MATHIAS M. FONKAM (PhD)
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PROFESSIONAL OBJECTIVE

Grow School of IT & Computing to a world-renown and reference center of excellence in ICTs in the Sub-Sahara Africa region, serving as a pillar for the university's mission as a development university. Source and hire world class faculty for a strong and development centered computing curriculum that becomes the reference in the area. Develop and grow the school's curriculum and programs including post-graduate programs to accreditation and ensure adaptation to the needs of industry in the region. Actively engage in capacity building through teaching and technology education; lead open-source software adoptions and the establishment of an African Software Industry Initiatives (ASII) in ICTs as well as develop research themes within the school on relevant and applicable areas such as Blockchain & Cryptocurrencies, Cyber-Security, AI, Data Science & System Dynamics. Lead the marketing effort to attract new students for SITC working with admissions and PR and through recruitment drives and use of social media and own web presence. Developing important training and outreach programs in emerging technologies such as Blockchain, AI, System Dynamics and Open-Source Technologies. Provide leadership on strategic IT decisions for the University especially regarding use, maintenance and upgrade of the Open Source ERP and Learning Management Systems that I led development & implementations of.

KEY CONTRIBUTIONS IN ROLE AS DEAN OF SITC – APRIL 2011-JULY 2020

- Put together a world class computing faculty (teaching staff) that got recognized nationally in Nigeria (the NUC regularly made reference to the AUN computing programs) with strong IT & Computing faculty from Russia, India, US and Europe.
- School remained the flagship school of AUN in terms of alumni profiles and recognitions of our programs and delivery. Countless numbers of SITC alums went on to complete Masters and even PhDs at world class universities in the US/Canada (Columbia, Carnegie Mellon, Georgetown, Alberta, Tulane, etc), UK (Cambridge, Manchester, Birmingham, Cardiff, etc), Japan (Osaka), South Korea (Solbridge) and Europe. A good number of SITC students started their own IT companies in Nigeria becoming employers of labor in the spirit of the AUN development agenda. Notable ones amongst these are MCI communications in Abuja and ChatDesk in Enugu that has become one of the viable IT outsourcing companies.
- Initiated and led the development of the University's Open Source ERP System – OpenERP that replaced a costly commercial system that was in place (Banner) saving the university hundreds of thousands of dollars a year.
- Initiated and led the development of the university's learning management system – CANVAS, that serves as an important knowledge repository for the university and prepares faculty for online classes based on the flip-classroom or learner-centered model of learning.
- Led the elaboration and implementation of the first post-graduate programs for the university – the SITC Executive (Professional) Masters in IT & Telecoms and subsequently elaborated, got NUC approval and successfully implemented MSc & PhD programs in Computer Science and Information Systems including a Joint Masters in Information Systems Security Management (MISSM) with Concordia University of Edmonton, Canada.

- Initiated and led the elaboration of new programs for a school of engineering to meet the growing demand for engineering programs such as Computer Engineering and to support and strengthen our Telecoms and Wireless program. This eventually got approval from the NUC this Summer, July 2019.
- Served on several NUC appointed committees to elaborate new computing degree programs for Nigerian universities – specifically BSc in Software Engineering, BSc Cyber-Security, BSc Information Systems and BSc Information Technology, leading to the establishment of a new faculty (School or College) of Computing for Nigerian Universities with its own separate set of Benchmark Minimum Academic Standards (BMASes).
- Served on several NUC appointed committees to complete resource visits and re-accreditations or approvals for new computing degree programs, specifically: 1. Re-accreditation of Graduate Computing degree programs at the African University of Science and Technology (Spring 2017), 2. Re-accreditation of a BSc in MIS at Covenant University and 3. a resource visit for new computing programs in Software Engineering, Information Systems and Cyber Security at City University – Ibadan, Spring 2019.
- Have overseen 2s NUC re-accreditations of all SITC programs – in 2013 when we got full accreditation for all our programs and 2018 when 3 programs were only given partial accreditation.
- Elaborated a Faculty assessment instrument adopted by other schools and even HR.
- Contributed the idea leading to a policy for in-house peer review of faculty publications prior to sponsorship for presentation at Conferences or Journals as an important quality control measure. This has helped raise the bar on the quality of publications and reduced unnecessary expenses on mushroom conferences and 'half-baked' research works solely for numbers.
- Served as the faculty lead in promoting the use of online and digital resources in teaching and learning adopting a Problem-Centered approach to pedagogy. This promotes a more engaging, more efficient and more effective learner-directed learning.
- Contributed the idea for a databank of questions and problem sets (or test bank) for each course on the Canvas LMS that could be vetted by peers and serve as a basis for assessing student learning in midterms or final exams. We have also already extended Canvas with Question Bank support for all courses.
- Led recruitment efforts of high-caliber international students from Cameroon.
- Supported OTS in technical guidance on hiring decisions, assignment of responsibilities to IT staff based on expertise and key technology support functions.
- Elaborated several IT Professional Development and Certification courses that could be offered to both our students and others from the wider community and industry.
- Evolving an online African Systems Dynamics Interest Group to promote the use of Systems Dynamics and its toolset especially computer simulation in addressing complex issues facing the continent.
- Elaborated and was awarded a $10K grant by Google aimed at promoting Computer Science in Yola High Schools, in a way to advance the field and encourage more young students to consider careers in computing or leverage some of the computing mechanisms in their careers. We have already established a working relationship with 4 High Schools in Yola and started training their computing instructors and students.
- Elaborated several interdisciplinary and computing research themes in SITC that attempt to address some of the development objectives of the university such as ICTs & Climate Change, Artificial Intelligence and applications of Machine Leaning to Big Data, Open Source Technology & Applications, and Applications of the Systems Thinking Paradigm and System Dynamics to addressing complexity, function/type theories including category theory in Programming Languages and software engineering. Established and have run SITC Technology Open-House events some 8 semes- ters. This is a Technology show-casing

