Academic Resume

Ahmad Barnawi

Professor, Information Technology Department

Prof. AHMED BARNAWI received the M.Sc. degree from UMIST, U.K., in 2001, and the Ph.D. degree from the University of Bradford, U.K., in 2005. He is currently a Professor with the Faculty of Computing and IT, King Abdulaziz University. He is also the Managing Director of the KAU Cloud Computing and Big Data Research group. He has published more than 100 articles in peer reviewed journals. His research interests include big data, cloud computing, and advanced mobile robotic application.

Contact Information.

Building 31, Room 109, Ext. 67433, ambarnawi@kau.edu.sa.

Highest Degree.

2005, Ph.D. in Telecommunication Engineering, Mobile Networks, University of Bradford, UK.

Academic and Professional Experiences.

1. **2011 - 2013**
   Chairman IT Department, Saudi Arabia, King Abdul Aziz University, Jeddah.
2. **2009 - 2012**
   Cisco Diploma Coordinator, Saudi Arabia, Community College.
3. **2009 - 2012**
   Executive Manager, Saudi Arabia, Saudi Society for IT.
4. **2009 - 2011**
   Assistant Professor FCIT, Saudi arabia, King Abdul Aziz University,Jeddah.
5. **2006 - 2006**
   Mobile Com. Specialist (contract), Saudi Arabia, Mobile and Satellite Com. Research Centre.

Research Interests.

Application of AI in wireless and mobile Communications, Advanced AI and Robotic Applications, Cloud Computing and Big Data, Machine Learning.

Teaching Interests.

Cloud Computing, Information Technology, Computer networks, Wireless Communications.

Certifications and Trainings.

1. Attending the 2nd Fokus Fueco Forum on Future Seamless Communication.
2. Workshop on Virtual Classes System (CENTRA), King Abdul-Aziz University.
3. Workshop on academic accreditation, King Abdul-Aziz University.
4. Introduction to Bio-Informatics, University of Helsinki- Finland.
5. University of Koblenz Summer School participant.
6. Attending the 1st forum for Next Generation Networks.
7. 2009 Annual Cisco Conference, Cisco Regional Academy.

Social, Scientific and Professional Affiliation.

1. 2014-2014, reviewer, 30TH IEEE INTERNATIONAL CONFERENCE ON COMPUTER COMMUNICATIONS, Shangahi, China.
2. 2010-2010, reviewer, INTERNATIONAL SYMPOSIUM ON CIRCUITS AND SYSTEMS (ISCAS), Rio De Janiro, Brasil, 2010.
3. -, reviewer, Princess Norah University's Curriculum for Faculty of Computing and IT, 2009..
4. -, research proposals reviewer, King Abdulaziz City for Science and Technology.
5. -, speaker, 2nd PACS workshop for Saudi Society for Radiography..
6. -, organizer, 3rd PACS workshop for Saudi Society for Radiology.
7. -, reviewer, ACM Workshop on Performance Evaluation of Wireless Ad Hoc Sensor, and Ubiquitous Networks (PE-WASUN'2004), Venice, 10-7, 2004.
8. -, reviewer, Ninth IEEE Symposium on Computers and Communications (ISCC 04), Alexandria, Egypt, 2004.
9. -, Session Organiser, 9th World Multi-Conference on Systemics, Cybernetics and Informatics SCI 2005, Florida, USA, July 10-13, 2005..
10. -, reviewer, IEEE MELECOM '06 conference, Malaga, Spain, 2006.
11. -, Member, IEEE.
12. -, Member, Saudi Society for IT.

Excellence Awards and Patents.

1. 2015, Patent, Cognitive radio sensing method and system, US Patent.
2. 2020, Patent, Method and apparatus for non-coherent detection of overlapped chirp signal to increase data rate of a chirp spread, US Patent.
3. 2020, Patent, Method and apparatus for non-coherent detection of overlapped chirp signal to increase data rate of a chirp spread, US Patent.

Funded Projects.

