

# Summary of Prof. S.B. Junaidu's Curriculum Vitae

## PERSONAL DATA

Name: Professor Sahalu Junaidu Balarabe  
Date/Place of Birth: December 22, 1963/Jiba, Danja LGA, Katsina State  
Marital Status: Married  
Number of Children: Ten with ages: 27,23,21,19,16,14,12,12,9,6  
Contact Tel. Numbers: 0703 215 4610 and 0705 518 7856  
E-mail Addresses: [sahalu@abu.edu.ng](mailto:sahalu@abu.edu.ng), [abuyusra@gmail.com](mailto:abuyusra@gmail.com)  
Web site: <http://dcs.abu.edu.ng/staff/sahalu>

## EDUCATION

Government Secondary School (now Alhudahuda College) Zaria (1977-1982)  
Ahmadu Bello University, Zaria (1982-1984)  
Ahmadu Bello University, Zaria (1985-1988)  
Queen Mary & Westfield College, University of London (1990-1991)  
St. Andrews University, Scotland (1992-1997)

## QUALIFICATIONS

West African School Certificate - 1982  
Diploma in Mathematics Education - 1984 (Distinction)  
Bachelor of Science (Mathematics with Computer Science) - 1988 (First Class)  
Master of Science (Computer Science) - 1991  
Doctor of Philosophy (Computer Science) - 1997

## AFFILIATIONS

Life Member, Association of Computing Machinery (ACM) - 2006  
Member, Institute of Electrical and Electronic Engineers (IEEE) - 2007  
Member, Computer Professionals (Registration Council) of Nigeria - 2016  
Member, Nigerian Computer Society - 2016

## ACADEMIC PROGRESSION & YEARS OF EXPERIENCE

Graduate Assistant, Ahmadu Bello University, Zaria (ABU) - 1989-1992  
Lecturer, Universiti Telekom, Malaysia - 1998-1999  
Rose from Instructor to Assistant Professor at King Fahd  
University of Petroleum & Minerals (KFUPM), Saudi Arabia - 1999-2008  
Visiting Professor, Umaru Musa 'YarAdua University, Katsina-  
Professor, Ahmadu Bello University, Zaria - 2007 to Date  
Teaching and Research Experience (University Level) - 1992 to Date

## **ADMINISTRATIVE APPOINTMENTS**

Head, Computer Science Unit, Department of Mathematics, Ahmadu Bello University, Zaria	-	2008 to 2016
Director, Iya Abubakar Computer Center, ABU Zaria	-	2009 – 2014
Chairman, Science Complex G (comprising Faculty of Science, Faculty of Pharmaceutical Sciences, Center for Energy Research and Training, Center for Biotechnology Research and Training and Iya Abubakar Computer Center)	-	2009-2015
Chairman, Ministerial Implementation Committee for the Conversion of Kaduna Polytechnic to City University of Technology.	-	Oct. 2010-Nov. 2010
Chairman, Implementation Committee, Proposed Dialogue ICT University, Kaduna,	-	2014 to 2016
Pioneer Director, Institute of Computing & ICT, ABU Zaria	-	2014 to April 2018
Pioneer Head of Department, Department of Computer Science, ABU, Zaria,	-	2016 to Date
Member, Senate Estimates Committee Ahmadu Bello University, Zaria	-	2010 - 2012
Member Representing Congregation (Elected twice) Search Team for the Appointment of Vice-Chancellor, Ahmadu Bello University, Zaria	-	2014 and 2019
Member, Board of Governors, Digital Bridge Institute, Abuja	-	2018 to Date
Acting Director, Iya Abubakar Institute of ICT, Ahmadu Bello University, Zaria	-	May 2020 to Date
Dean, Faculty of Physical Sciences, ABU Zaria	-	March 2021 to Date

## **EXPERIENCES RELATED TO E-LEARNING**

1. Led a project team that developed three multimedia-rich online courses at KFUPM. One of these courses, Data Structures, was the first online course at KFUPM. At that initial experience, team members played all roles in the development process; as subject matter experts, instructional designers, animators, programmers, etc.
2. Facilitated delivery of the developed online courses over several semesters, blending at the course level within the same degree program.
3. Won an award (Cash and Plaque) for Use of Technology in Teaching and Learning at KFUPM in 2004.
4. Published a paper in which I designed an online course development procedure that informed online courseware development at KFUPM.
5. Served as Principal Investigator and co-investigator on projects related to technology-based education in KFUPM, which were completed successfully.

6. Published x papers in international journals and conferences related to e-Learning experience sharing and the employment of IT in education in general.
7. Served at dozens of conferences and fora as invited speaker on matters related to the employment of ICT for teaching, learning and development.
8. Participated in an Online Facilitators course anchored by Dr. Susan Manning, University of Illinois, and successfully certified as an Online Facilitator in 2006.
9. Served in many committees that developed guidelines for the design, development, maintenance, evaluation and Intellectual Rights issues relating to online courseware in KFUPM.
10. Earned commendations over many years for outstanding contributions in the development of e-learning at KFUPM.

### **RECENT ACADEMIC ATTAINMENTS AND RESEARCH GRANT ATTRACTION**

1. So far, I have published over fifty articles in refereed journals and conference proceedings. I supervised, to successful completion, about forty graduate students (PhD and masters degree students).
2. Led and guided a team of twenty five members that developed over a dozen different software applications for automating various processes in a university setting. These applications are in use in ABU since 2011, saving the University hundred of millions of naira annually. These applications are also deployed in other institutions, generating revenue for ABU.
3. Won a software development grant from Tertiary Education Tax Fund (TETFund) for the development of a Facility Management software, 2013.
4. Won a software development grant of about twenty five million naira from the National Information Technology Agency, NITDA in 2012.
5. Attracted a capacity building grant of about ten million naira from NITDA.
6. Sourced an intervention, in 2011, from Universal Service Provision Fund (USPF) for refurbishing and fully furnishing the Iya Abubakar Computer Center, including a supply of over four hundred state-of-the-art computer systems.
7. Sourced an intervention, in 2015, from the Nigeria Communications Commission (NCC) for building and furnishing a 250-sitting-capacity Computer-Based Testing (CBT) Center for ABU. This provides a platform for wider use of our in-house developed CBT software application.
8. Attracted software development contracts for Ahmadu Bello University from National Water Resources Institute Kaduna, Kaduna State University, Al-Qalam University Katsina, School of Basic and Remedial Studies, Funtua and Division of Agricultural Colleges, ABU, Zaria, 2013-2017.
9. Won a software development grant in 2017, from the Nigeria Communications Commission (NCC), for the development of a wearable e-band tracking system.
10. Sourced an intervention, in 2018, from NITDA for building a solar-powered IT Hub for Ahmadu Bello University, Zaria. Project cost is three hundred and thirty one million naira (₦331m)

11. Lead, Development Team, for the project that developed new portals for flexible payment and registration for the School of Postgraduate Studies, Ahmadu Bello University, Zaria (2018-2019).
12. Lead, Development Team, for the project developing a suite of software examination processing software for the National Teachers' Institute, Kaduna (2018-2019).
13. Lead, Development Team, for a project developing a suite software applications for the NTA TV College, Jos (2018-2019).
14. Lead, Development Team, for a project developing a suite software applications for the Federal Radio Corporation of Nigeria, Abuja (2018-2019).
15. Lead, Development Team, for a project developing an Agricultural Knowledge Base for extension services for the National Agricultural Extension and Liaison Services, Ahmadu Bello University, Zaria (2018-2019).
16. Lead, Development Team, for a project developing a suite software applications for the NILEST, Zaria (2019-2020).
17. Lead, Development Team, for a project developing a suite software applications for Nasarawa State University, Keffi (2019-2020).
18. Lead, Development Team, for a TETFund-sponsored project developing an Academic Planning and Monitoring Information System (APMIS) and related sundry applications for Ahmadu Bello University, Zaria (2020-2021).
19. Principal Investigator, TETFund National Research Fund (Grants for 2020 Cycle) on a Project titled "An Artificial Intelligent based Approach for Remote Diagnosis, Treatment and Awareness using Sensor Technology". Funds expected for this project to start work before the end of 2021.