event for the wider community done by SITC faculty and Students every semester.

- Have continued to teach, working with teaching assistants or through guest-lectures, lower level core computing courses as wells senior level computing courses including Principles of Programming I & II, Database Systems, Object-Oriented Software Construction, Programming Paradigms, AI and System Dynamics.

ACADEMIC QUALIFICATIONS & INDUSTRY CERTIFICATION

1993	Ph.D, Computer Science Cardiff University, S. Wales, Gt Britain
1989	Master of Science (M.Sc.), Systems Engineering Cardiff University, S. Wales, Gt. Britain
1987	Bachelor of Science with Honors (B.Sc. Hons), Computer Engineering, University College Cardiff, Gt. Britain
2000	Sun Certified Programmer on Java II Platform - San Jose, California
2018	IBM Cognitivelabs.ai (Big Data University) - Have now Completed 12 courses amounting to 5 certification tracks: Data Science Methodology, Statistics 101, Data Science Hands-on with Open Source Tools, R 101, Python 101 for Data science, Data Analysis with Python, Data Visualization with Python, R for Data Science, Hadoop 101 Big Data 101 and Text Analytics 101, Blockchain technologies, Bitcoin Cryptocurrency & IBM Hyperledger.

PROFESSIONAL EXPERIENCE

ACADEMIC

09/2021 – Present	Associate Professor, FCAS, Baze University, Abyja
08/2012 – 07/2020	Dean & Associate Professor, SITC;
10/2014 – 05/2016	Acting Dean for School of Arts & Sciences
05/2011 – 07/2012	Interim Dean & Associate Professor, SITC
10/2010 – 04/2011	Associate Professor & Associate Dean, SITC
01/2006 – 10/2010	Curriculum Coordinator, SITC, Founding Faculty Advisor, AUN Honors Society, SITC, American University of Nigeria, PMB 2205, Yola, Adamawa State, Nigeria
08/2004 – Jan 2006	Associate Professor, Computer Science, Department of Mathematics & Computer Science, Albany State University, Albany, GA 31705
08/2002 - 08/2004	Assistant Professor(Visiting), Computer Science Department of Mathematics & Computer Science, St. Joseph's University, Philadelphia, PA 19131.
11/1993 – 10/1997	Visiting Professor (titular) of Computer Engineering, Dept of Engineering, Federal University of Maranhao,

Sao Luis, MA, Brazil

INDUSTRY

07/2001 – 07/2004	Principal Web Consultant, Focus Consultant, 415 Market Street, San Francisco, CA 94413
01/2001 – 07/2001	Senior Web Consultant, Blue Martini Software, San Mateo, CA 94403
04/2000 – 12/2000	Web Developer/Senior Web Developer, Millenia Vision Corp., San Jose, CA
11/1998 – 03/2000	Technical Director, BestWits Group NM, Sao Luis, MA, Brazil Part-time Professor of Computer Science, Dept. of Engineering, Federal University of Maranhao, Brazil
01/1998 – 08/1998	Senior Software/Knowledge Engineer, Mosakin Int. Corporation, Matawan, NJ
04/1993 – 10/1993	Research Assistant, School of Engineering, University of Wales, College – Cardiff – Gt Britain.
01/1990 – 09/1991	Computer Science Lab. Teaching Assistant, Department of Maths & Computer Science, University of Wales, College Cardiff

MAJOR INDUSTRY EXPERIENCE

Sun Certified Programmer for the Java II Platform, San Jose, July 2000.

