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Computer Science
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Employment

Deputy Vice Chancellor For Administrative & Financial Affairs

Computer Science
Sultan Qaboos University
Aug 17 1998 → present

Research outputs

HIGH PERFORMANCE NMF BASED INTRUSION DETECTION SYSTEM FOR BIG DATA IOT TRAFFIC

Touzene, A., Farsi, A. A. & Zeidi, N. A., Mar 29 2024, In: International Journal of Computer Networks and Communications. 16, 2, p. 43-58 16 p.

Non-Negative Matrix Factorization based Intrusion Detection System for IoT Traffic

Touzene, A., Al Farsi, A. S. & Alzeidi, N., Dec 2023, *12th International Conference on Soft Computing, Artificial Intelligence and Applications*.

Immersive Virtual and Augmented Reality in Healthcare: Implications of Augmented Reality Applications for Vehicle-to-Everything (V2X)

Al-Harhi, F., Touzene, A., Alzeidi, N. & Al-Salti, F., Oct 16 2023, *CRC Press*. 1st edition ed. Boca Raton: CRC Press, Taylor Francis Group, p. 119-143 25 p.

Implications of augmented reality applications for Vehicle-to-Everything (V2X)

Harhi, F. R. A. A., Touzene, A., Alzeidi, N. & Salti, F. A., Oct 9 2023, *Immersive Virtual and Augmented Reality in Healthcare: An IoT and Blockchain Perspective*. CRC Press, p. 119-143 25 p.

Live Virtual Machine Migration in Fog Computing: State of the Art

Alqam, S., Alzeidi, N., Touzene, A. & Day, K., Jan 1 2023, In: International Arab Journal of Information Technology. 20, 6, p. 977-995 19 p., 6.

PERFORMANCE EVALUATION OF ERGR-EMHC ROUTING PROTOCOL USING LSWTS AND 3DUL LOCALIZATION SCHEMES IN UWSNS

Al-Salti, F., Alzeidi, N., Day, K. & Touzene, A., Jan 2023, In: International Journal of Computer Networks and Communications. 15, 2

A Multiple Data Collection Tree Protocol for UWSNs

Day, K., Al-Salti, F., Alzeidi, N. & Touzene, A., Jan 1 2022, In: Journal of Communications. 17, 2, p. 90-98 9 p., 2.

User Privacy and Data Flow Control for Android Apps: Systematic Literature Review

Alkindi, Z. R., Sarrab, M. & Alzeidi, N., 2021, In: Journal of Cyber Security and Mobility. 10, 1, p. 261-304 44 p.

CUDA implementation of fractal image compression

Al Sideiri, A., Alzeidi, N., Al Hammoshi, M., Chauhan, M. S. & AlFarsi, G., Oct 1 2020, In: Journal of Real-Time Image Processing. 17, 5, p. 1375-1387 13 p.

An Efficient Data Collection Protocol For Underwater Wireless Sensor Networks

Day, K., Al-Salti, F., Touzene, A. & Alzeidi, N., Sept 2020, In: International Journal of Computer Networks and Communications. 12, 5, p. 1-15 15 p.

Hybrid RPL-based sensing and routing protocol for smart city

AlSawafi, Y., Touzene, A., Day, K. & Alzeidi, N., Jul 15 2020, In: International Journal of Pervasive Computing and Communications. 16, 3, p. 279-306 28 p.

Context-Aware RPL-Based Mobile Crowd Sensing and Routing Protocol for Smart City Networks

Sawafi, Y. A., Touzene, A., Day, K. & Alzeidi, N., Jun 2020, *2020 International Wireless Communications and Mobile Computing, IWCMC 2020*. Institute of Electrical and Electronics Engineers Inc., p. 1830-1835 6 p. 9148414. (2020 International Wireless Communications and Mobile Computing, IWCMC 2020).

Localization schemes for underwater wireless sensor networks: Survey

Al-Salti, F., Alzeidi, N. & Day, K., May 1 2020, In: International Journal of Computer Networks and Communications. 12, 3, p. 113-130 18 p.