# Curriculum Vitae

## A. PERSONAL DATA

1. Name: Professor Sahalu Junaidu Balarabe
2. Date of Birth: December 22, 1963
3. Place of Birth: Jiba, Danja LGA, Katsina State
4. Registered Domicile: No. 6 Mai Bedde Road, Area A, Part II, ABU Zaria
5. Permanent Postal Addr. No. 55 Katsina Road, Bakori, Katsina State.
6. Marital Status: Married.
7. Number of Children: Ten with ages: 27,23,21,19,16,14,12,12,9,6
8. Date of Appointment as Professor: January 1, 2006
9. Contact Tel. Numbers: 0703 215 4610 and 0705 518 7856
10. E-mail Addresses: [sahalu@abu.edu.ng](mailto:sahalu@abu.edu.ng), [abuyusra@gmail.com](mailto:abuyusra@gmail.com)
11. Web site: <http://dcs.abu.edu.ng/staff/sahalu>

## B. EDUCATIONAL INSTITUTIONS ATTENDED

1. Government Secondary School (now Alhudahuda College) Zaria (1977-1982)
2. Ahmadu Bello University, Zaria (1982-1984)
3. Ahmadu Bello University, Zaria (1985-1988)
4. Queen Mary & Westfield College, University of London (1990-1991)
5. St. Andrews University, Scotland (1992-1997)

## C. ACADEMIC QUALIFICATIONS

1. West African School Certificate - 1982
2. Diploma in Mathematics Education - 1984 (Distinction)
3. Bachelor of Science (Mathematics with Computer Science)- 1988 (First Class)
4. Master of Science (Computer Science) - 1991
5. Doctor of Philosophy (Computer Science) - 1997

## D. MEMBERSHIP OF PROFESSIONAL ORGANIZATIONS

1. Life Member, Association of Computing Machinery (ACM) - 2006
2. Member, Institute of Electrical and Electronic Engineers (IEEE) - 2007
3. Member (representing Nigeria), Advisory Committee of the Commission on Science and Technology for Sustainable Development in the South (COMSATS) 2017 – Date
4. Board Member, Digital Bridge Institute, Abuja 2018 – Date

## E. ACADEMIC PRIZES AND AWARDS

1. Best graduating Diploma in Mathematics Education student, Ahmadu Bello University, Zaria, Nigeria, 1982.
5. Best second-year Computer Science Student, Ahmadu Bello University, Zaria, Nigeria, 1987.

6. Best graduating Computer Science Student, Ahmadu Bello University, Zaria, Nigeria, 1988.
7. Overseas Development Administration Shared Scholarship Scheme (ODASSS) for MSc study in Queen Mary & Westfield College, University of London, 1990.
8. Federal Government (Nigeria) Scholarship for PhD Studies, 1992.
9. Instructional Technology Award (Medal plus Cash), King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 2004.
10. Vice-Chancellor's Merit Award for Leadership of a Team that Developed over a dozen software applications automating various processes in the University, Ahmadu Bello University, Zaria, Nigeria, November 2014.

## **F. COMMUNITY HONORS AND RECOGNITIONS**

1. Certificate of Merit as Favorite Lecturer by Students of Mathematics Department, Ahmadu Bello University, Zaria, 2012.
2. Certificate of honor from National Student Union Organization, 2014.

## **G. WORKING EXPERIENCE**

### **(a) Academic Positions Held**

1. Graduate Assistant, Ahmadu Bello University, Zaria, Nigeria, 1989-1990.
2. Lecturer on National Youth Service Corps (NYSC), Alvan Ikoku College of Education, Owerri, Nigeria, 1988-1989.
3. Laboratory Demonstrator, St. Andrews University, Scotland, UK, 1994-1996
4. Lecturer, Universiti Telekom, Malaysia, 1998-1999.
5. Assistant Professor, Information and Computer Science Department, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 1999-2008.
6. Visiting Reader, Abubakar Tafawa Balewa (ATBU) Bauchi, Nigeria, June-August, 2005.
7. Visiting Professor, Umaru Musa 'YarAdua University, Katsina, 2006 to 2019.
8. Professor, Ahmadu Bello University, Zaria, Nigeria, 2007 to Date

### **(b) Administrative Positions Held**

1. Head, Computer Science Unit, Department of Mathematics, Ahmadu Bello University, Zaria, 2008 to 2016
2. Director, Iya Abubakar Computer Center, ABU Zaria, April 2009 – April 2014
3. Chairman, Science Complex G (comprising Faculty of Science, Faculty of Pharmaceutical Sciences, Center for Energy Research and Training, Center for Biotechnology Research and Training and Iya Abubakar Computer Center), 2009-2015.
4. Chairman, Ministerial Implementation Committee for the Conversion of Kaduna Polytechnic to City University of Technology. Inaugurated October 3, 2010 by Honorable Minister of Education, Professor Ruqayyatu Ahmed Rufa'I, OON.
5. Pioneer Director, Institute of Computing & ICT, ABU Zaria, 2014 to 2018

6. Chairman, Implementation Committee, Proposed Dialogue ICT University, Kaduna, 2014 to 2016
7. Pioneer Head of Department, Department of Computer Science, ABU, Zaria, 2016 to Date
8. Acting Director, Iya Abubakar Institute of ICT, Ahmadu Bello University, Zaria, May 2020 to Date

### **(c) Teaching at University Level (1988 to Date)**

1. Taught a significant portion of courses in a typical computer science program including Operating Systems, Data Communications and Telecommunication Systems, Parallel and Distributed Processing, Fundamentals of Programming Languages, Data Structures, Discrete Structures, Design and Analysis of Algorithms, Program Design, Web Application Engineering, Programming in C, Java and Python, etc.
2. Taught High-Performance Computing, Advanced Computer Algorithms, ICT & Research Methodology, Management and Entrepreneurship, Application Development for Internet Based Services, Data Security and Encryption, Big Data Analytics courses at postgraduate level.
3. In my about thirty years of teaching at university level, I taught at universities in Nigeria, UK, Asia and Arabia.

### **(d) Curriculum Development**

Lead a team of faculty members responsible for in-house training as a result of a paradigm shift in instruction (from imperative paradigm to object-oriented paradigm). Also heavily involved in curriculum development and curriculum assessment for the past fifteen years.

#### **Key accomplishments:**

1. Redesigned computer science basic courses according to the recommendations of IEEE-CS/ACM joint Task Force report published in December 2001.
2. Trained colleagues (through jump-start sessions) to provide the necessary manpower for teaching courses according to the new paradigm.
3. Co-lead a team that successfully conducted a Self-Assessment Exercise for the Computer Science program of my department. Self-Assessment is an intensive exercise that requires reviewing and assessing all aspects of a program in readiness for accreditation by international bodies like ABET. Ours is among the first seven programs in the University to go through this exercise successfully.
4. Won a Distinguished Service Award given by the College of Computer Science and Engineering
5. Published a paper, in ACM ITiCSE'2005, titled: *Principles of curriculum design and revision: a case study in implementing computing curricula CC2001*

6. Participated as a resource person in editing the National Universities Commission's Postgraduate Benchmark Minimum Academic Standard (PG BMAS), 2011.
7. Participated as a resource person in developing the National Universities Commission's (NUC) Computing Benchmark Minimum Academic Standard (Computing BMAS), 2017.
8. Serving as a resource person in NUC's *ad hoc* accreditation panels since 2008.
9. Served as a resource person for the National Accreditation Board of Ghana.
10. Member in Charge of B.Sc. Computer Science Program in the 2021 NUC National Curriculum Review.