Summer Part-time Software Trainer & Consultant with Quanteq Technology Services (Abuja) & BRA Ltd (Lagos) - 2007 to Present

Have elaborated and executed several software training programs at Quanteq Technology Services in Abuja since Summer 2007 covering Java, Ruby, Ruby on Rails and software product related processes of development and configuration management. Have also acted on a part-time basis as independent consultant to both Quanteq Technology services in Abuja and BRA Ltd (another software company) in Lagos, Nigeria.

Part-time Principal Software engineer/Consultant – Focus Consulting – San Francisco

Completed a Student Enrollment, Registration and Grading Web-enabled application for Federal University of Maranhao using J2EE technologies – Java, JSPs, Servlets, tomcat 4.1 and Struts framework (Aug. 2001-July 2004)

Senior Consultant Blue Martini Software, San Mateo, CA and Principal Consultant for Focus Consulting, San Francisco, CA.

Served initially as a Focus Consulting contractor (contract-to-perm) at Blue Martini Software before turning permanent. Provided onsite Blue Martini expertise with several partner system integrators using Blue Martini on their projects including Arthur Anderson, Accenture, and Skillnet to deliver BMSs B2B and B2C eCRM solutions to clients (such as www.otn.com, www.jafra.com, and www.paperloop.com), mentoring/training more junior staff/partners, resolving issues/bugs on new releases of product and helping speed deployments. Highly involved in requirements gathering, architect- ing and leading project teams to deliver BMS

solutions (I architected and led the development of a portal for Stanford University using Blue Martini and several internal demos used by the sales force), and contributing to development and extension of the BMS product suite through client engagements and identification of client requirements not directly supported by the product suite. Jan 2001 - Jul 2002

Millenia Vision Corp alias Quovera Corp, San Jose, CA - Sr Web Developer.

My responsibilities included working with internal project teams and clients to clarify requirements, documenting proposals, architecting solutions and leading development of project modules mostly using J2EE technologies (EJB, servlets and JSPs) with the weblogic application server and the Oracle backend. Some of projects included the account management module on www.ontool.com, the billing invoice module of www.equilibrium.com and an XML factory/taglibs java classes for validation and error display for www.moneysuite.com (Apr 2000 - Dec 2000)

Technical Director of Applications Development, BestWits Group NM, São Luís, MA, Brasil

My duties included helping define a business baseline for the company centered on web technologies, writing up project proposals, liaising with clients to close deals, hiring and training technical staff, leading technical team in drawing up project requirements, development and deployment of client solutions and managing a number of client web applications on the company's ASP server. (Nov 1998 - Mar 2000)

Senior Software/Knowledge Engineer - Mosakin Int. Corp., New Jersey, USA

Duties included leading an onsite team to develop and maintain client applications and serving as the company's consultant at AT & T for 4 months as a Test/Certification engineer for the SONET technology. (Jan 1998 - Oct 1998)

Visiting Professor - Titular, the Federal University of Maranhão, Brazil

Duties included working as part of a team of 10 Professors to establish and get accreditation for a new post-graduate program in an engineering department, elaborating and teaching post-graduate courses in computing (courses on Knowledge Base Systems, Programming with Prolog and Systems Engineering using the Industry Dynamics approach), serving as the department's computing labs. manager for 2 years where I oversaw the acquisition and deployment of our first LANs interconnecting Novell 4.11, NT 3.5, IBM AIX Unix (email/web server), supervising post-graduate student projects (2 students completed masters thesis under my supervision) and leading several projects of cooperation with industry and international universities one of which was the ALFA-LATICO project sponsored by the European Union for cooperation and exchange between European and Latin American Universities. (Nov 1993 - Oct 1997)

AWARDS AND GRANTS

1. Recipient of the 2007 SITC Distinguished Annual Faculty Award

2. ALFA-LATECO Research Grant (1993 – 1997) - Network of Universities Grant Award from the European Union for exchange of scientific knowledge between networks of Latin American and European Universities (Initial offering was EUR 700,000.00 – seven hundred euros).