1. 2019, Mobile Robotic Systems and Applications, MoE
2. 2019, Supervised and Unsupervised PCG classification for Cardiovascular Disease diagnosis, KAU
3. 2020, Covid-19 research grant, KAU, finished.
4. 2020, patent grant for Saudi National day, KAU

Last Profile Update: April   19, 2024

Publications.

1. Monerah Alawadh, Ahmed Barnawi, "A Consumer Behavior Analysis Framework Toward Improving Market Performance Indicators: Saudi&Rsquo;S Retail Sector As A Case Study", Journal Of Theoretical And Applied Electronic Commerce Research, 2024.

2. Monerah Mohammed Alawadh, Ahmed Mohammed Barnawi, "Performance Comparisons Of Association Rule Learning Algorithms On A Supermarket Data", World Conference On Information Systems And Technologies, 2023.

3. Asma Alotaibi, Ahmed Barnawi, "Idsoft: A Federated And Softwarized Intrusion Detection Framework For Massive Internet Of Things In 6g Network", Journal Of King Saud University-Computer And Information Sciences, 2023.

4. Asma Alotaibi, Ahmed Barnawi, "Securing Massive Iot In 6g: Recent Solutions, Architectures, Future Directions", Internet Of Things, 2023.

5. Omar Alnajar, Ahmed Barnawi, "Tactile Internet Of Federated Things: Toward Fine-Grained Design Of Fl-Based Architecture To Meet Tiot Demands", Computer Networks, 2023.

6. uzan Almutairi, Ahmed Barnawi, "Federated Learning Vulnerabilities, Threats And Defenses: A Systematic Review And Future Directions", Internet Of Things, 2023.

7. Sami Alrabie, Ahmed Barnawi, "Heartwave: A Multiclass Dataset Of Heart Sounds For Cardiovascular Diseases Detection", Ieee Access, 2023.

8. Asma Alotaibi, Ahmed Barnawi, "Lightfids: Lightweight And Hierarchical Federated Ids For Massive Iot In 6g Network", Arabian Journal For Science And Engineering, 2023.

9. Suzan Almutairi, Ahmed Barnawi, "Securing Dnn For Smart Vehicles: An Overview Of Adversarial Attacks, Defenses, And Frameworks", Journal Of Engineering And Applied Science, 2023.

10. Ahmed Barnawi Ahmed Barnawi ,Krishan Kumar, Neeraj Kumar, Nisha Thakur, Bander Alzahrani, Amal Almansour, "Unmanned Ariel Vehicle (Uav) Path Planning For Area Segmentation In Intelligent Landmine Detection Systems", Sensors, 2023.

11. Bander Alzahrani, Ahmed Barnawi, Azeem Irshad, Areej Alhothali, Reem Alotaibi, Muhammad Shafiq, "A Secure Key Agreement Scheme For Unmanned Aerial Vehicles-Based Crowd Monitoring System", Cmc-Computers Materials &Amp; Continua, 2022.

12. Zeeshan Ali, Bander A Alzahrani, Ahmed Barnawi, Abdullah Al-Barakati, Pandi Vijayakumar, Shehzad Ashraf Chaudhry, "Tc-Pslap: Temporal Credential-Based Provably Secure And Lightweight Authentication Protocol For Iot-Enabled Drone Environments", Security And Communication Networks, 2021.

13. Yuan Tang, Yiming Miao, Ahmed Barnawi, Bander Alzahrani, Reem Alotaibi, Kai Hwang, "A Joint Global And Local Path Planning Optimization For Uav Task Scheduling Towards Crowd Air Monitoring", Computer Networks, 2021.

14. Ahmed Barnawi, Prateek Chhikara, Rajkumar Tekchandani, Neeraj Kumar, Mehrez Boulares, "A Cnn-Based Scheme For Covid-19 Detection With Emergency Services Provisions Using An Optimal Path Planning", Multimedia Systems, 2021.

15. Rahul Saha, Gulshan Kumar, Neeraj Kumar, Tai-hoon Kim, Tannishtha Devgun, Reji Thomas, Ahmed Barnawi, "Internet-Of-Things Framework For Oxygen Saturation Monitoring In Covid-19 Environment", Ieee Internet Of Things Journal, 2021.