### **(e) Capacity Building for Academic Staff**

I have led a team of colleagues, at King Fahd University of Petroleum and Minerals (KFUPM) Saudi Arabia, in conducting training sessions in Java and Authorware as outlined below. I have also conducted training sessions at Iya Abubakar Computer Center, Ahmadu Bello University, Zaria, Nigeria. I taught Java Programming training courses under Oracle Academic Initiative program. These are summarized here:

1. Workshop on ***Jump-Starting CCSE Faculty on Java***. Organized by College of Computer Science and Engineering (CCSE), March 2000.
2. Workshop on ***Online Course Development Using Macromedia Authorware***. Jointly organized by College of Computer Science and Engineering and KFUPM's Academic Development Center, July 9 – 10, 2002.
3. Workshop on ***Online Course Development Using Macromedia Authorware***. Jointly organized by College of Computer Science and Engineering and KFUPM's Academic Development Center, September 1 – 3, 2002.
4. Short course on ***Introduction to C***, Iya Abubakar Computer Center, ABU Zaria, Nigeria, 14 – 18 August, 2000.
5. Short course on ***Introduction to Java***, Iya Abubakar Computer Center, ABU Zaria, Nigeria, August, 2001.
7. Served as a resource person where I taught Java Programming at the Digital Bridge Institute, Abuja, 2006.

### **(f) Strategic Planning**

I have been a member of my college's strategic planning committee for two years. I have also been a member of the university's strategic planning committee. We have worked and developed, in consultation with Mr. Neville Lake, an Australian Consultant, a strategic plan for KFUPM. The exercise had been completed successfully. I received an award for outstanding contribution in this project.



I also participated as a resource person in strategic planning for faculties and departments at Ahmadu Bello University, Zaria.

### **(g) E-Learning Experience**

I'm a recognized figure in the design, development, facilitation and mentoring on online courses, especially in KFUPM. I have been serving in a number of committees, at college and university levels, on e-learning. I made a number of presentations on sharing our experiences with respect to online course development, delivery and facilitation at KFUPM.

#### **Key accomplishments:**

1. Led a project team that developed three multimedia-rich online courses at KFUPM. One of these courses, Data Structures, was the first online course at KFUPM. At that initial experience, team members played all roles in the development process; as subject matter experts, instructional designers, animators, programmers, etc.
2. Facilitated delivery of the developed online courses over several semesters, blending at the course level within the same degree program.
3. Won an award (Cash and Plaque) for Use of Technology in Teaching and Learning at KFUPM in 2004.
4. Published a paper in which I designed an online course development procedure that informed online courseware development at KFUPM.
5. Served as Principal Investigator and co-investigator on projects related to technology-based education in KFUPM, which were completed successfully.
6. Published x papers in international journals and conferences related to e-Learning experience sharing and the employment of IT in education in general.
7. Served at dozens of conferences and fora as invited speaker on matters related to the employment of ICT for teaching, learning and development.
8. Participated in an Online Facilitators course anchored by Dr. Susan Manning, University of Illinois, and successfully certified as an Online Facilitator in 2006.
9. Served in many committees that developed guidelines for the design, development, maintenance, evaluation and Intellectual Rights issues relating to online courseware in KFUPM.
10. Earned commendations over many years for outstanding contributions in the development of e-learning at KFUPM.

### **(h) Postgraduate Supervision Experience**

The following are among the students that I supervised who have successfully completed their study.

1. ***Predicting Students' Performance using the Nearest Neighbour Binary Cuckoo Search Algorithm***, Olayemi Olalekan David, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2019.
2. ***Enhanced Financial Fraud Detection with Fuzzy Soft Set using Case Based Reasoning, Sada***, Wasilah Muhammad, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2019.
3. ***Semantic Web Framework for Medical Diagnosis and Monitoring IPA in a Swappable Network***, O.N. Oyelade, PhD Thesis, Ahmadu Bello University, Zaria, 2018.
4. ***Modeling and Simulation of Intelligent Pedestrian Crossing Control System for Improved Safety***, Oyenike Mary Olanrewaju, PhD Thesis, Ahmadu Bello University, Zaria, 2018.
5. ***Enhanced Encryption using Next Nearest Prime Key Generation Algorithm***, Zainab Adamu Aliyu, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2018.
6. ***Development of an Enhanced Instance-Based Learning System for Ontology Matching***, Hindatu Mohammed, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2017.
7. ***Educational Data Mining using Association Rule for Enhancing Academic Decision Making***, Musa Shamsuddeen, M.Sc. Dissertation, Kaduna State University, Kaduna, 2017.
8. ***Extending Router Capabilities to Detect and Mitigate Distributed Denial of Service Attacks***, Rasheeda Abdulkadir Idris, M.Sc. Dissertation, Kaduna State University, Kaduna, 2017.
9. ***TripleFetchQL: A Platform for Integrating Relational and NoSQL Databases***, Ooju, Oluwafemi Emmanuel, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2015.
10. ***Fault Tolerance using Swarm Intelligence Job Scheduling in Grid Computing***, Idris Hajara, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2015.
11. ***Design And Implementation Of A Service Oriented Payroll System (Sops)***, Abdullahi Buhari, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2015.
12. ***Design and Implementation of Web Based Academic Information System (WeBAIS) for Nigerian Universities***, Muktar M. Aliyu, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2015.
13. ***Modelling and Performance Analysis of TCAS using UPPAAL***, Bakare Kareem Ayeni, Ph.D. Thesis, Ahmadu Bello University, Zaria, 2012.
14. ***Digital Preservation Policy and Implementation Strategies for National Information Centers in Nigeria***, Ezra Shiloba Gbaje, Ph.D. Thesis, Ahmadu Bello University, Zaria, 2011.
15. ***DualFetchQL SYSTEM: A Platform for Integrating Relational and Nosql Databases***, ThankGod S. Adeyi, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2014.

16. ***Performance Evaluation of A New Hybrid Process Scheduling Algorithm***, Shidali Gloria Agbonmere, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2014.
17. ***A scheduling Algorithm for Minimizing the Penalty Ratio Variance***, Okpoko Onyinye, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2014.
18. ***Use of Communication Technologies to Manage Road Traffic Crashes***, Mohammed Auwalu Magaji, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2014.
19. ***Performance Evaluation of Graphic Rendering using OpenCL and Intel Cilk Plus***, Yaknan John Gambo, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2013.
20. ***Empirical Performance Analysis of Parallel Programs on Wired and Wireless LANs***, Charles I. Saidu, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2013.
21. ***A User-Assisted Ontology Alignment System***, Jauro Fatsuma, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2013.
22. ***Extending an Ontology Alignment System with a Lexical Database***, Baththama Bello Alhassan, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2013.
23. ***A Secured Face Recognition System for ATM Applications***, Fred Henry K. Adeyaju, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2011.
24. ***Process Scheduling in Longest Job First (LJF) Algorithm: A Framework for Eliminating Starvation***, ABDULLAHI Ibrahim, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2012.
25. ***3D-Visualization Of Geo-Spatial Data On The Web***, ALIYU Salisu, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2011.
26. ***Improving Ontology Matching Towards Semantic Interoperability***, Aminu Mustapha Bagiwa, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2010.
27. ***Implementation and Parallelization of a SAT Solver Algorithm***, Abdullahi Mohamed, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2010.
28. ***Wireless Local Area Network Analysis: A Case Study of ABU Wireless Area Network***, Shehu Muhammad Tukur, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2010.
29. ***Algorithms for Rhotrix Multiplication on Two-Dimensional Process Grids***, Ezugwu El-Shamir Absalom, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2010.
30. ***Remote Monitoring and Management of Servers from Mobile Devices***, Ahmad Barroon Isma'eel, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2010.
31. ***A Framework for Semantic Web Services Discovery using Improved SAWSDL-MX***, Agushaka Jeffrey Ovre, M.Sc. Dissertation, Ahmadu Bello University, Zaria, 2009.
32. ***Optimizing the Search for Access Control Lists for IP Packet Filtering Applications***, MI Buhari, Ph.D. Thesis, Co-advisor supervisor (September 2000 – September 2003), Multimedia University, Malaysia.