3. FAPEMA Research Scholarship (Nov. 1993 to Oct. 1997) - Fapema is a Foundation for

Support of Research in Higher Educational Institutions in the Brazilian State of Maranhao and this scholarship was for recent PhD graduates engaged in research, teaching and industry cooperation. This was renewable on a yearly basis based on performance.

4. Cameroon Government Scholarship (Oct. 1984 to Sept. 1992) – awarded to top fifty students (1984) in the Country in the GCE (General Certificate of Education) Advanced Level Exam for University level studies in Great Britain (and other countries) and renewable yearly based on merit. This scholarship fully supported my Bachelors, Masters and PhD programs at the University of Wales, Gt. Britain.

RESEARCH PUBLICATIONS & REFEREED CONFERENCES

Research Interests:

Include but not limited to - *Function/Type theories, lambda calculus and category theory, applications of type theories in programming languages and software engineering, strategies for teaching object-oriented and functional programming within computing curricula, advancing computational thinking, symbolic logic and applications in AI, data science, Big data and machine learning, Systems Thinking and Systems Dynamics, Open-Source Packaged solutions, web and mobile application development and applications in Health, Agriculture and education.*

Journal Articles

1. Hadiza Umar, Rajesh Prasad & M M Fonkam "*Viability Prediction of Smart Meter Installation to Prevent Non-Technical Losses using Naïve Bayes Classifier and Deep Learning*" Journal: Bentham Science

2. Aminu Aliyu, Rajesh Prasad and Mathias Fonkam, "*A Framework for Predicting Malaria using Naïve Bayes Classifier",* Journal name: International Journal of Telemedicine and Clinical Practices, Inderscience Publisher, UK *(Special Issue on: Internet of Things and Big Data for Smart Health Services)*

3. Emmanuel Ukpe, Mathias Fonkam & Ferdinand Che; "*A Systems Study of the Impacts of Rising Extreme Poverty in Nigeria",* Scientific Research Journal (SCIRJ) Volume 1, #5, Dec., 2013, ISSN: 2201-2796

4. M.M. Fonkam & Emmanuel Ukpe – "*Application of Information and Communication Technologies (ICTs) in Human Induced Crisis management: The case of Nigeria"* - European International Journal of Science and Technology (EIJST), ISSN: 2304-9693, October, 2013.

5. M. M. Fonkam et al; "*Insights on Systems Dynamics & Its Relevance in Sub-Sahara Africa",* International Journal of Management Science, Volume 3, #5, 2011

6. M. M. Fonkam and W. A. Gray - *"An Approach to Eliciting the Semantics of Relational Multidatabases"*, 3rd International Conference on Advance Information Systems Engineering, Manchester, England, 1992. Republished in the Journal – Lecture Notes in Computer Science , - LNCSD9, Vol. 593, p 463--69, ISSN: 0302-9743, 1996

7. M. M. Fonkam and W. A. Gray - *"Using Integrity Constraints for Query Modification and Intensional Answer Generation in a Multidatabase System"*, Proceedings. of the 10th British National Conference on Databases, Aberdeen, Etds P. M. D. Gray and R. Lucas, 1992. Republished in the Journal – Lecture Notes in Computer Science , - LNCSD9, Vol. 618, p 244--54, ISSN: 0302-9743, 1996

8. M. M. Fonkam – *"Logic – A Basis for Correct Reasoning & Mechanizing Human Thought – Revisiting Prolog – the Logic Programming Language"* – Published in the Math & CS Dept, Spring 2005 NewsLetter - http://asuweb.asurams.edu/mathcs/. Also appeared in the Mono-

graph of Research Endeavors, Vol. 3, Fall 2005 - Albany State University.