Mobile Crowd Sensing RPL-based routing protocol for smart city

Al Sawafi, Y., Touzene, A., Day, K. & Alzeidi, N., Mar 1 2020, In: International Journal of Computer Networks and Communications. 12, 2, p. 49-68 20 p.

State-of-the-art of the Physical Layer in Underwater Wireless Sensor Networks

Al-Salti, F. & Alzeidi, N., Dec 2019, In: International Journal of Wireless & Mobile Networks. 11, 6, p. 21-33 13 p.

An efficient and reliable grid-based routing protocol for UWSNs by exploiting minimum hop count

Al-Salti, F., Alzeidi, N., Day, K. & Touzene, A., Oct 24 2019, In: Computer Networks. 162, 106869.

Performance Evaluation of a Tree-Based Routing Protocol over a 3D Grid for UWSNs

Bahanta, F. A., Alzeidi, N., Day, K., Touzene, A. & Al-Maqbali, H., Jul 2019, *ICUFN 2019 - 11th International Conference on Ubiquitous and Future Networks*. IEEE Computer Society, p. 426-431 6 p. 8806130. (International Conference on Ubiquitous and Future Networks, ICUFN; vol. 2019-July).

Multiple Sink Placement Strategy for Underwater Wireless Sensor Networks

Al-Salti, F., Day, K., Alzeidi, N. & Touzene, A., Nov 9 2018, *2018 International Symposium on Networks, Computers and Communications, ISNCC 2018*. Institute of Electrical and Electronics Engineers Inc., 8531063. (2018 International Symposium on Networks, Computers and Communications, ISNCC 2018).

Multipath routing in a 3D torus Network on Chip

Day, K., Alzeidi, N. & Touzene, A., Jun 26 2018, *Proceedings of the 2nd International Conference on Future Networks and Distributed Systems, ICFNDS 2018*. Association for Computing Machinery, 13. (ACM International Conference Proceeding Series).

Toward hybrid RPL based IoT sensing for smart city

Sawafi, Y. A., Touzene, A., Day, K. & Alzeidi, N., Apr 19 2018, *32nd International Conference on Information Networking, ICOIN 2018*. IEEE Computer Society, p. 599-604 6 p. (International Conference on Information Networking; vol. 2018-January).

On Finding Minimum and Maximum Path Length in Grid-Based Wireless Networks

Al-Salti, F., Alzeidi, N., Day, K. & Arafeh, B., Feb 2018, In: International Journal of Wireless & Mobile Networks (IJWMN) Vol. 10, No. 1, February 2018. p. 51-59

PentaNoc: A New Scalable and self-similar NoC Architecture

Boudelloua, A. & Alzeidi, N., 2018, In: Procedia Computer Science. 134, p. 358-364 7 p.

Grid-based Priority routing protocol for UWSNs

Al-Salti, F., Alzeidi, N., Day, K., Arafeh, B. & Touzene, A., Nov 1 2017, In: International Journal of Computer Networks and Communications. 9, 6, p. 1-20 20 p.

TBR: Tree-based routing over a 3D grid for underwater wireless sensor networks

Day, K., Al-Moqbali, H., Alzeidi, N. & Touzene, A., Oct 2017, In: Journal of Communications. 12, 10, p. 579-584 6 p.

GARP: A Highly reliable grid-based adaptive routing protocol for underwater wireless sensor networks

Day, K., Touzene, A., Arafeh, B. & Alzeidi, N., Sept 1 2017, In: International Journal of Computer Networks and Communications. 9, 5, p. 71-82 12 p.

EMGGR: an energy-efficient multipath grid-based geographic routing protocol for underwater wireless sensor networks

Al Salti, F., Alzeidi, N. & Arafeh, B., May 1 2017, In: Wireless Networks. 23, 4, p. 1301-1314 14 p.

Realistic offloading scheme for mobile cloud computing

Jadad, H., Touzene, A., Alzeidi, N., Day, K. & Arafeh, B., 2016, *Mobile Web and Intelligent Information Systems - 13th International Conference, MobiWIS 2016, Proceedings*. Awan, I., van Thanh, D., Kryvinska, N., Strauss, C. & Younas, M. (eds.). Springer Verlag, p. 81-92 12 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9847 LNCS).