33. ***A New Algorithm for the Circuit Satisfiability Problem***, Ahmed Bagais, MS thesis, Information & Computer Science Department, KFUPM, due June 2007.
34. ***Learnability Results for Elementary Formal Systems***, Shahid Husain, MS thesis, Information & Computer Science Department, KFUPM, January 2007.
35. ***Software Watermarking: Protecting Copyrights & Preventing Piracy***, MA Al-Dharrab, MS thesis, Information & Computer Science Department, KFUPM, February – May 2005.

### **(I) Leadership in Research/Software Development Projects (Recent)**

Recent software development projects that I lead include the ones listed below. These projects serve multiple purposes including mentorship for young software developers, generating revenue for Ahmadu Bello University as well as for the beneficiary organizations while providing increased service delivery by the beneficiary organizations.

1. Attracted software development contracts for Ahmadu Bello University from Al-Qalam University Katsina, 2017. After managing the portals for two years, we trained their staff and sold the source code to the University, as part of our community and mentorship services.
2. Won a software development grant in 2017, from the Nigeria Communications Commission (NCC), for the development of a wearable e-band tracking system.
3. Sourced an intervention, in 2018, from NITDA for building a solar-powered IT Hub for Ahmadu Bello University, Zaria. Project cost is three hundred and thirty one million naira (₦331m)
4. Lead, Development Team, for the project that developed new portals for flexible payment and registration for the School of Postgraduate Studies, Ahmadu Bello University, Zaria (2018-2019).
5. Lead, Development Team, for the project developing a suite of software examination processing software for the National Teachers' Institute, Kaduna (2018-2019).
6. Lead, Development Team, for a project developing a suite software applications for the NTA TV College, Jos (2018-2019).
7. Lead, Development Team, for a project developing a suite software applications for the Federal Radio Corporation of Nigeria, Abuja (2018-2019).
8. Lead, Development Team, for a project developing an Agricultural Knowledge Base for extension services for the National Agricultural Extension and Liaison Services, Ahmadu Bello University, Zaria (2018-2019).
9. Lead, Development Team, for a project developing a suite software applications for the NILEST, Zaria (2019-2020).
10. Lead, Development Team, for a project developing a suite software applications for Nasarawa State University, Keffi (2019-2020).
11. Lead, Development Team, for a TETFund-sponsored project developing an Academic Planning and Monitoring Information System (APMIS) and related sundry applications for Ahmadu Bello University, Zaria (2020-2021).

## (J) Leadership in Software Development Projects (Past)

I have developed, participated in the development and supervised software development projects during the last twenty seven years of my research and work career. The table below mentions some of them.

S/No	Project	Achievements	Role
1.	An Artificial Intelligent based Approach for Remote Diagnosis, Treatment and Awareness using Sensor Technology	Won TETFunds National Research Fund Project for 2020 Grant Cycle	Lead researcher
2.	Naira: A Parallel <sup>2</sup> Haskell Compiler	This is the second largest Haskell program written in the Haskell programming. The compiler generates C program as output and generates parallel code that runs on parallel computers	Sole designer and implementor
3.	Design and Implementation of a Students' Organizer	A user-friendly software that students use to manage and organize their time at a university	Project mentor and supervisor
4.	E-Learning Courseware	Designed and implemented three e-learning courses. Offered these courses completely online	Project team leader and co-developer
5.	KADA-Legend 1.0	A commercial-grade, robust secondary school records manager. Adopted in 16 pilot schools in Katsina state and other private schools.	Project mentor and supervisor
6.	ExamsLOGIC 1.0	A robust examinations records processor for universities. Being adopted as pilot in a	Project lead advisor and strategist

		department for all ABU faculties.	
7.	NTI GreenLogic	Custom-designed software to solve enrolment and other statistics-related problems faced by NTI in their MDG capacity building programs.	Project lead and strategist
8.	SmartMEDIC 1.0	Software under development to automate the operations of ABU's Sick Bay	Project lead and strategist
9.	Automation of ABU Bursary Department	Software development started in December, 2010.	Initiator and project leader
10.	Staff Portal and Human Resource Management Information System for Nigerian Universities	To automate key processes in a university. Supported by NITDA.	Principal Investigator.
11.	Applications suite for automating key processes in ABU Zaria	Development of discrete but integrated portals for online forms sales, course registration, exam processing, staff portal, Computer Based Testing, etc	Project Leader and Mentor.
12.	Development of a suite of applications for revenue generation.	Developed and deployed applications for School of Basic and Remedial Studies, Funtua; Division of Agricultural Colleges (Samaru, Kaduna and Kabba); Kaduna State University; National Water Resources Institute, Kaduna, among others.	Project Leader and Mentor.

### **(k) Attraction/Participation in Sponsored Research Projects (pre-2008)**

I have participated in a number of university-funded projects. The following summarizes the projects accomplished at KFUPM.

<b>Project Title</b>	<b>Project Goal</b>	<b>Role</b>
The Art of Teaching Online	A one-year project (submitted to Saudi Ministry of Higher Education) containing three training workshops aimed at disseminating KFUPM's elearning expertise with sister Saudi universities	Team Member. Completed.
Bloom's Taxonomy in Computer Science Curriculum	Study the level of infusion of higher-level cognitive skills to students in our CS program. Develop a teaching-strategy-cognitive skill matrix for instructors to use for effective infusion of various cognitive skills	Co-Investigator. Completed.
Promoting Technology-Based Learning	Investigate the availability of, extent of use of and benchmark the use of technology in KFUPM. Make recommendations and provide an Action Plan for effective ICT use for teaching and research	Team Member. Completed.
A Visualization Tool for basic ICS courses Allowing Students to Visualize Data Structures	Develop a user-friendly visualization tool to assist novices in learning data structures	Co-Investigator. Completed.
KFUPM Strategic Plan Project (Oct 2004 – May 2005)	Develop a short-term and a long-term strategic plan for KFUPM	Team Member. Completed.
Technology-Based Education in KFUPM (April 2003 – May 2004)	Study existing tools and technologies used world-wide for enhancing learning. Come up with the best combination of tools and technology most suitable for KFUPM	Principal Investigator. Completed.
Development of KFUPM Strategic Plan (Jan 2003 – May 2005)	Develop a competitive commercial proposal (in competition with two other teams) for developing a strategic plan for KFUPM	Team Member. Completed.
Online Course Development: ICS 201 –	Design and develop a multimedia-rich online course that can be taken completely online.	Principal Investigator. Completed

Introduction to Computer Science (Sept 2001 – Nov 2002)		
Online Course Development: ICS 102 – Introduction to Computing (Sept 2001 – Nov 2002)	Design and develop a multimedia-rich online course that can be taken completely online.	Principal Investigator. Completed.
Online Course Development: ICS 202 – Data Structures (April 2000 – August 2000)	Design and develop a multimedia-rich online course that can be taken completely online.	Principal Investigator. Completed.

