model." *The 14th International Symposium on Modeling Analysis and Simulation of Wireless and Mobile Systems (MSWiM)*, Oct 31-Nov 4, 2011, Miami Beach, Florida, USA

Trac N. Nguyen, Min Kyung An, Nhat X. Lam, and Dung T. Huynh, "The Complexity of Minimizing Receiver-Based and SINR Edge Interference." *The 20th International Conference on Computer Communications and Networks (ICCCN)*, Jul 31-Aug 4, 2011, Maui, HI, USA

Min Kyung An, Nhat X. Lam, Dung T. Huynh, and Trac N. Nguyen, "Minimum Data Aggregation Schedule in Wireless Sensor Networks." In *Proceedings of the ISCA 23rd International Conference on Computer Applications in Industry and Engineering (CAINE)*, Nov 8-10, 2010, Las Vegas, Nevada, USA

Work or Professional Experiences

2013 – Present, Assistant Professor of Computer Science Department, Sam Houston State University

2008-2013, Teaching/Research Assistant of Computer Science Department, University of Texas at Dallas

2006-2007, Teaching Assistant of Computer Science Department, University of Texas at Arlington

Honors and Awards

Best Paper Award, International Conference on Computer, Information, and Telecommunication Systems (CITS 2014)

Outstanding Paper Presentation Awards (for two presentations), International Conference on Signal and Information Processing (ICSIP 2014)

NSF Travel Grant Award, 20th Annual IEEE International Conference on Computer Communications and Networks (ICCCN 2011)

The Graduate Studies Abroad Program Award, Korea Science and Engineering Foundation grant funded by the Korea government (MOST) (No.2005-215-C00025), Republic of Korea (Received US$60,000, 2005-2007)

Other Competencies

Guest Editor:

Special Issue on Knowledge Discovery and Intelligent Systems in Digital Forensics and Information Assurance

Workshop Organization: SPFMSNET 2015

Technical Program Committee (TPC) Member:

2018: MELECON, ICCISN, ICC, ICACCI

2017: WSCAR, WCSP, WCI, ICC, Globecom, ISJ, WINCOM

2016: COMNETSAT, Globecom, WCI, GSCIT, ICNI, GOCICT

2015: ICACCI, ICCIA, CICT,

2014: CICT, ISSPIT

2013: ISSPIT

Reviewer Services:

2018: MELECON, ICNC, CCPE

2017: WINCOM, WCSP, TENCON, Systems Journal, LCN

2016: ICC, WCI, SENSORS, JOCS, ICC, GOCICT, COMNET

2015: WCI, SPFMSNET, ICACCI, GOCICT, CICT

2014: WINET, TPDS, JNCA, ISSPIT, ICC, ADHOC

2013: TPDS, ISSPIT, WINET

2012: MIMOCR, ISSPIT

2010: WINET

Conference Session Chair: CITS 2014, ICNC 2018