Refereed Conference Presentations

1. Anadozie, C., Fonkam, M., Cleron, J.-P., & Kah, M. M. (2019). *"The impact of mobile phone use on farmers' livelihoods in post-insurgency Northeast Nigeria"*. Information Development. https://doi.org/10.1177/0266666919886904
   International Peer-Reviewed Conference Paper
2. Anadozie, C., Fonkam, M., Cleron J. (2018). *"An Evaluation of Food Crop Production by Smallholder Farmers in Nigeria"*. Proceedings of the Sixth Annual System Dynamics Conference, (pp. 117 – 223). South Africa.
3. Hadiza Umar, Rajesh Prasad & M M Fonkam, **"***Assessing Severity of Non-technical Losses in Power using Clustering Algorithms***"** Presented at: ICECCO (15th International Conference on Electronics, Computer and Computations)
4. Hadiza Umar, Rajesh Prasad & M M Fonkam **"***Customer Segmentation and Outlier Detection in Power distribution using Clustering Algorithms***"**, AIST-2019 (International Conference on Artificial Intelligence and Speech Technology) Status: Presented
5. Muhammad Yusuf Muhammad, Rajesh Prasad, Mathias Fonkam and Hadiza Ali Umar
   "Recent Advances in Machine Learning Based Protein Secondary Structure Prediction", Submitted for Publication at the ICECCO 2019
6. Amal Babangida, Mathias Fonkam, Abubakar Sadiq Hussaini, Charles Nche: "*The Development and Deployment of a Mobile Music Application for Literacy Enhancement" (M2APPLE*), presented at the International Conference on Computer Science & Computer Engineer (CSCE'19), Las vegas, July 29 – Aug 1, 2019.
7. Edward Rajah, Mathias Fonkam, Narasimha Rao Vajjhala, *"Novel Extended Federated Authentication and Authorization Framework"*, 2019 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'19), Las Vegas, USA, Jul 20 – Aug 1, 2019
8. G. Chama, J. P. Cleron, M. M. Fonkam, "*Security in Identity Management: A Systems Dynamics Approach", accepted for Presentation & Publication, 7th International Conference on Internet Technologies & Apps, Sept 12-15, 2017 Wrexham, North Wales.*
9. M.M. Fonkam – "*A Systems Study of the Dynamics of Climate change-Induced Crises in Nigeria & the Role of ICTs for Intervention"* - Presented & published in proceedings of – ICT for Africa Conference, October 1-4, Yaounde-Cameroon, 2014.
10. Emmanuel Ukpe, M.M. Fonkam & Ferdinand Che – "*A Systems Study of the Impacts of ICTs on Rising Extreme Poverty in Nigeria" accepted for Presentation & Publication at WSCAR'2014 (World Symposium on Computer Applications & Research sponsored by the IEEE), Tunis, Tunisia*
11. Abubakar Sadiq Hussaini, Yasir I. Abdulraheem, Konstantinos N. Voudouris, Buhari A. Mohammed, Raed A. Abd-Alhameed, Husham J. Mohammed, Issa Elfergani, Abdulkareem S. Abdullah, Dimitrios Makris, Jonathan Rodriguez, James M. Noras, Charles Nche, Mathias Fonkam "Green Flexible RF for 5G" – Fundamentals of 5G Mobile Networks 2015, pp 241-272, April 2015, ISBN: 978-1-118-86752-5.
12. B.A. Mohammed, N.A. Abduljabbar, A.S. Hussaini, C. Nche, M. Fonkam, E.A. Abdulmula, E. Elkazmi, I.T. E. Elfergani, R. A. Abd-Alhameed, J. Rodriguez *"Towards a Green Energy RF Power Amplifier for LTE Applications,"* in Sixth International Conference on Internet Technologies & Applications 4th International Workshop on Energy Efficient and Re-

configurable Transceivers, Werxham, 8-11 Sept, 2015, pp.386-389.

13. M.M. Fonkam – "*An Investigation of the Role of Functional Programming in Computing Curricula*" - Presented & Published in proceedings of – IGIP 2011 – Santos, Sao Paulo, Brazil March, 2011

14. M.M. Fonkam– "*Integration of the Object-Oriented & Functional Programming in Computing Curricula & their Roles in Modern Software Development*" - WorldComp-2010 - FECS – Las Vegas, Nevada, USA July, 2010

15. M. M. Fonkam – *"A Model of Computational Degree Programs in Sub-Sahara Africa with Emphasis on Needs, Strengths & Constraints",* - 4th International Conference on Research & Development, April 13-16 - 2010, University of Abuja, NIGERIA

16. M.M. Fonkam – "*Insights on Systems Dynamics & its Relevance in Sub-Saharan Africa*" - Presented & Published in Proceedings of – ACCE Sympozium, at AUN-Yola, Nigeria October, 2010

17. M.M. Fonkam & M. Kah – "*Evaluating Eiffel as a Foundation Language for an OO-Centric Curriculum*" - published in Proceedings of the International Conference on Engineering and Technology Education – ICECE-2009, March 8-11, Buenos Aires, Argentina.