## H. COMMUNITY SERVICE

### (a) External Examination

1. External Examiner for the B. Tech. Computer Science Program of Abubakar Tafawa Balewa University, Bauchi, 2009-2011.
2. External Examiner for the B. Sc. Computer Science Program of University of Jos, 2010-2012.
3. External Examiner for the B. Sc. Computer Science Program of Nigeria Defense Academy, Kaduna, 2010-2012.
4. External Examiner for the B. Ed. Computer Science Program of Usmanu Danfodio University, Sokoto, 2012-2014.
5. External Examiner for the B. Tech. Computer Science Program of Federal University of Technology, Yola, 2010-2013.
6. External Examiner for the B. Sc. Computer Science Program of University of Abuja, 2010-2012.
7. External Examiner for the B. Sc. Computer Science and B. IT. Programs of Kebbi State University of Science and Technology, Aliero, 2011-2013.
8. External Examiner for the B. Sc. Computer Science Program of Kano University of Science and Technology, Wudil, 2010-2012.
9. External Examiner for the B. Sc. Computer Science Program of Gombe State University, Gombe, 2013-2015.
10. External Examiner for the B. Sc. Computer Science Program of Bayero University, Kano, 2010-2013.
11. External Examiner for the B. Sc. Computer Science Program of Al-Qalam University, Katsina, 2013-2015.
12. External Examiner for the B. Sc. Computer Science Program of Kano University of Science and Technology, Wudil, 2014-2017.
13. External Examiner for the B. Sc. Computer Science Program of Sule Lamido, Kafin Hausa, 2019-Date.



### **(b) Participation in Academic Review**

I have participated in a number of external reviews for appointments to the ranks of Associate Professor and Professor for a number of candidates from various universities. I have also been a reviewer of a number for Conferences, Journals and academic programs. Some of the recent ones are:

1. Workshop on Information and Computer Science, WICS2002, KFUPM, Saudi Arabia, March 17-18 2002.
2. Journal of Network and Computer Applications (JNCA), published by Elsevier Science four times a year.
3. A reviewer of course modules of the Postgraduate Diploma program in Distance Education and Training, Arabian Gulf Univeristy, Bahrain.
4. International Conference of Information & Computer Science, November 28-30 2004, King Fahd University of Petroleum & Minerals, Dhahran Saudi Arabia.
5. Recently participated in designing a BS in Computer Science program for a new university in Hayel, Saudi Arabia. I was among a visitation team to Hayel (November 29 – December 1, 2005) to assess the readiness of university's take-off.
6. Reviewer, Fourth GCC Industrial Electrical and Electronics Conference (IEEE-GCC), 2007.

### **(c) Contributions to Home Community**

1. Continuous support for maintenance of Balarabe Primary School over the years.
2. Continuous support for teachers and maintenance of Balarabe Community Secondary School over the years.
3. Payment of ₦200,000 seed money required to attract highest amount of UNICEF support for primary schools in Katsina State.
4. Attracted a School Support Project (Digital Awareness Programme), for the Year 2020, from the Nigerian Communications Commission for the Construction of One (1) Unit of Compute Laboratory and Installation of ICT Equipment.
5. Provide educational support (school fees payment, etc) for natives of Unguwar Balarabe out of which sixteen (16) have completed Diplomas, fifteen (15) have completed degrees and thirteen (13) are undergoing their degree programs.
6. Started a Dry Season Farming initiative in 2019 with the construction of two high capacity boreholes. This is to engage the youth and create local value in this farming-centric community that has not embraced dry season farming in the scale they should.
7. I have channeled my little resources over the years in purchasing arable lands that I give to relatives to farm without charges. I also lately realised it was better to offer personal monetary and material loans to encourage people to farm than for them to rely on handouts. I started these personal loans in the 2020 farming season with the hope that it will be a win-win for all of us.

#### **(d) Other Community Services**

1. Chairman, Ministerial Implementation Committee for the Conversion of Kaduna Polytechnic to City University of Technology. Inaugurated October 3, 2010 by Honorable Minister of Education, Professor Rukaiya Ahmed Rufa'i, OON.
2. Chairman, McArthur ICT Sub-Committee, Ahmadu Bello University, Zaria. From September 16, 2010.
3. Member, Member, McArthur Projects Implementation Committee (PIMC), Ahmadu Bello University, Zaria. From September 16, 2010.
4. Senate Representative, Senate Estimates Committee, Ahmadu Bello University, Zaria. From October 22, 2010.
5. Leadership in the organization of two International Conferences on E-Learning in Higher Education (in 2004 and 2006 as mentioned earlier). I won an award for this also as reported earlier in this document.
6. Leadership in coordinating the teaching of various multi-section courses among various instructors over the past eight to nine years.
7. Leadership in writing five successful funded projects proposal and leading those projects to successful completion over the past six to seven years. These projects are shown in the "Funded Projects" section of this document.
8. Lead the offering of/single handedly offered training programs for teachers and students both at Saudi Arabia and Nigeria. Some of these training programs are listed in the "Training Programs Conducted" section of this document. I won an award in KFUPM for this.
9. Co-Lead the successful design and development of the first and only fully-online course at KFUPM. I won an Instructional Technology Award as a result of this effort as mentioned in the "Awards and Prizes" section of this document.
10. Providing leadership in many areas of elearning in KFUPM including publications in international journals and conferences.
11. Chaired the departmental curriculum committee two times towards reviewing the BS in Computer Science program. I have been a member of the curriculum committee since 1999. I have participated in the department's Self Evaluation exercise in pursuit of ABET's equivalency certification of our program with Computer Science programs in North America.
12. A contributor in the funding of a number of Remedial Programs in Nigeria (currently active at centers in Funtua and ATBU Bauchi) designed to assist and (re)prepare students for GCE and 100 level examinations.
13. A contributor in managing and financing a revolving loan scheme tagged FFF (Funding For the Future) designed to ease admission into KFUPM by bright but financially less to do students.
14. Chairman, Mentorship Committee, Ahmadu Bello University, Zaria, 2017 to Date.
15. Member Representing Congregation (Elected twice), Search Team for the Appointment of Vice-Chancellor, Ahmadu Bello University, Zaria, 2014 and 2019.

## I. MAJOR CONFERENCES, WORKSHOPS AND COURSES ATTENDED

I have participated in a number of workshops aimed at Excellence in University Teaching. These workshop cover aspects of traditional face-to-face teaching as well as teaching online. Some of these are:

1. Presented a seminar titled ***Experiences Facilitating Online Courses at KFUPM***, at Workshop on E-Learning in Higher Education (WEHE 2006), organized by the Deanship of Academic Development, King Fahd University of Petroleum & Minerals, Dhahran Saudi Arabia, March 14-15, 2006.
2. Presented a paper titled ***Principles of curriculum design and revision: a case study in implementing computing curricula CC2001***, at the ACM Special Interest Group on Computer Science Education Annual Conference on Innovation and Technology in Computer Science Education (ITicSE'2005), Monte de Caparica, Portugal.
3. Presented a paper titled ***Use of Internet for Online Course Delivery: A Case study*** at the International Conference of Information & Computer Science, November 28-30 2004, King Fahd University of Petroleum & Minerals, Dhahran Saudi Arabia.
4. Presented a seminar titled ***A Comparative Study of Offline and Online Course Offerings at KFUPM*** at KFUPM Experience-Sharing Workshop on E-Learning, May 26, 2004.
5. Presented a paper, titled: ***Values Affecting Student Motivation: A Case Study*** at a KFUPM Workshop on Faculty and Student Motivation, May 2004.
6. Presented a seminar titled ***Online Course Development & Delivery: Issues and Challenges*** at KFUPM Experience-Sharing Workshop on E-Learning, June 3, 2003.
7. Presented a paper titled ***Optimizing Resource Usage Using Parallel Active Networks***, 4<sup>th</sup> Workshop on Information and Computer Science, WICS2002", KFUPM, Saudi Arabia, March 17-18 2002.
8. Presented a paper titled ***Measuring Large Software Systems: An Experience with Naira***, Internatinal Conference on the Third Workshop in Computer Sciecnce, King Fahd University of Petroleum & Minerals, October 2000.
9. Presented a seminar tititled ***A Flavour of Glasgow Parallel Haskell (GpH)***, Information & Computer Science Department, KFUPM, June 26, 2000.
10. Presented a seminar titled ***Introduction to Functional Programming Languages***, Faculty of Information Technology, University Telekom, Melaka Campus, Malaysia, September 10, 1998.
11. Presented a paper titled ***Multithreaded Code Generation in Naira***, at Scottish Functional Parallel Interest Group (SCOFPIG), Dept. of Computer Science Heriot-Watt University Riccarton, Edinburgh, December 8, 1997.
12. Presented a paper titled ***Naira: A Parallel<sup>2</sup> Haskell Compiler*** at Implementation of Functional Languages: 9th International Workshop, IFL'97, St. Andrews, Scotland, UK, September 1997.

13. Invited speaker on Naira: A Parallel Functional Language Compiler for Message-Passing Multicomputers, Glasgow University, Scotland, May 26, 1997.

## **J. EXTRA-CURRICULAR ACTIVITIES AND INTERESTS**

1. Sports (Football, jogging)
2. Computer Games

## **K. PUBLICATIONS IN JOURNALS AND CONFERENCES**

### **(a) Books**

1. S.B. Junaidu *et. al.* (2013), **Computer Science for Fresh Undergraduate Students**, ISBN 978-125-357-6, Ahmadu Bello University Press Limited, Zaria.
2. S.B. Junaidu *et. al.* (2021), **Solved Problems in Computer Programming I**, In Press.
3. S.B. Junaidu *et. al.* (2021), **Solved Problems in Computer Programming II**, In Press.
4. S.B. Junaidu *et. al.* (2021), **Solved Problems in Data Structures**, In Press.

### **(b) Journals and Conferences**

1. **S Junaidu**, T. Davie and K Hammond, **Naira: A Parallel<sup>2</sup> Haskell Compiler**. Lecture Notes in Computer Science, Springer Verlag, Volume 1467, pp. 215-231, 1998.
2. H-W Loidl, PW Trinder, K Hammond, **S Junaidu**, RG Morgan, SL Peyton Jones, **Engineering Parallel Symbolic Programs in GpH**. Concurrency Practice and Experience, 11(12):701-752, October 1999.
3. PW Trinder *et al*, **Low-level Architecture Independence of Glasgow Parallel Haskell**, Glasgow Functional Programming Workshop. Pitlochry, Scotland, September 1998.
4. **S Junaidu** and PW Trinder, **Profiling Naira: A Compiler with Irregular Parallelism**, 1<sup>st</sup> Scottish Functional Programming Workshop, August 29-September 1<sup>st</sup>, 1999, University of Sterling, Brige of Allen, Scotland.
5. **S. Junaidu** and PW Trinder, **Measuring Large Software Systems: An Experience with Naira**, Third Workshop in Computer Sciecnce, King Fahd University of Petroleum & Minerals, October 2000.
6. **S. Junaidu** and PW Trinder, **Parallelising Large Irregular Programs**, Journal of Information Scinces, 140 (2002) 229-240.
7. M.I. Buhari, Akbar, **S. Junaidu** and Saleem (2001), **Parallel and Fault Tolerant Database for Applet Oriented Active Networks**, Conference on Electrical, Electronics, Communication and Information (CECI'2001) organized by University Indonesia, Indonesia, March 7-8, 2001.
8. M.I. Buhari, Akbar, **S. Junaidu** and Saleem (2001), **Parallel and Fault Tolerant Database for Access Control in Active Networks**, Tunisian-German conference on Smart Systems and Devices '01, organized by Universitöt der Bundeswehr München, Germany at Tunisia, March 27-30, 2001.
9. M.I. Buhari, Akbar, Kalamullah, **S. Junaidu** and Saleem (2001), **Parallel Processing of data on the fly in active networks**, Third Conference on Large-Scale Scientific

- Computations '01, organized by Bulgarian Academy of Sciences, Bulgaria, June 6-10, 2001.
10. M.I. Buhari, Akbar, **S. Junaidu** and Saleem (2001), **Automatic Signature files update in Antivirus software using Active Packets**, ACS/IEEE International Conference on Computer Systems and Applications, organized by Arab Computer Society, Lebanon at Beirut, June 26-29, 2001.
  11. Akbar Badhusha, Buhari, **S. Junaidu**, Saleem, **Radial Networks Reconfiguration Using Active Packets**, The Proceedings of The International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2001), Monte Carlo Resort, Las Vegas, Nevada, USA, June 25-28, 2001, Vol – 4, pp 1 ~ 9.
  12. M.I. Buhari, Akbar, **S. Junaidu** and Saleem (2001), **Mirror Site Update Using Active Networks**, 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001) and the 7th International Conference on Information Systems Analysis and Synthesis (ISAS 2001), organized by International Institute of Informatics and Cybernetics, Orlando, USA, July 22-25, 2001.
  13. Seyed Mohamed Buhari, Kallamullah Ramli, **S. Junaidu**, Akbar Badhusha, Axel Hunger and Saleem, **Proper Resource Sharing among Universities using Active Networks**, The Proceedings of The Brunei International Conference on Engineering and Technology 2001, Brunei, October 9-11, 2001, pp 495 ~ 505.
  14. M.I. Buhari, Akbar, **S. Junaidu** and Saleem (2001), **Efficient Multimedia Data Transmission Using Active Networks**, International Conference on Imaging Science, Systems, and Technology (CISST '2001), Monte Carlo Resort, Las Vegas, Nevada, USA organized by The University of Georgia, Georgia, June 25-28, 2001.
  15. Akbar Badhusha, Buhari, **S. Junaidu** and Saleem, **Improper website blocking protection using active networks**, The Proceedings of The International Conference on Information technology and multimedia at UNITEN (ICIMU 2001), Malaysia organized by UNITEN, Malaysia, August 13-15, 2001, pp 292 ~ 296.
  16. M.I. Buhari, Akbar, **S. Junaidu** and Saleem (2001), **Enhancing Quality of Service in TCP/IP Using Active Networks**, 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001) and the 7th International Conference on Information Systems Analysis and Synthesis (ISAS 2001), organized by International Institute of Informatics and Cybernetics, Orlando, USA, July 22-25, 2001
  17. M.I. Buhari, **S. Junaidu**, Kalamulla, M.A. Badhusha, H.M. Saleem and Hunger, **Optimizing Resource Usage Using Parallel Active Networks**, The Proceedings of 4<sup>th</sup> Workshop on Information and Computer Science, WICS2002”, KFUPM, Saudi Arabia, March 17-18 2002.
  18. **S. Junaidu** and J. Al-Ghamdi , **Developing an Online Data Structures Course using Authorware**, Journal of the United States Distance Learning Association (USDLA), Volume 16, No. 10, October 2002
  19. **S. Junaidu** and J. Al-Ghamdi , **Tips for Developing Media-rich Online Courses**, Journal of the United States Distance Learning Association (USDLA), Volume 16, No. 12, December 2002.

