

Adnan Ahmed Khan

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Military College of Signals

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About

Dr. Adnan Ahmed Khan is working as Defence Faculty in the Military College of Signals. Dr. Adnan Ahmed Khan has a PhD in Computer Engineering. Dr. Adnan Ahmed Khan has published 62 research articles & conference papers having a citation count of 260, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Computer Engineering	2005 - 2009
UET Taxila , Pakistan	
MS in Computer Engineering	2003 - 2005
UET Taxila , Pakistan	
BE in Telecomm Engineering	1990 - 1993
NUST, Islamabad , Pakistan	

Experience

Defence Faculty	2024- Present
Military College of Signals	
Defence Faculty	2012 - 2012
Military College of Signals	

Research Articles

C2B: A Semantic Source Code Retrieval Model using CodeT5 and Bi-LSTM	2024
Nazia Bibi Ayesha Maqbool Tauseef Ahmad Rana Farkhanda Afzal Adnan Ahmed Khan	
Applied Sciences , Volume 14(13), Article Number 5795	
Impact Factor: 2.500   Quartile: 1   Citations: 2	
DOI: https://doi.org/10.3390/app14135795	
A wideband decoupling method using bezel-coupled loop-type isolator for smartwatch MIMO applications	2022
Babar Aslam Baloch Zeeshan zahid Adnan Ahmed Khan Longyue Qu	
International Journal of Microwave and Wireless Technologies, Pages 1-11	
Impact Factor: 1.090   Quartile: 4   Citations: 1	
DOI: 10.1017/ S1759078722000812	
Secure resource management in beyond 5G heterogeneous networks with decoupled access	2022
Humayun Zubair Khan Mudassar Ali Muhammad Naeem Imran Rashid Shahid Mumtaz Adnan Ahmad Khan Ahmad Naeem Akhtar	
Ad Hoc Networks , Volume 125, Article Number 102737	
Impact Factor: 4.111   Quartile: 2   Citations: 20	
DOI: 10.1016/j.adhoc.2021.102737	
A wideband isolation technique using bezel coupled T-type isolator for smartwatch MIMO applications	2022
Babar Aslam Baloch Longyue Qu Muhammad Zeeshan Zahid Adnan Ahmed Khan	
Microwave and Optical Technology Letters, Pages 1-7	
Impact Factor: 1.311   Quartile: 4   Citations: 1	
DOI: 10.1002/mop.33415	
Resource allocation for energy efficiency optimization in uplink–downlink decoupled 5G heterogeneous networks	2021
Humayun Zubair Khan Mudassar Ali Imran Rashid Abdul Ghafoor Muhammad Naeem Adnan Ahmed Khan Adil Masood Saddiqui	

**Impact Factor:** 1.882 | **Quartile:** 3 | **Citations:** 16

**DOI:** <https://doi.org/10.1002/dac.4925>

#### Optimality of Linear MIMO Detection for 5G Systems via 1-Opt Local Search

2021

Kiran Khurshid Adnan Ahmed Khan Muhammad Haroon Siddiqui Muhammad Usman Hadi Imran Rashid Muhammad Imran

*Journal of Electrical Engineering and Technology*, Pages 1-10

**Impact Factor:** 1.528 | **Quartile:** 4 | **Citations:** 10

**DOI:** <https://doi.org/10.1007/s42835-020-00625-0>

#### Efficient hybrid Neumann series based MMSE assisted detection for 5G and beyond massive MIMO systems

2020

Kiran Khurshid Adnan Ahmed Khan Muhammad Imran Imran Rashid Muhammad Haroon Siddiqui

*IET Communications*, Volume 14, Issue 22, Pages 4142-4151

**Impact Factor:** 1.542 | **Quartile:** 3 | **Citations:** 6

**DOI:** [10.1049/iet-com.2020.0670](https://doi.org/10.1049/iet-com.2020.0670)

#### Dual-Band B-Shaped Antenna Array for Satellite Applications

2020

Muhammad Mateen Hasan Adnan Ahmed Khan Imran Rashid Muzhair Hussain Farooq Ahmed Bhatti