18. M.M. Fonkam & Felix Bollou – "*Integration of the Algorithmic & Object-Oriented Approaches in the Curriculum*" - WorldComp-2008 - FECS – Las Vegas, Nevada, USA July 14-17, 2008

19. M. M. Fonkam & M. Kah - *"Using Open-Source 3D Object-Oriented Programming Systems to Teach Java"* – International Conference on Engineering & Computer Education, Santos, SP, March 11-14, 2007.

20. M. M. Fonkam - *"On the Choice of Technologies for Teaching Software Engineering – the role of Standards and Open-Source Technologies"* – World Congress on Engineering Technology Education – Sao Paulo – Brazil, March 14-17, 2004.

21. M. M. Fonkam & Chamraj Bathirappan – "A Java-based Intelligent Pluggable Security Module for Web Applications – JIPS2 "- International Joint Conference in Computer Science, Las Vegas, USA, July 2004.

22. M. M. Fonkam and W. A. Gray - *"Towards Eliciting the Semantics of a Relational Multidatabase",* 1st African Conference on Research in Computer Science, Yaounde-Cameroon, October, 1992.

23. M. M. Fonkam - *"On a Composite Approach and Formalism to Presenting the Knowledge Content of a Relational Database",* Brasilian Sympozium on AI, SBIA'95 in Campinas SP.

24. M. M. Fonkam - *"A Portuguese MultiMedia Version of the Game of Hangman with Extensions for Learning Important English Expressions ",* 47th Brazilian Society for the Advancement of Science - SBPC, São Luis, Julho, 1995.

25. M. M. Fonkam - *"An Intelligent Computer Assistant for Improving the Human Memory Process ",* 47th Brazilian Society for the Advancement of Science - SBPC, São Luis, Julho, 1995.

26. M. M. Fonkam - *"Knowledge Discovery for Dealing with the Empty Query Problem in Relational Database Systems",* Int. Symposium on Artificial Intelligence (ISAI) in Cancun, Mexico, Nov. 1996.

27. M. M. Fonkam - *"An Approach to Discovering more Semantic Integrity Constraints for Dealing with Empty Queries in Relational Database Systems",* XI Brazilian Symposium on Databases (SBBD), São Carlos, 1996.

28. M. M. Fonkam - *"Logic Programming with Prolog as a complete programming language for Rapid Prototyping",* 2nd Seminar of the ALFA-INTEC (Euro-Latin American) Multi-institutional project, Guadalajara, Mexico, Nov., 1997.

29. Mauro Luís Aquino dos Santos, M. M. Fonkam and Maria da Guia da Silva - *"Desenvolvimento de um Sistema Especialista para Auxiliar Manobras e Diagnósticos de faltas nos sub-estações de energia usando uma interface gráfica"* - III Simpósio Brasileiro de Automação Inteligente (SBAI'97), Vitória - ES, 2 - 5, Setembro de 1997.

30. Mauro Luís Aquino dos Santos, M. M. Fonkam and Maria da Guia da Silva - *"Expert System for the Maintenance and Fault Diagnosis of Power systems using a Graphical User Interface",* 3rd Latin American Congress on Electricity Generation and Transmission, Campos do Jordão - SP, de 09-13 de Nov., 1997 which I also attended.

COLLOQUIA PRESENTATIONS AND PARTICIPATIONS

1. *The Object-Oriented Paradigm & Java II Platforms* – Math & Computer Science Fall Colloquium Series, November, 12, 2004.

2. *Open-Source Technologies for Team Project Management* , St. Joe's University - College of Arts & Science Dean's Colloquium – Technology Open-house; May 4, 2004.

3. Object-Technology & Java Platforms – Presented at the CEUMA University, in Sao Luis, Jan 14th 2004 as part of program of collaboration and exchange between St Joe's University and Universities in Brazil**.**

WORKSHOPS ATTENDED/PREPARED & ONLINE

1. Computer Science Workshop for Underrepresented Groups (CSWUG) – attended as a Faculty Mentor Jan 4 – 11, 2005 at the University of Southern California in Los Angeles.

2. Web Application & Web-Site Design & Development (WAWSiDD) Workshop Organizer – March 22 – April 1, 2005 (http://mfonkam.mathcs.asurams.edu/) in the Dept of Math & Computer Science.