20. **S. Junaidu** and J. Al-Ghamdi, **Comparative Analysis of F2F and Online Course Offerings: KFUPM Experience**. International Journal of Instructional Technology and Distance Learning (IJITDL), April 2004.
21. **S. Junaidu**, **Values Affecting Student Motivation: A Case Study**, Workshop on Faculty and Student Motivation, King Fahd University of Petroleum & Minerals, Dhahran 31261, May 23, 2004.
22. **S. Junaidu**, **Use of Internet for Online Course Delivery: A Case study**. Turkish Online Journal of Distance Education-TOJDE October 2004 ISSN 1302-6488 Volume: 5 Number: 4
23. M.R.K. Krishna Rao, **S. Junaidu**, T. Maghrabi, M. Shafique, M. Ahmad and K. Faisal (2005), **Principles of curriculum design and revision: a case study in implementing computing curricula CC2001**, to appear in Proc. of the ACM Special Interest Group on Computer Science Education Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE'2005).
24. J. Al-Ghamdi and **S. Junaidu**, **Emulating F2F for A Distance Learning Environment**, International Journal of Applied Computing & Informatics. Accepted.
25. **S. Junaidu**, **Effectiveness of Multimedia for Learning and Teaching Data Structures Online**. The 2007 World Congress in Computer Science, Computer Engineering, & Applied Computing Las Vegas, Nevada, USA, June 25-28, 2007.
26. **S. Junaidu**, A. Laradji and A. Umar, **Powers of integers as sums of consecutive odd numbers**. The Mathematical Gazette, Vol. 94, No. 529, pp. 117-119, March 2010.
27. J.O. Agushaka and **S. Junaidu**, **A Framework for Semantic Web Services Discovery using Improved SAWSDL-MX\***, International Journal of Computer Science & Emerging Technologies (IJCSET), Volume 1, Issue 2, 2010.
28. Ezugwu E. Absalom, A. O. Ajibade, **S. Junaidu**, **Algorithm design for row-column multiplication of n-dimensional rhotrices**, Global Journal of Computer Science and Technology (GJCST), USA, Volume 11 Issue 1 Version 1.0 January 2011.
29. Bakare K. A. and Sahalu, J. (2012). **Modeling and Analysis of GPS based Traffic Alert and Collision Avoidance System (TCAS) Using 'UPPAAL'**, International Journal of Engineering Science and Technology (IJEST) Vol. 3 No. 8 August 2011. pp 6751- 6765.
30. Bakare K. A. and Sahalu, J. (2012). **Real-Time Embedded Systems Modeling Approaches**. International Journal of Artificial Intelligence and Mechatronics (IJAIM) pp 12-19.
31. Bakare K. A. and Sahalu, J. (2012). **UPPAAL, a Solution to Real-Time Embedded System Predesign Performance Analysis**, British Journal of Engineering and Technology (BJET) PP 10-26.
32. Bakare Ayeni K. and Junaidu Sahalu B. (2013). **Integration of Radar System with GPS-Based Traffic Alert and Collision Avoidance System (TCAS) for Approach Control Separation**, Journal of Aviation Technology and Engineering: Vol. 2: Iss. 2, Article 6 pp 56-62.
33. Bakare K. A. and Sahalu, J. (2013). **Review of Performance Analysis Methods for Real-Time Embedded Systems Design**, GESJ: Computer Science and Telecommunications Reviewed Electronic Scientific Journal ISSN 1512-1232.

No.3(39), pp. 11-29 (<http://gesj.internet-academy.org.ge/download.php?id=2059.pdf>)

34. Ezugwu E. Absalom, Buhari M. Seyed, Obiniyi A. Afolayan, **Junaidu B. Sahalu**, (2013) "**A Generic Reference Architecture for Collaboratory Scientific Virtual Laboratory**", International Journal of Grid and High Performance Computing, 5(1), pp.37-52.
35. ThankGod S. Adeyi, Saleh E. Abdullahi and **Sahalu.B Junaidu** "DualFetchQL SYSTEM: A PLATFORM FOR INTEGRATING RELATIONAL AND NoSQL DATABASES ' International Journal of Engineering Research & Technology, Vol 2 Issue 12, December 2013 ISSN (online): 2278-0181 ([www.IJERT.org](http://www.IJERT.org)) Pg 1973 – 1981
36. Ezugwu E. Absalom, Buhari M. Seyed, **Junaidu B. Sahalu**, (2013)."**Virtual Machine Allocation in Cloud Computing Environment**", International Journal of Cloud Applications and Computing, 3(2), pp.47-60.
37. Abdulrazaq Abdulrahim, Saleh E. Abdullahi and **Junaidu B. Sahalu** "A New Improved Round Robin (NIRR) CPU Scheduling Algorithm' International Journal of Computer Applications (ISSN 0975-8887), Volume 90 - No 4, March 2014 ([www.IJCA.org](http://www.IJCA.org)) Pg 27 – 33
38. Fatsuma Jauro, **S. B. Junaidu** and S. E. Abdullahi "Falcon-AO++: An Improved Ontology Alignment System" International Journal of Computer Applications (ISSN 973-93-80881-72-4), Volume 94 - No 2, May 2014 ([www.ijcaonline.org](http://www.ijcaonline.org)) Pg 1-7
39. Ashiru Simon, Saleh Abdullahi and **Sahalu Junaidu** "Dynamic Round Robin with Controlled Preemption (DRRCP)' International Journal of Computer Science Issues, Vol 11, Issue 3, No 1, May 2014 ISSN(print) 1694-0814 | ISSN (online): 1694-0784 ([www.IJCSI.org](http://www.IJCSI.org)) Pg 109 – 117
40. Absalom E. Ezugwu, Marc-Eduard Frincu and **Sahalu B. Junaidu**. (2014). "**Performance Characterization of Heterogeneous Distributed Commodity Cluster Resources**," Proceedings of the 2014 6th International Conference on Adaptive Science and Technology, (ICAST 2014) Covenant University, Canaanland, Ota, Ogun State, Nigeria.
41. Absalom E. Ezugwu, Marc E. Frincu, **Sahalu B. Junaidu**, (2014) " **A Reference Architectural Pattern: Component-based Scheduling System for Heterogeneous Computing Environment**," 2014 Annual Global Online Conference on Information and Computer Technology. (CICT 2014). Sullivan University (in press)
42. Ezugwu, A. E., Buhari, S.M. and **Junaidu, S.B.** (2015) "**Resource management system for scientific virtual laboratory applications**", *Int. J. Grid and Utility Computing*, Vol. 6, No. 1, pp.8–21.
43. Absalom E. Ezugwu, Marc E. Frincu , Seyed M. Buhari, **Sahalu B. Junaidu**. (2015). Multi-Component Applications Scheduling: An Architectural Pattern, International Journal of Grid and High Performance Computing, (In press).
44. Absalom E. Ezugwu, Marc E. Frincu, **Sahalu B. Junaidu**. (2015). "Characterization of Grid Resources Using Measurement-Based Evaluation," International Transaction on System Science and Applications, 2015 (in press).
45. Absalom E. Ezugwu, Marc E. Frincu, Seyed M. Buhari, **Sahalu B. Junaidu**. (2015) "Neural Network Based Multi-Agent Approach for Scheduling in Distributed Systems," International Transaction on System Science and Applications, 2015 (in press).

46. Absalom E. Ezugwu, Marc E. Frincu and **Sahalu B. Junaidu**. (2015). "Multi-agent-Based Approach to Scheduling of Multi-Component Applications in Heterogeneous Distributed Systems," In the Proceedings of the 4th Computer Science On-line Conference, Advances in Intelligent Systems and Computing - ISSN 2194-5357. (in press).
47. E. A. Ezugwu, D. I. Yakmut, A. P. Ochang, M. S. Buhari, E. M. Frincu and **S. B. Junaidu**. Multiset genetic algorithm approach to grid resource allocation, in: Innovations in Bio-Inspired Computing and Applications, pp. 1–13, Springer International Publishing, 2016.