*International Journal of Microwave and Wireless Technologies*, Pages 1-8

**Impact Factor:** 1.064 | **Quartile:** 4

**DOI:** <https://doi.org/10.1017/S1759078720001439>[Opens in a new window]

#### Two element MIMO antenna with frequency reconfigurable characteristics utilizing RF MEMS for 5G applications

2020

Muhammad Mateen Hassan Zeeshan Zahid Adnan Ahmed Khan Imran Rashid Abdul Rauf Moazam Maqsood Farooq Ahmed Bhatti

*Journal of Electromagnetic Waves and Applications*, Volume 34, Issue 9, Pages 1210-1224

**Impact Factor:** 1.335 | **Quartile:** 4 | **Citations:** 35

**DOI:** [10.1080/09205071.2020.1765883](https://doi.org/10.1080/09205071.2020.1765883)

#### Detection of Intermediate Spoofing Attack on Global Navigation Satellite System Receiver Through Slope Based Metrics

2020

Abdul Malik Khan Adnan Ahmed Khan Muhammad Faisal Khan Abdul Malik Khan Naveed Iqbal Muhammad Faisal Khan Attiq Ahmad

*Journal of Navigation*, Pages 1-17

**Impact Factor:** 1.995 | **Quartile:** 2 | **Citations:** 24

**DOI:** [10.1017/S0373463320000168](https://doi.org/10.1017/S0373463320000168)

#### Optimal Massive MIMO Detection for 5G Communication Systems via Hybrid n-Bit Heuristic Assisted-VBLAST

2019

Muhammad Haroon Siddiqui Kiran Khurshid Imran Rashid Adnan Ahmed Khan Khubaib Ahmed

*IEEE Access*, Volume 7, Pages 73646-173656

**Impact Factor:** 3.745 | **Quartile:** 1 | **Citations:** 11

**DOI:** [10.1109/ACCESS.2019.2949247](https://doi.org/10.1109/ACCESS.2019.2949247)

#### A novel UWB MIMO antenna array with band notch characteristics using parasitic decoupler

2019

Muhammad Mateen Hassan Maryam Rasool Muhammad Umair Asghar Zeeshan Zahid Adnan Ahmed Khan Imran Rashid Abdul Rauf Farooq Ahmed Bhatti

*Journal of Electromagnetic Waves and Applications*, Pages 1-12

**Impact Factor:** 1.373 | **Quartile:** 3 | **Citations:** 50

**DOI:** [10.1080/09205071.2019.1682063](https://doi.org/10.1080/09205071.2019.1682063)

#### Big data assisted CRAN enabled 5G SON architecture

2019

Kiran Khurshid Adnan Ahmed Khan Muhammad Haroon Siddiqui Imran Rashid Muhammad Usman Hadi

*Journal of ICT Research and Applications*, Volume:13, No.2, Pages:93-106

**Impact Factor:** 0.6 | **Quartile:** 4

**DOI:** <https://doi.org/10.5614/itbj.ict.res.appl.2019.13.2.1>

#### A wideband loop-type ground radiation antenna using ground mode tuning and optimum impedance level

2019

Mateen Hassan Zeeshan Zahid Adnan Ahmed Khan Moazam Maqsood

*Microwave and Optical Technology Letters*, Volume 61, Issue 9, Pages 2056-2061

**Impact Factor:** 0.957 | **Quartile:** 4 | **Citations:** 2

**DOI:** [10.1002/mop.31859](https://doi.org/10.1002/mop.31859)

#### Big Data Assisted CRAN Enabled 5G SON Architecture

2019

Kiran Khurshid Adnan Ahmed Khan Haroon Siddiqui Imran Rashid M. Usman Hadi

**Impact Factor:** 0 | **Citations:** 15

**DOI:** DOI: 10.5614/itbj.ict.res.appl.2019.13.2.1

**A nonorthogonal cooperative scheme for multiuser CRN using probabilistic interference constraint**

2019

Ashfaq Ahme Mudassar Ali Muhammad Naeem Muhammad Iqbal Udit Pareek Adnan Ahmed Khan

*Transactions on Emerging Telecommunications Technologies*, Volume: 30 Issue: 5 Article Number: e3568