16. Wenjing Xiao, Miao Li, Min Chen, Ahmed Barnawi, "Deep Interaction: Wearable Robot-Assisted Emotion Communication For Enhancing Perception And Expression Ability Of Children With Autism Spectrum Disorders", Future Generation Computer Systems, vol: 108, pp. 709-716, 2020.
   DOI: 10.1016/j.future.2020.03.022

17. Gaoxiang Wu, Yiming Miao, Yu Zhang, Ahmed Barnawi, "Energy Efficient For Uav-Enabled Mobile Edge Computing Networks: Intelligent Task Prediction And Offloading", Computer Communications, vol: 150, pp. 556-562, 2020.
   DOI: 10.1016/j.comcom.2019.11.037

Last Profile Update: April   19, 2024

Publications.

18. Ahmed Barnawi, Marwan Alharbi, Min Chen, "Intelligent Search And Find System For Robotic Platform Based On Smart Edge Computing Service", Ieee Access, vol: 8, pp. 108821-108834, 2020.
DOI: 10.1109/ACCESS.2020.2993727

19. Mehrez Boulares, Tarik Alafif, Ahmed Barnawi, "Transfer Learning Benchmark For Cardiovascular Disease Recognition", Ieee Access, vol: 8, pp. 109475-109491, 2020.
DOI: 10.1109/ACCESS.2020.3002151

20. Jun Yang, Wenjing Xiao, Huimin Lu, Ahmed Barnawi, "Wireless High-Frequency Nlos Monitoring System For Heart Disease Combined With Hospital And Home", Future Generation Computer Systems, vol: 110, pp. 772-780, 2020.
DOI: 10.1016/j.future.2019.11.001

21. Fatimah Alghamdi, Saoucene Mahfoudh, Ahmed Barnawi, "A Novel Fog Computing Based Architecture To Improve The Performance In Content Delivery Networks", Wireless Communications And Mobile Computing, 2019.

22. Ahmed Barnawi, Abdullah Al-Barakati, Omar Alhubaiti, "A Gui Interfaces For A Multiple Unmanned Autonomous Robotic System", Proceedings Of The International Conference On Software Engineering Research And Practice (Serp), 2018.

23. Ahmed Barnawi, Fuad Bajaber, Abdullah Al-Barakati, Seyed Buhari, Anas Fatouh, Omar Alhubaiti, "Design And Implementation Of Api And Gui Interfaces For A Multiple Unmanned Autonomous Robotic System", International Journal Of Applied Engineering Research, 2018.

24. Fatimah Alghamdi, Ahmed Barnawi, Saoucene Mahfoudh, "Fog-Based Cdn Architecture Using Icn Approach For Efficient Large-Scale Content Distribution", Future Of Information And Communication Conference, 2018.

25. Asma Alotaibi, Ahmed Barnawi, Mohammed Buhari, "Attribute-Based Secure Data Sharing With Efficient Revocation In Fog Computing", Journal Of Information Security, 2017.

26. Ahmed Barnawi, Abdullah Al-Barakati, "Design And Implantation Of A Search And Find Application On A Heterogeneous Robotic Platform", Journal Of Engineering Technology, 2017.

27. Fuad Bajaber, Amin Shafaat, Omar Batarfi, Radwa Elshawi, Abdulrahman Altalhi, Ahmed Barnawi, Sherif Sakr, "A Cloud-Based Platform For Democratizing And Socializing The Benchmarking Process", International Journal Of Advanced Computer Science And Applications, 2016.

28. Zakaria Maamar, Noura Faci, Sherif Sakr, Mohamed Boukhebouze, Ahmed Barnawi, "Network-Based Social Coordination Of Business Processes", Information Systems, 2016.

29. Fuad Bajaber, Radwa Elshawi, Omar Batarfi, Abdulrahman Altalhi, Ahmed Barnawi, Sherif Sakr, "Big Data 2.0 Processing Systems: Taxonomy And Open Challenges", Journal Of Grid Computing, 2016.