**(c) Speeches and Guest Lectures**

1. **S. Junaidu, Implementation of DARQ-Enabled Campus Projects**, 35<sup>th</sup> AVCNU Conference (July 11-14, 2021) Kano State University of Science and Technology Wudil
2. **S. Junaidu, Achieving Quality T&L in Pandemic Era through ICT Skills: Implications for Teacher Education in STME in Nigeria**, 17<sup>th</sup> Annual Conference (June 7-11, 2021) School of Secondary Education (Sciences) Federal College of Education, Zaria
3. **S. Junaidu, Place of ICT in Corporate Governance**, Corporate Training Webinar, November 2020.
4. **S. Junaidu, Acquiring Requisite Skills to Succeed in the Digital Economy**, Office of ICT Innovation and Entrepreneurship (OIIE) Webinar Series 1.0, November 10, 2020.
5. **S. Junaidu, Deploying 5G Networks in Nigeria—Opportunities & Challenges**, 3Logy Talks, July 4, 2020.
6. **S. Junaidu, Implementing Online Learning Solutions for ICT Directorates of Nigerian Universities**, Panelist. Webinar Organized by the Committee of Vice-Chancellors of Nigerian Universities, June 10, 2020.
7. **S. Junaidu, Importance of ICT in ODL Education Delivery**. One Day Stakeholder Conference Organized by the Distance Learning Center, Ahmadu Bello University, Zaria, January 27, 2020, Dankani Guest Palace, Sokoto.
8. **S. Junaidu, Experts Review of Nigeria’s Draft Digital Economy Policy and Strategy, Panelist**. 12<sup>th</sup> Annual eNigeria Conference and Exhibition, International Conference Center, Abuja, November 28-29, 2019.
9. **S. Junaidu, Developing Nigeria’s Tech Ecosystem: Imperative for Improving Local Content. Lead Presenter**, Emerging Technologies Research and ICT Innovation Forum. Yola, Adamawa State (North East) Region, organized by the Nigerian Communications Commission (NCC), Library Auditorium, American University of Nigeria (AUN), October 30-31, 2019.
10. **S. Junaidu, Google Products & Services: A Glimpse**. Invited Speech at DevFestZaria, organized by the Google Developer Group. The Auditorium, School of Postgraduate Studies, Ahmadu Bello University, Zaria, October 19, 2019.
11. **S. Junaidu, Digital Skills Imperative for Retooling National Workforce & Developing Capacities for Future Work. Panel Moderator**, Emerging Technologies Research and ICT Innovation Forum. Kano (North West) Region, organized by the Nigerian Communications Commission (NCC), Bristol Palace Hotel, Kano, August 14-15, 2019.



12. **S. Junaidu, *Application of ICT for Sustainable Development***. Fourth Faculty of Science Annual International Conference, Yusuf Maitama Sule University, Kano, July 8-11, 2019.
13. **S. Junaidu, *Capacity Building of IT Professionals for National Development***. Keynote Speaker, IT in Education and Development Conference, Baze University, Abuja. April 22 – 26, 2019.
14. **S. Junaidu, *Breeding Highly Skilled Graduates***. StartUp Friday, Office for ICT Innovation and Entrepreneurship, NITDA. PTDF House, Plot 1058 Memorial Drive, Abuja, December 4, 2018.
15. **S. Junaidu, *Building Infrastructure for a Digital Economy: How is Nigeria Developing its Critical Digital Assets?*** 11<sup>th</sup> Annual eNigeria Conference and Exhibition, International Conference Center, Abuja, November 5-7, 2018.
16. **S. Junaidu, *Role of ICT in Renewable Energy Generation and Management***, 8th RAESON Conference, Emerald Energy Institute, University of Port Harcourt, Port Harcourt, April 25-28, 2018.
17. **S. Junaidu, *Computer Ethics: An Islamic Perspective***, Dr. Usman Bugaje's 10th Annual In-House Seminar, Gusau Institute, Kaduna, December 31, 2017.
18. **S. Junaidu, *ICT for Security and Economic Development***, 3rd Annual International, Yusuf Maitama Sule University, Kano, November 13-15, 2017.
19. **S. Junaidu, *Analysis of the Social and Economic Benefits of a Sustainable Educational Technology Ecosystem***, 10th Annual eNigeria Conference and Exhibition, International Conference Center, Abuja, November 7-9, 2017.
20. **S. Junaidu, *ICT Enabled Student Engagement and Expansive Education: Scenarios and Strategies***, International Capacity Building Conference 2017, Organized by the Digital Bridge Institute, International Conference Center, Abuja, July 25-27, 2017.
21. **S. Junaidu, *ICT as an Instrument for Positive Change in Nigeria***, 53rd Annual Conference of the Mathematical Association of Nigeria, School of Postgraduate Studies, Ahmadu Bello University, Zaria, August 30, 2016.
22. **S. Junaidu, *Data Security and Internet of Things in e-Electoral Process***, e-Nigeria 2015, International Conference Center, Abuja, November 17-19, 2015.
23. **S. Junaidu, *Automation as Catalyst for Quality Service Delivery: Case Study of Select ABU Applications***, Workshop for Deans & HoDs, Assembly Hall, Ahmadu Bello University, Zaria, Nigeria, August 5, 2015.
24. **S. Junaidu, *Chartered Accountants and IT: Opening the Pandora's Box***, 10<sup>th</sup> ICAN Northern Zonal Districts' Conference, ZAZZAU 2015, SPS Auditorium, ABU Zaria, May 6, 2015.
25. **S. Junaidu, *Job Opportunities for Graduates of Computing***, Students Orientation Program, Dialogue Computer Institute, Kaduna, April 23, 2015.
26. **S. Junaidu, *Efficient & Quality Service Delivery through Automation: A Case Study of Three Applications***, Workshop for Deans and Directors, Assembly Hall, Ahmadu Bello University, Zaria, May 28, 2014.

27. **S. Junaidu**, Discussant on *Security Challenges In Educational Institutions: The Way Forward*, 2013 Annual Lecture Of Zaria Education Development Association (ZEDA), MB Ibrahim, Kongo Conference Hotel, Zaria, Friday 27th December, 2013.
28. **S. Junaidu**, *Framework for Developing Human Capital for IT Local Content in Nigeria*, eNigeria 2012, Organized by NITDA, Transcorp Hilton, Abuja, November 20, 2012.
29. **S. Junaidu**, *Impact of Software Engineering Curriculum in Tertiary Institutions on the Growth of Software Industry in Nigeria*, Invited Paper presented at the National Retreat on Development of Software Policy for Nigeria organized by NITDA (National Information Technology Development Agency), Lagos Airport Hotel, Lagos, June 9<sup>th</sup> 2011.
30. **S. Junaidu**, *Infusing Entrepreneurship Skills through Science, Technology & Mathematics Education*, STME Conference, Federal College of Education, Zaria, July 5, 2011.
31. **S. Junaidu**, *Use of Information Technologies for Effective eLearning*, ABU Zaria, June 23, 2011.
32. **S. Junaidu**, *Fa'idodin Na'ura Mai Kwalwa a Takaice*. Guest Speech, Graduation Ceremony of Imams for ICT, Giwa Local Government, Giwa, Kaduna State. September 10<sup>th</sup>, 2010.
33. **S. Junaidu**, *Use of Science & Technology to Mitigate Global Warming*, Guest Speech, Federal College of Education, Kano. Kano State Nigeria. August 6<sup>th</sup>, 2010.
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