**Impact Factor:** 1.594 | **Quartile:** 3

**DOI:** 10.1002/ett.3568

**Incast Mitigation in a Data Center Storage Cluster Through a Dynamic Fair-Share Buffer Policy**

2019

YAWAR ABBAS BANGASH TAUSEEF RANA HAIDER ABBAS MUHAMMAD ALI IMRAN ADNAN AHMED KHAN

*IEEE Access*, Volume 7, Pages 10718-10733

**Impact Factor:** 3.745 | **Quartile:** 1 | **Citations:** 2

**DOI:** 10.1109/ACCESS.2019.2891264

**Big Data-9Vs, Challenges and Solutions**

2018

Kiran Khurshid Adnan Ahmed Khan Haroon Siddique Imran Rashid

*Technical Journal, University of Engineering and Technology (UET) Taxila*, Volume 23, No. 3, Pages 28-34

**Impact Factor:** -

**DOI:** NA

**MT-SECURER: multi-factors trust for secure and reliable routing in MANETs**

2018

Imran Shafi Zakir Ullah Muhammad Hasan Islam Adnan Ahmed Khan

*International Journal of Adhoc and Ubiquitous Computing*, Volume 28, Issue 3, Pages 131-147

**Impact Factor:** 0.56 | **Quartile:** 4

**DOI:** 10.1504/IJAHUC.2016.10001915

**Filtering Dishonest Trust Recommendations in Trust Management Systems in Mobile Ad Hoc Networks**

2016

Muhammad Hasan Islam Zakir Ullah Adnan Ahmed Khan Sohail Sarwar

*International Journal of Communication Networks and Information Security (IJCNIS)*, Volume 8, No. 1, Pages 18-30

**Impact Factor:** -

**DOI:** <https://www.ijcnis.org/index.php/ijcnis/article/view/1568/179>

**Capacity Dimensioning of HSDPA Urban Network**

2014

Awais Saeed Adnan Ahmed Khan Syed Ismail Shah Shariq Yasin

*International Journal of Communication Networks and Information Security*, Volume 6, Issue 2, Pages 148-161

**Impact Factor:** -

**DOI:** 10.17762/ijcnis.v6i2.651

**Selection of VoIP CODECs for Different Networks based on QoS Analysis**

2013

Imran Rashid Adnan Ahmed Khan Malik Ahsan Ali

*International Journal of Computer Applications*, Volume 84, No 5, Pages 38-44

**Impact Factor:** -

**DOI:** 10.5120/14575-2702

**Performance Comparison of Adaptive Power Control in UMTS for Indoor Propagation**

2012

Adnan Ahmed Khan H. Zahra S. Muzahir Abbas K. Shehzad M. Aurangzeb Khan

*International Journal of Future Generation Communication and Networking*, Volume 5, No. 3, Pages 105-116

**Impact Factor:** -

**DOI:** N/A

**Analysis of Codebook Based Channel Feedback Techniques for MIMO-OFDM Systems**

2011

Adnan Ahmed Khan Ahmed Farhan Hanif Muhammad Rehan Khalid

*International Journal of Information and Communication Engineering*, Vol:5, No:12, Pages:05

**Impact Factor:** N/A

**DOI:** 10.5281/zenodo.1072905

**Application of Heuristic (1-Opt Local Search) and Metaheuristic (Ant Colony Optimization) Algorithms for Symbol Detection in MIMO Systems**