3. Online Self-Paced Courses on Microsoft Office Applications & Software Technologies accessible to authorized users at: http://mfonkam.mathcs.asurams.edu/ under Online Courses

UNDERGRADUATE COURSES ELABORATED AND TAUGHT AT AUN

1. Principles of Programming I using Java CSC 105 (using Ruby CIE 105)

2. Principles of Programming II using Java CSC 106 (using Ruby CIE 106)

3. Programming Logic & Design for CS & S/w Engineering Majors – CSC 101

4. Computer Organization & Architecture – CSC 232.

5. Discrete Mathematics for Computer Science & Software Engineering – CSC 213

6. Logic in Computer Science –CSC 214

7. Data Structures & Algorithms using Java – CSC 202
8. Object-oriented Software Construction – SEN 301
9. Object-oriented Analysis & Design – CSC 306
10. Advanced Object-oriented analysis & design – CSC 365
11. Formal Methods in Software Analysis & Design – SEN 321
12. Advanced Principles of Programming Languages & Lab – CSC 307 (now CSC 407)
13. Compiler Design & Interpreters – CSC 484
14. Business Dynamics – Systems Thinking & Modeling for a Complex World – INF 490
15. Fundamentals of database Management for IS Students – INF 231 (now CIE 231)
16. Principles of Database Systems for CS & SEN Students – CSC 384
17. Logic in Computer Science
18. CIE 111 – Introduction to Computers & Computing

POSTGRADUATE COURSES ELABORATED AND TAUGHT

1. Advanced Principles/Concepts of Programming Languages – CSC 852/952 for MSc & PhD in Computer Science
2. System Thinking & Modeling for a Complex World – offered to Executive Masters Students every other Summer.
3. Cloud Computing – offered to Executive Masters students every Summer.
4. Web-Applications & E-Commerce – Offered to Executive Masters students during the Summer.
5. Knowledge Base Systems – elaborated for a new Post-graduate Program in Computer Engineering at the Federal University of Maranhao, Brazil, 1994. Became part of the package offerings for the program which got accredited by the CNPq – Brazilian Higher Education accreditation body. I taught and refined this course during my four years on the program.
6. System Engineering - elaborated for a new Post-graduate Program in Computer Engineering at the Federal University of Maranhao, Brazil, 1994. Became part of the package offerings for the program which got accredited by the CNPq – Brazilian Higher Education accreditation body. I taught and refined this course during my four years on the program.
7. Logic Programming with Prolog – elaborated and taught at undergraduate Computer Science Program in the Dept of Computer Science in the Federal University of Maranhao, Brazil 1994 – 1996.
8. Programming Paradigms – elaborated and taught as part of a package offering by the Computer Science Dept of the Federal University of Maranhao to local industry professionals.

OTHER COURSES TAUGHT

GRADUATE LEVEL	Software Engineering, Database Systems, Advanced Database Systems, Computer Architecture.
UNDER-GRADUATE	Intermediate Computer Science with Java & C++, Database Management, Data Structures with Java, Programming with Prolog, Programming Paradigms and Introduction to Computer Simulations taught at St Joe's University in Philadelphia, Albany State University, Albany, GA & Federal University of Maranhao, Brazil

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- **Curriculum Development & Management:** served as curriculum coordinator for the School of Information Technology & Computing for 5 years, then in the capacity of Associate Dean, Interim Dean and Dean for 2 years now where curriculum development, curriculum revisions and preparations for accreditations have been a key concerns. Other responsibilities include faculty recruitment, mentoring and development and the overall day to day running of the school.

- **Teaching:** Over 20 Years of Teaching Graduate and Undergraduate-Level computer science and computing (also IS, IT and software engineering) courses including; databases, knowledge bases, logic programming, Artificial Intelligence, software engineering, data structures & algorithms, programming with C++, Programming with Java, and Logic Programming with Prolog, Database Application development and Computer Architecture, System Thinking, Computer Simulation and Management Information Systems.

- **Student Mentoring:** have supervised many Masters and undergraduate student projects in computing.

- **Research:** Broad-based research capabilities in computer science spanning database modeling, knowledge representation and management on the web, logic programming, object-oriented systems, web programming and meta-programming, Mathematical Foundations of Programming Languages, Programming Paradigms (strong in object-oriented, functional and logic paradigms), category/type theory, language semantics, cryoptography, Blockchain and cryptocurrencies. With over 30 publications in conferences and journals.

