

# ABDULLAH ALOMARI, PhD

## (Curriculum Vitae)

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ASSISTANT PROFESSOR  
DEPARTMENT OF COMPUTER SCIENCE  
FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY  
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Abdullah Alomari received a bachelor's degree in computers from Umm Al-Qura University, Saudi Arabia, in 2008, and the MSc. and Ph.D. degrees in Engineering Mathematics and Internetworking from Dalhousie University, Halifax, NS, Canada, in 2012 and 2018, respectively. He is currently an Assistant Professor with the Faculty of Computer Science and Information Technology, Albaha University, Saudi Arabia. His research interests include IoT and communication networks, particularly using meta-heuristics optimization techniques in wireless ad hoc and sensor networks. He is a member of the IEEE, IEEE Communication Society, and ACM.

### EXPERIENCE

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PRESENT APR 2020	Vice-Dean of Information Technology <i>Deanship of E-Learning and Information Technology, Albaha University, Saudi Arabia</i>
PRESENT NOV 2019	Supervisor of the Department of the University's Portal <i>Deanship of E-Learning and Information Technology, Albaha University, Saudi Arabia</i>
PRESENT DEC 2018	Assistant Professor <i>Faculty of Computer Science and Information Technology, Albaha University, Saudi Arabia</i>
DEC 2018 NOV 2013	Lecturer <i>Faculty of Computer Science and Information Technology, Albaha University, Saudi Arabia</i>
JAN 2013 SEP 2012	Lecturer <i>Deanship of Introductory Year, Albaha University, Saudi Arabia</i>

### EDUCATION

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MAY 2018 JAN 2013	<b>PhD</b> in ENGINEERING MATHEMATICS AND INTERNETWORKING, <b>Dalhousie University</b> , Halifax, NS, Canada
AUG 2012 SEP 2010	<b>MSc</b> in ENGINEERING MATHEMATICS AND INTERNETWORKING, <b>Dalhousie University</b> , Halifax, NS, Canada
JUL 2008 SEP 2004	<b>Bachelor</b> of COMPUTERS, <b>Umm Al-Qura University</b> , Saudi Arabia

## ADMINISTRATIVE ACTIVITIES

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I am a member of the following committees at Albaha University:

- 2020 **Member**, COVID-19 Crisis Management Team  
2019 - PRESENT **Member**, Executive Committee of E-Transactions

I am a member of the following committees in the Deanship of E-Learning and Information Technology (DeIT) at Albaha University:

- 2019 - PRESENT **Supervisor**, Department of the University's Portal  
2020 - PRESENT **Head**, Department of E-Transactions and Applications

I am a member of the following committees in the Faculty of Computer Science and Information Technology (FCSIT) at Albaha University:

- 2019 - 2020 **Head**, Committee of Final Year Projects  
2018 - 2020 **Head**, Unit of External and Internal Equalization  
2018 - 2019 **Member**, Committee of Final Year Projects  
2018 - 2019 **Member**, Committee of Higher Education and Scientific Research

## RESEARCH INTERESTS

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Path planning for mobility-assisted localization in Wireless Sensors Networks  
Mobility optimization in Wireless Sensors Networks  
Energy efficient data collection protocols in Wireless Sensors Networks  
Machine learning algorithms and applications in communication networks  
Fuzzy logic algorithms and applications in communication networks  
Meta-heuristic algorithms and applications in communication networks

## SCHOLARSHIPS AND AWARDS

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- NOV 2013 PhD Scholarship, Albaha University, Saudi Arabia (4 Years)  
JULY 2013 ENGM Department Fund, Dalhousie University, Canada  
JAN 2013 PhD Scholarship, King Abdullah Scholarship Program, Saudi Arabia  
JULY 2012 Excellency Award, Saudi Cultural Bureau in Canada  
MAR 2009 Masters Scholarship, King Abdullah Scholarship Program, Saudi Arabia (3 Years)

## PUBLICATION LIST

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### Journal Articles

I. Ullah, A. Alomari, N. Ul Amin, M. Asghar Khan, H. Khattak "An Energy Efficient and Formally Secured Certificate-Based Signcryption for Wireless Body Area Networks with the Internet of Things", *Electronics*, vol. 8, no. 10, 1171, 2019. doi:10.3390/electronics8101171

A. Alomari, W. Phillips, N. Aslam, and F. Comeau, "Swarm Intelligence Optimization Techniques for Obstacle-Avoidance Mobility-Assisted Localization in Wireless Sensor Networks", *IEEE Access*, vol. 6, pp. 22368-22385, 2018. doi: 10.1109/ACCESS.2017.2787140

A. Alomari, W. Phillips, N. Aslam, and F. Comeau, "Dynamic Fuzzy-Logic Based Path Planning for Mobility-Assisted Localization in Wireless Sensor Networks", *Sensors*, vol. 17, no. 8, 1904, 2017. doi:10.3390/s17081904

A. Alomari, F. Comeau, W. Phillips, and N. Aslam, "New Path Planning Model for Mobile Anchor-Assisted Localization in Wireless Sensor Networks", *Wireless Networks*, vol. 24, pp. 2589-2607, 2018. doi:10.1007/s11276-017-1493-2.