2011

Adnan Ahmed Khan Kiran Khurshid Safwat Irteza S. I. Shah

*Communications and Network*, Vol:3, No:4, Article ID:8468, Pages: 200-209

**Impact Factor:** N/A

**DOI:** 10.4236/cn.2011.34023

<b>Passive Source Localization in a Randomly Distributed Wireless Sensor Networks</b> <i>Adnan Ahmed Khan Muhammad Tabish Niaz Imran Shafi</i> <i>International Journal of Computer Applications</i> , Volume 24, No.6, Pages 1-6 <b>Impact Factor:</b> - <b>DOI:</b> 10.5120/2963-3955	2011
<b>Validity guided fuzzy clustering evaluation for neural network based time-frequency reassignment</b> <i>Imran Shafi Jamil Ahmad Syed Ismail Shah Ataul Aziz Ikram Adnan Ahmed Khan Sajid Bashir</i> <i>EURASIP Journal on Advances in Signal Processing</i> , Volume 2010, Article ID 636858, 14 pages <b>Impact Factor:</b> 1.053   <b>Quartile:</b> 2   <b>Citations:</b> 10 <b>DOI:</b> 10.1155/2010/636858	2010
<b>High-resolution time-frequency methods performance analysis</b> <i>Imran Shafi Adnan Ahmed Khan Sajid Bashir Faisal Mahmood Kashif Jamil Ahmad Syed Ismail Shah Ataul Aziz Ikram</i> <i>EURASIP Journal on Advances in Signal Processing</i> , Volume 2010, Article ID 806043, 7 pages <b>Impact Factor:</b> 1.053   <b>Quartile:</b> 2   <b>Citations:</b> 9 <b>DOI:</b> 10.1155/2010/806043	2010
<b>An application of univariate marginal distribution algorithm in MIMO communication systems</b> <i>Adnan Ahmed Khan Sajid Bashir Muhammad Naeem Syed Ismail Shah</i> <i>International Journal of Communication Systems</i> , Volume 23, Issue 1, Pages 109–124 <b>Impact Factor:</b> 0.229   <b>Quartile:</b> 4   <b>Citations:</b> 10 <b>DOI:</b> 10.1002/dac.1051	2010
<b>Meta-Heuristics for Symbol Detection in a Spatial Multiplexing System</b> <i>Adnan Ahmed Khan Muhammad Naeem Syed Ismail Shah</i> <i>NUST Journal of Engineering Sciences</i> , Volume 1, No.1, Pages 117-126 <b>Impact Factor:</b> - <b>DOI:</b> -	2008
<b>Symbol detection in spatial multiplexing system using particleswarm optimization meta-heuristics</b> <i>Adnan Ahmed Khan Sajid Bashir Muhammad Naeem Syed Ismail Shah Xiaodong Li</i> <i>International Journal of Communication Systems</i> , Volume 21, Issue 12, Pages 1239-1257 <b>Impact Factor:</b> 0.394   <b>Quartile:</b> 3   <b>Citations:</b> 17 <b>DOI:</b> <a href="https://doi.org/10.1002/dac.949">https://doi.org/10.1002/dac.949</a>	2008

## Conference Proceedings

<b>Self-Decoupled Dual Band PIFA for Wi-Fi 6E Smartwatch MIMO Applications</b> <i>Babar Aslam Zeeshan Zahid Adnan Khan</i> <i>Proceedings of 2022 19th International Bhurban Conference on Applied Sciences and Technology, IBCAST 2022</i> , res.country(282,)	2022
<b>Artificial Intelligence based 6G Intelligent IOT: Unfolding an Analytical Concept for Future Hybrid Communication Systems</b> <i>Adnan Ahmed Khan Kiran Khurshid Imran Rashid Muhammad Haroon Siddiqu</i> <i>2020 The 12th International Conference on Future Computer and Communications</i> , res.country(48,)	2020
<b>RF MEMS capacitive switch with high isolation for 5G communication</b> <i>Adnan Ahmed Khan Saad Mansoor</i> <i>2019 International Conference on Communication Technologies, ComTech 2019</i> , res.country(177,)	2019
<b>5G Waveform Competition: Performance Comparison and Analysis of OFDM and FBMC in Slow Fading and Fast Fading Channels</b> <i>Muhammad Imran Aamina Hassan Adnan Ahmed Khan</i> <i>FICC: Future of Information and Communication Conference</i> , res.country(233,)	2019