- **Methodologies, Methods & Techs.:** Over 11 years problem modeling experience using several methodololologies and techniques including; Entity-Relationship, normalization, OOA/D & UML, Eiffel Method, XML, Expert System design, knowledge engineering, system thinking skills, Dynamic Feedback system modeling and computer simulation.
- **Blockchain technologies, Crypto-economic & Cryptocurrencies**: Bitcoin, Ethereum and Hyperledger Blockchain technologies

- **J2EE Application Frameworks:** RIFE, Spring, Struts, Ruby on Rails, Expresso, SOFIA, Blue Martini, hibernate 2.x, Echo & Echo Point, Spring

- **Middle-ware:** Blue Martini, Weblogic, JBoss, tomcat, RIFE, Expresso, Echo/EchoPoint, Sofia, Ruby on Rails, Spring;

- **CMS:** Plone, OpenCMS (Java-based, Radiant & Rublicks (Ruby on Rails-based), Joomla

(PHP-based)

- **Programming Paradigms, Languages & Tools:** functional, object-oriented and imperative paradigms, Languages include: Elixir, ELM, Ruby & Ruby on Rails, Python & frameworks: Django & Plone, R, Java II &J2EE (EJB, servlets and JSPs), Groovy, GRAILS, Solidity, Scala, Eiffel & the Eiffel Method, Scheme, Haskell, ML, Elixir, Erlang, Clojure, Prolog, Javascript,XML, PL/SQL, PHP, HTML 5 , JavaScript. Tools include: Unix/Windows command line, GIT/Github, Google, AWS and Heroku Cloud Hosting Platforms

- **RDBMS:** Oracle Servers (7.3/8i), MySQL, PostgreSQL, HSQL & Microsoft Access;

- **Application Server:** weblogic 4.5/5.1, tomcat 3.3, 4.0, 4.1.24; JBoss 2.X, 3.X

- **Web-servers**: Apache, MS IIS, Tomcat, Webrick, Mongrel, Lighttp

- **IDEs:** JetBrains IntelliJ Idea, Eclipse Open IDE, Dream-weaver, JBuilder, SunONE;

- **Web-Tools & Code Generators:** Dream-weaver, Home-site, Ant, CVS, Middlegen, xdoclet.

- **Operating Systems:** Unix (Solaris, IBM AIX, Linux – Ubuntu, Windows NT,98/95, & Novell Netware 4.1;

- **Hardware/Networking**: IBM PCs & PC Networking with Windows 9x, NT & XP, Novell and Linux, SUN Workstations (Solaris), and IBM Aix, SONET and ATM.

- **Human Language Skills**: I am fluent in three international languages – English, Portuguese and French in order of decreasing fluency. I also have a reasonable command of Spanish especially written Spanish given its closeness with Portuguese.

UNIVERSITY SERVICES

- Curriculum Coordinator for the School of Information Technology & Communication
- Strategic Planning Coordinator for SITC
- Implementer & Administrator of the SITC School Portal (http://sitc.aun.edu.ng/) and related software systems
- Anchor for computer science student advisement
- Faculty Advisor of the AUN Honors Society since its inception
- Member of the AUN Promotions, IT, Evaluations and Programs Review Committees
- Leading the AUN/SITC Open-source effort as Principal Investigator and Director of the CIL$DRIA Lab at AUN – A Center of Excellence for Joint Industry & Academic Software Incubations, Community Outreach Training programs and Research & Innovations on Open-Source Software
- Active on AUN open-house programs for student recruitment programs especially to Franco-phone and Portuguese speaking countries within Sub-Sahara Africa.

COMMUNITY SERVICES

- Established with Google grant a community engagement with 4 High Schools in the Yo-la community aimed at promoting computer science for all.
- Software Industry Partnerships with Quanteq.com of Abuja and brickfieldroad.com in Lagos with commitments for student internships and joint developments using open-source technology and as an avenue for AUN student internships.
- Director of CIL$DRIA Lab at AUN – a systems and software incubation laboratory for Sub-Saharan Africa with seed funding from Quanteq Technology Solutions, Abuja.
- Leading a Project of Collaboration and Development of a Computer System for the MATCO clinic – a local clinic use by AUN expatriates.

STUDENT SUPERVISIONS

- Have supervised to completion upwards of 40 Senior Design Projects, more than 15 Masters degree theses and currently supervising 2 SDPs, 2 MScs, and 5 PhD Students in Computer Science IS.

REFERENCES

Will provide as needed.