A new multipath grid-based geographic routing protocol for underwater wireless sensor networks

Al-Salti, F., Alzeidi, N. & Arafeh, B., Dec 12 2014, *Proceedings - 2014 International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, CyberC 2014*. Institute of Electrical and Electronics Engineers Inc., p. 331-336 6 p. 6984328. (Proceedings - 2014 International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, CyberC 2014).

A grid-based MANET routing protocol with simple cell-head election

Al-Maqbali, H., Day, K., Ould-Khaoua, M., Touzene, A. & Alzeidi, N., 2014, In: International Journal of Wireless and Mobile Computing. 7, 2, p. 159-170 12 p.

Bandwidth borrowing-based QoS approach for adaptive call admission control in multiclass traffic wireless cellular networks

Arafeh, B., Khanjari, S. A., Day, K. & Alzeidi, N., Jul 2013, In: International Journal of Communication Systems. 26, 7, p. 811-831 21 p.

GEGR: A grid-based enabled geographic routing in Wireless Sensor Networks

Arafeh, B., Day, K., Touzene, A. & Alzeidi, N., 2013, p. 367-372. 6 p.

M8NoC: An 8-degree mesh-based NoC architecture

Alzeidi, N., Day, K., Touzene, A. & Arafeh, B., 2012, *ICUFN 2012 - 4th International Conference on Ubiquitous and Future Networks, Final Program*. p. 192-197 6 p. 6261691. (ICUFN 2012 - 4th International Conference on Ubiquitous and Future Networks, Final Program).

An adaptive bandwidth borrowing-based call admission control scheme for multi-class service wireless cellular networks

Al Khanjari, S., Arafeh, B., Day, K. & Alzeidi, N., 2011, *2011 International Conference on Innovations in Information Technology, IIT 2011*. p. 375-380 6 p. 5893853. (2011 International Conference on Innovations in Information Technology, IIT 2011).

A weighted grid-based routing protocol for manets

Al-Maqbali, H., Day, K., Ould-Khaoua, M., Touzene, A. & Alzeidi, N., 2011, *Proceedings of the IASTED International Conference on Parallel and Distributed Computing and Systems, PDCS 2011*. p. 350-355 6 p. (Proceedings of the IASTED International Conference on Parallel and Distributed Computing and Systems).

Position-based broadcast algorithm in mobile ad-hoc networks

Touzene, A., Day, K., Arafeh, B. & Al-Zidi, N., 2011, *Proceedings of the 10th International Symposium on Programming and Systems, ISPS' 2011*. p. 17-23 7 p. 5898882. (Proceedings of the 10th International Symposium on Programming and Systems, ISPS' 2011).

Towards fast and reliable communication in MANETs

Day, K., Arafah, B., Touzene, A. & Alzeidi, N., 2011, *Digital Information and Communication Technology and Its Applications - International Conference, DICTAP 2011, Proceedings. PART 1* ed. p. 593-602 10 p. (Communications in Computer and Information Science; vol. 166 CCIS, no. PART 1).

Performance modelling of torus interconnection networks with deep buffers

Alzeidi, N., Khaoua, M. O. & Khonsari, A., Mar 4 2010, In: *International Journal of Computers and Applications*. 32, 1, p. 1-8 8 p.

An adaptive call admission control scheme with complete bandwidth sharing for multi-class traffic in wireless networks

Al Khanjari, S., Arafah, B., Day, K. & Alzeidi, N., 2010, *SoftCOM 2010 - International Conference on Software, Telecommunications and Computer Networks*. p. 265-269 5 p. 5623701. (SoftCOM 2010 - International Conference on Software, Telecommunications and Computer Networks).

Analysis of buffer arrangements in low and high dimensional networks

Alzeidi, N., 2010, In: *Journal of Engineering Research*. 7, 2, p. 80-90 11 p.

A parameterized NoC simulator using OMNet++

Al-Badi, R., Al-Riyami, M. & Alzeidi, N., 2009, *2009 International Conference on Ultra Modern Telecommunications and Workshops*. 5345363. (2009 International Conference on Ultra Modern Telecommunications and Workshops).