### Conference Papers

A. Alomari, N. Aslam, W. Phillips, and F. Comeau, "Three-dimensional path planning model for mobile anchor-assisted localization in wireless sensor networks", in *2017 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, Windsor, ON, Canada, 2017, pp. 1-5. doi: 10.1109/CCECE.2017.7946681

A. Alomari, N. Aslam, W. Phillips, and F. Comeau, " Using dv-hop technique to increase localization ratio in static path planning models in wireless sensor network", in *2016 International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP)*, Prague, Czech Republic, 2016, pp. 1-6. doi: 10.1109/csndsp.2016.7574010

A. Alomari, N. Aslam, W. Phillips, and F. Comeau, " A scheme for using closest rendezvous points and Mobile Elements for data gathering in wireless sensor networks", in *2014 IFIP Wireless Days (WD)*, Rio de Janeiro, Brazil, 2016, pp. 1-6. doi: 10.1109/wd.2014.7020793.

A. Alomari, N. Aslam, and F. Comeau, " Data collection using rendezvous points and mobile actor in wireless sensor networks", in *2012 IEEE International Conference on Communications (ICC)*, Ottawa, ON, Canada, 2012, pp. 7115-7119. doi: 10.1109/icc.2012.6364936.

## THESES

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### PhD Thesis

A. Alomari, 'Path planning models for mobile anchor-assisted localization in wireless sensor networks', Dalhousie University, 2018.

### MSc Thesis

A. Alomari, 'Energy efficient data collection scheme using rendezvous points and mobile actor in wireless sensor networks', Dalhousie University, 2012.

## TEACHING

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4101-1151	Programming Basics
4101-0132	Probability and Statistics
4101-1412	Parallel and Distributed Computing
4101-1425	Mobile Computing and Applications
4101-1427	Robotics
4101-1402	Network Administration
4101-1411	CS Senior Project I
4101-1421	CS Senior Project II

## PROFFISIONAL ACTIVITIES

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I am a member of the following organizations:

2013 - PRESENT	IANG, Member
2010 - PRESENT	IEEE, Member
2010 - PRESENT	IEEE, ComSoc Member
2010 - PRESENT	ACM, Member

I also regularly review (mainly Communication Networks-related papers) for several international journals and conferences including

**TPC Member**, 2019 International conference on Computer Applications & Information & Security, (ICCAIS)  
**TPC Member**, 12th International Conference on Software, Knowledge, Information Management & Applications (SKIMA 2018)  
**Reviewer**, 2017 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)  
**Reviewer**, IEEE Access (IEEE)  
**Reviewer**, Sensors Letters (IEEE)  
**Reviewer**, Sensors Journal (IEEE)  
**Reviewer**, Sensors (MDPI)  
**Reviewer**, Applied Science (MDPI)  
**Reviewer**, Electronics (MDPI)  
**Reviewer**, International Journal of Electronics (Taylor and Francis)  
**Reviewer**, Journal of King Saud University - Computer and Information Sciences (Elsevier)  
**Reviewer**, Transactions on Mobile Computing (IEEE)  
**Reviewer**, Wireless Networks (Springer)  
**Reviewer**, IEEE Transactions on Mobile Computing (IEEE)

## LANGUAGES

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ARABIC: Mothertongue  
ENGLISH: Proficient

## TECHNICAL EXPERTISE

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CERTIFICATES	Cisco Certified Network Associate - Routing and Switching (CCNA - R & S)
LANGUAGES	Python, HTML
SIMULATION AND TOOLS	Matlab, Minitab, Latex
PROTOCOLS	IP, TCP, UDP, IPSec, IGMP
OPERATING SYSTEMS	Windows, Macintosh, Cisco IOS

## REFERENCES

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**1. Dr. William Phillips**

Professor and Department Head  
Department of Engineering Mathematics and Internetworking  
Faculty of Engineering, Dalhousie University, Canada

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**2. Dr. Nauman Aslam**

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Department of Computer and Information Sciences  
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Engineering Department  
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