<b>New technique: Surface modeling of dual polarized RADARs antenna structure for cross polarization reduction</b> <i>Adnan Ahmed Khan Zar Khitab Farooq Ahmed Bhatti Adil Masood Siddiqui Imran Rashid</i> <i>2017 IEEE 6th Global Conference on Consumer Electronics (GCCE), res.country(113,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/GCCE.2017.8229242	2017
<b>Binary ant colony algorithm for symbol detection in a spatial multiplexing system</b> <i>Adnan Khan Sajid Bashir Muhammad Naeem Syed Ismail Shah Asrar Sheikh</i> <i>International Conference on Unconventional Computation, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1007/978-3-540-73554-0_12	2017
<b>Performance Analysis of Wavelet Based Blind Detection and Hop Time Estimation Algorithm for Frequency Hopping Signals in HF Band</b> <i>Adnan Ahmed Khan Imran Taqeer Saira Anwar Muhammad Imran</i> <i>Estimation Algorithm for Frequency Hopping Signals in HF Band, PIMRC'16 (Personal, Indoor and Mobile Radio Communication, res.country(177,)</i> <b>Citations:</b> N/A <b>DOI:</b> Nil	2016
<b>Issues with trust management and trust based secure routing in MANET</b> <i>Zakir Ullah Muhammad Hasan Islam Adnan Ahmed Khan</i> <i>13th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(177,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/IBCAST.2016.7429910	2016
<b>Enhanced multi user detection technique of overloaded MIMO systems using Network Coding based HARQ</b> <i>Adnan Ahmed Khan Amna Qayyum Khawaja Tauseef Tasneem</i> <i>2014, 8th International Conference on Signal Processing and Communication Systems, ICSPCS 2014 - Proceedings, res.country(13,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICSPCS.2014.7021117	2015
<b>Performance analysis of a novel high impedance surface for microstrip-line small patch antenna for mobile applications</b> <i>Adnan Ahmed Khan M.I. Khattak F. Ahmad A.B. Qazi</i> <i>The 6th International Conference on Emerging Ubiquitous Systems and Pervasive Networks, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1016/j.procs.2015.08.379	2015
<b>Multiuser detection of co-channel systems using combination of basic network coding and HARQ</b> <i>Adnan Ahmed Khan Amna Qayyum Muhammad Ali Imran</i> <i>2015 IEEE 81st Vehicular Technology Conference (VTC Spring), res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/VTCSpring.2015.7145943	2015
<b>Adaptive antenna grouping for capacity maximization in correlated MIMO channels</b> <i>Adnan Ahmed Khan Waqas Ahmad Naveed Iqbal Christian Schneider</i> <i>2014 IEEE International Conference on Communication, Networks and Satellite (COMNETSAT), res.country(100,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/COMNETSAT.2014.7050516	2014
<b>Detection of Dishonest Trust Recommendations in Mobile Ad Hoc Networks</b> <i>Zakirullah M. Hasan Islam Adnan Ahmed Khan</i> <i>Fifth International Conference on Computing, Communications and Networking Technologies (ICCCNT), res.country(48,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICCCNT.2014.6962994	2014
<b>Performance analysis of energy detection spectrum sensing using MIMO-OFDM VBLAST test bed</b> <i>Adnan Ahmed Khan Noman Akbar Faizan Qasim Butt Muhammad Salman Saleem Sadia Riffat Raja Iqbal</i> <i>2013 6th Joint IFIP Wireless and Mobile Networking Conference, WMNC 2013, res.country(2,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/WMNC.2013.6549033	2013
<b>Turbo-coded HARQ scheme in multi-hop cooperative wireless networks</b>	2013