30. Omar Batarfi, Radwa Elshawi, Ayman Fayoumi, Ahmed Barnawi, Sherif Sakr, "A Distributed Query Execution Engine Of Big Attributed Graphs", Springerplus, 2016.

31. N.Dimitriou, Ahmad Barnawi, A.Zalonis, A.Polydoros, "Resource Management In Cognitive Radio Networks", , 2013.

32. Ahmad Barnawi, N.Dimitriou, A.Polydoros, "Robust Routing Under Shadow-Fading In Mobile Ad-Hoc Networks", , 2013.

33. Rizwan Qureshi, M.R.J, Ahmad Barnawi, Ahmed Alzahrani, Alosaimi, Shesha, Alsobhi, "Iphone Application For Ims Based Mass Mobile Examination System", , 2013.

34. Rizwan Qureshi, M.R.J, Ahmad Barnawi, A, "Evaluation Of Extended Cbd Model-Case Study Using Ims Application", , 2013.

35. Ahmad Barnawi, Abdulrahman Altalhi, "Component Based Development Model For New And Customized Software Products", , vol: 3, pp. 1384-1389, 2013.

Publications.

36. Ahmad Barnawi, "Method And Apparatus For Supporting Ad Hoc Networking Over Umts Protocol", , 2012.

37. Asif Irshad Khan, Ahmad Barnawi, Rizwan Qureshi, "Novel Component-Based Development Model For Sip-Based Mobile Application", , vol: 3, No.1, 2012.

38. Ahmad Barbawi, Abdulrahman Altalhi, Nadine Akkari, Ahmad Barnawi, "Security Analysis And Delay Evaluation For Sip - Based Mobile Mass Examination System", , vol: 4 Issue: 1, pp. 1-19, 2012.

39. Mohammed Ali, Ahmad Barnawi, Abul Bashar, "Modeling And Simulation Strategies For Performance Evaluation Of Cloud Computing", , 2012.

40. Mohammed Ali, Ahmad Barnawi, Abul Bashar, "Optimising Storage Infrastructure For Cloud", , 2012.

41. Ahmad Barnawi, Abdulrahman Altalhi, Asif Irshad Khan, "Evaluation Of Ip Multimedia Subsystem Based Mobile Mass Examination System", , vol: 4, No. 4, pp. 1-12, 2012.

42. Ahmad Barnawi, "Sensing Users' Temporal Behavior In Cognitive Radio Networks Using Wideband Chirp Signal", , 2011.

43. Ahmad Barnawi, "Wideband Sensing For Cognitive Radio Systems In Heterogeneous Next Generation Networks", , 2011.

44. Ahmad Barnawi, Rizwan Qureshi, "A Framework For Mobile Next Generation Network Application Development Using Hybrid Component Based Development Model", , 2011.

45. Ahmad Barnawi, A, Nadine Akkari, Muhammad Khan, Asif Irshad Khan, "Deploying Sip-Based Mobile Exam Application Onto Next Generation Network Testbed", Saudi International Conference On Electronics Communications And Photonics Technologies, Riyadh, 2011.

46. Ahmad Barnawi, Abdulrahman Altalhi, "Time Sensing For Cognitive Radio Systems", Proceedings Of The European Conference On Communication Technologies And Software Defined Radio (Sdr11 - Winncomm - Europe, pp. 159-163, 2011.

47. Ahmad Barnawi, "A New Approach For Cognitive Radio Sensing Using Wideband Chirp Signal", Software Defined And Cognitive Radio Solution Conference, vol: 3, 2010.

48. Ahmad Barnawi, "Adaptive Technologies For Hybrid Ad Hoc/Cellular Network Architecture", , 2009.

49. Ahmad Barnawi, "Cognitive Radio Using Wideband Chirp Signal (Pending Patent, Patent Application Submitted For Us Patent In December 2009 Via King Abdul-Aziz Patent Offic", Conference Pending Patent, Patent Application Submitted For Us Patent In December 2009 Via King Abdul-Aziz Patent Offic, 2009.

Last Profile Update: April   19, 2024