Message from the workshop chairs of MAHSI 2009

Alzeidi, N., Mohamed, O. K. & Min, G., 2009, In: *International Conference on Scalable Computing and Communications - The 8th International Conference on Embedded Computing, ScalCom-EmbeddedCom 2009*. p. 22 1 p., 5341813.

A new general method to compute virtual channels occupancy probabilities in wormhole networks

Alzeidi, N., Ould-Khaoua, M. & Khonsari, A., Sept 2008, In: *Journal of Computer and System Sciences*. 74, 6, p. 1033-1042 10 p.

A new modelling approach of wormhole-switched networks with finite buffers

Alzeidi, N., Ould-Khaoua, M. & Khonsari, A., Feb 2008, In: *International Journal of Parallel, Emergent and Distributed Systems*. 23, 1, p. 45-57 13 p.

A new approach to model virtual channels in interconnection networks

Alzeidi, N., Khonsari, A., Ould-Khaoua, M. & Mackenzie, L., Dec 2007, In: *Journal of Computer and System Sciences*. 73, 8, p. 1121-1130 10 p.

Hypercube versus torus under pin-out constraint and finite buffers

Alzeidi, N., Ould-Khaoua, M. & Ferguson, J., 2007, *ICSPC 2007 Proceedings - 2007 IEEE International Conference on Signal Processing and Communications*. p. 544-547 4 p. 4728376. (ICSPC 2007 Proceedings - 2007 IEEE International Conference on Signal Processing and Communications).

Performance analysis of adaptively-routed wormhole-switched networks with finite buffers

Alzeidi, N., Ould-Khaoua, M., Mackenzie, L. M. & Khonsari, A., 2007, *2007 IEEE International Conference on Communications, ICC'07*. p. 38-43 6 p. 4288687. (IEEE International Conference on Communications).

On the probability distribution of busy virtual channels

Alzeidi, N., Khonsari, A., Ould-Khaoua, M. & Mackenzie, L. M., 2006, *20th International Parallel and Distributed Processing Symposium, IPDPS 2006*. IEEE Computer Society, 1639642. (20th International Parallel and Distributed Processing Symposium, IPDPS 2006; vol. 2006).

Performance modeling of fault-tolerant circuit-switched communication networks

Safaei, F., Khonsari, A., Fathy, M., Alzeidi, N. & Ould-Khaoua, M., 2006, *PARELEC 2006 - Proceedings: International Symposium on Parallel Computing in Electrical Engineering*. p. 239-244 6 p. 1698667. (PARELEC 2006 - Proceedings: International Symposium on Parallel Computing in Electrical Engineering).

Software-based fault-tolerant routing algorithm in multi-dimensional networks

Safaei, F., Rezazad, M., Khonsari, A., Fathy, M., Ould-Khaoua, M. & Alzeidi, N., 2006, *20th International Parallel and Distributed Processing Symposium, IPDPS 2006*. IEEE Computer Society, 1639644. (20th International Parallel and Distributed Processing Symposium, IPDPS 2006; vol. 2006).

User-based testing of GUI sequences and their interactions

White, L., Almezen, H. & Alzeidi, N., 2001, In: *Proceedings of the International Symposium on Software Reliability Engineering, ISSRE*. p. 54-63 10 p.

Prizes

The National Research Award for the best-published research led by a young researcher category in the ICT sector at the TRC Annual Research Forum

Al-Salti, F. (Recipient), Alzeidi, N. (Recipient) & Arafeh, B. (Recipient), Dec 9 2018

Press/Media

Projects

Comparative performance evaluation of networks-on-chip architectures

Alzeidi, N. (PI)

1/30/10 → 1/29/11

Grid-Based Communication Schemes for Underwater Wireless Sensor Networks

Alzeidi, N. (PI)

1/1/15 → 12/31/17

Live Virtual Machine Migration to Support Real-Time IoT Applications in Heterogeneous Fog Environment

Alzeidi, N. (PI)

1/1/22 → 12/31/23

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