<p><i>Adnan Ahmed Khan Ibrahim Khalil</i>  6th Joint IFIP Wireless and Mobile Networking Conference (WMNC), res.country(2,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/WMNC.2013.6549042</p>	
<p><b>Analysis of Codebook Based Channel Feedback Techniques for MIMO-OFDM Systems</b></p> <p><i>Adnan Ahmed Khan Muhammad Rehan Khalid Ahmed Farhan Hanif</i>  International Conference on Wireless Communications and Mobile Computing, res.country(217,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> Nil</p>	2011
<p><b>Turbo-coded HARQ with Switchable Relaying Mechanism in single hop cooperative wireless system</b></p> <p><i>Adnan Ahmed Khan Ibrahim Khalil Zohaib-Ur-Rehman</i>  2011 9th International Conference on Frontiers of Information Technology, FIT 2011, res.country(177,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/FIT.2011.54</p>	2011
<p><b>Optimal relay station placement in cooperative networks using particle swarm</b></p> <p><i>Adnan Ahmed Khan Samreen Umer</i>  13th annual Genetic and Evolutionary Computation Conference, res.country(233,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> <a href="https://doi.org/10.1145/2001858.2001865">https://doi.org/10.1145/2001858.2001865</a></p>	2011
<p><b>Performance of real time cooperative MIMO using an SDR platform</b></p> <p><i>Adnan Ahmed Khan Hassaan Ajaz Hassaan Ajaz Omer Ihsan Usman Javed Moaaz Ali Hafeez Safwat Irteza</i>  2011 IEEE Symposium on Computers and Informatics, res.country(157,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/ISCI.2011.5958956</p>	2011
<p><b>Performance of real time cooperative MIMO using an SDR platform</b></p> <p><i>Adnan Ahmed Khan Hassaan Ajaz Omer Ihsan Usman Javed Safwat Irteza</i>  ISCI 2011 - 2011 IEEE Symposium on Computers and Informatics, res.country(157,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/ISCI.2011.5958956</p>	2011
<p><b>Comparative Study of Self-Encoded Spread Spectrum and PN Coded Spread Spectrum in Cooperative Communicatio</b></p> <p><i>Adnan Ahmed Khan Zohaib-Ur-Rehman</i>  Spectrum in Cooperative Communication, res.country(48,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1002/9781119551539.ch8</p>	2011
<p><b>Application of ant colony optimization based algorithm in MIMO detection</b></p> <p><i>Adnan Ahmed Khan Safwat Irteza Kiran Khurshid</i>  IEEE Congress on Evolutionary Computing, res.country(68,)</p> <p><b>Citations:</b> 17  <b>DOI:</b> <a href="https://doi.org/10.1109/CEC.2010.5586173">https://doi.org/10.1109/CEC.2010.5586173</a></p>	2010
<p><b>Hostname addressing in heterogeneous mobile ad hoc networks</b></p> <p><i>Muhammad Umar Farooq Shoaab Ahmad Khan Syed Ayad Hasan Adnan Ahmed Khan</i>  3rd International Conference on Computer Science and Information Technology, res.country(48,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/ICCSIT.2010.5563784</p>	2010
<p><b>Efficient detection of space time block codes in time-selective channels via adaptive sphere decoder</b></p> <p><i>Adnan Ahmed Khan I. Safwat R. Kashif</i>  2009 International Conference on Emerging Technologies, ICET 2009, res.country(177,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/ICET.2009.5353155</p>	2009
<p><b>An improved ZF-ML decoder for space time block codes over time selective channels</b></p> <p><i>Adnan Ahmed Khan Safwat Irteza Atiq A Kashif R</i>  2009 IEEE Symposium on Industrial Electronics and Applications, ISIEA 2009 - Proceedings, res.country(157,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/ISIEA.2009.5356461</p>	2009

- Performance analysis of detection schemes in MIMO spatially correlated channels** 2009  
*Adnan Ahmed Khan Safwat Irteza Momin Shahab Syed Mohammad Shah*  
*2009 IEEE Symposium on Industrial Electronics and Applications, ISIEA 2009 - Proceedings*, res.country(157,)  
**Citations:** N/A  
**DOI:** 10.1109/ISIEA.2009.5356303
- Simplified maximum likelihood detection for Hi orthogonal space-time block coded system** 2009  
*Adnan Ahmed Khan Khawaja Tauseef Tasneem Syed Ismail Shah*  
*2009 2nd International Conference on Computer, Control and Communication, IC4 2009*, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/IC4.2009.4909258
- A particle swarm algorithm for symbols detection in wideband spatial multiplexing systems** 2007  
*Adnan Ahmed Khan Muhammad Naeem Syed Ismail Shah*  
*9th annual conference on Genetic and evolutionary computation*, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1145/1276958.1276968
- Heuristics assisted detection in high speed wireless communication systems** 2006  
*Adnan Ahmed Khan Sajid Bashir Muhammad Naeem Syed Ismail Shah*  
*10th IEEE International Multitopic Conference 2006, INMIC*, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/INMIC.2006.358125

## Book Chapters

- Swarm Intelligence Based MIMO DetectionTechniques in Wireless Systems** 2018  
*Adnan Ahmed Khan Zakir Ullah*  
 In: *Swarm Intelligence* , Chapter: 05, Volume 3, Pages:109-137  
**Citations:** N/A  
**DOI:** 10.1049/PBCE119H\_ch