

Funded Research & Development Projects

2015: *2 Million AED Project for the development of a wide data warehouse and Business Intelligence Dashboards for Zayed University*. This project is led by Prof F. Marir is leading this project that is composed of three phases: Cleaning and integrating the university data, develop a university wide data warehouse accessing all colleges and units data and then developing business intelligence dashboards to support colleges, service units and the university management in their strategic decisions to enhance university management and improve students' learning experiences.

2015: *Big Data Analytic for Improving and Sustaining the Growth of Dubai Hospitality Knowledge Economy (BDAH) funded by the UAE Higher Education Ministry National Research Foundation (NRF)*. **Prof Marir is the Principal Investigator** for this 175,000 AED NRF funded Research project on Big Data Analytics for Dubai Hospitality. This research proposal capitalizes on the big data magnet to develop analytical tools that capture and mine big data from authentic and reliable sources to support Dubai hospitality managers instantly respond to customers' needs and meet their expectations, adapt their businesses and develop products and services capable of bringing back old and attracting new customers.

2015: *Developing knowledge repository and deploy a CTI Web Server (Start Up award: 7000 AED)*. Zayed University. **Prof. F. Marir was awarded 7000 AED Start up funding from the University research office** to set up a web server to transfer previous research work and business intelligence and big data analytics he developed in the previous institution

2014: *Computational Approach to analyze Eye tracking Data to diagnose early Autism Spectrum Disorder in young children in UAE (RIF research project: 91,400 AED)*. Zayed University. **Prof. F. Marir is co-principal investigator in this RIF research project (91,400 AED)**. Its goal is to use data analytics (data & text mining) to analyse data generated by Eye Tracking technology and other textual sources to build a knowledge repository on Autism and its diagnosis at early age.

2014: *A profile model to enhance anomaly-based detection of suspicious computer activity*. Zayed University. **Prof. F. Marir is co-principal investigator in this RIF research funded project (78,010 AED)**. The intention of this research is to use data analytics to build profiles of normal computer activity, to support anomaly-based detection of suspicious computer activity, such as criminal activity by a user, or activity associated with or caused by a cyber-attack.

2014: *A Computational Linguistic Approach for Developing Vocabulary for Learning in Content Areas*. Zayed University. **Prof. F. Marir is the co-principal investigator for this RIF research funded project (99,900 AED)**. The aim of this project is to develop a framework and IT tools to support students to use context, word structure, references, and other strategies to understand new vocabulary words they encounter in subject-area texts.

2014: *Developing Adaptive Islamic Law Business Processes Models for Islamic Finance and Banking by Text Mining the Holy Qur'an and Hadith*. Zayed University. **Prof. F. Marir is the co-principal investigator in this RIF funded research project (96,052 AED)**. This project attempts to use computational and analytical approaches to mine the Quran (the Muslim holy book) and the Hadith (actions and words of the prophet Muhammad peace be upon him) to uncover hidden knowledge on Islamic financial business processes and controls.

2014: *The Dubai Model Revisited*. Zayed University. **Prof. F. Marir is the co-principal investigator for this RIF research project (95,700 AED)**. This two-year study aims at using analytical data to analyze the effects of the 2008 financial crisis on Dubai's development model, governance structure, and further diversification to discover hidden patterns and explanations and generate hypotheses.

2014: *Developing knowledge repository and deploy a CTI Web Server (Start Up award: 7000 AED)*. Zayed University. **Prof. F. Marir was awarded 7000 AED Startup funding from the University research office** to set up a web server to transfer previous research work and business intelligence and big data analytics he developed in the previous institution

2014: *Text Mining Approaches for developing an integrated diabetic knowledge repository (ontology) (99,600 AED)*. Zayed University. **Prof. F. Marir is the principal investigator for this RIF Research Funded Project (99,600 AED)**. The project aims at using data analytics for the development of a knowledge repository for all aspects of Diabetic disease including diagnosis, diet, treatment, sportive activities, etc...

2013: *Search Engine Optimization*. London Metropolitan University- UK.. **Prof. F. Marir led a £120K UK Knowledge Transfer Partnership (KTP) funded project (2010-2013)** for developing Dynamic SEO to enhance the CRM of New Brand Vision (NBV) (<http://www.newbrandvision.com/>) with web Analytic tool. This has led to the development of Decibel CMS analytics Tool (<http://www.newbrandvision.com/CMSAnalytics/>) which helped NBV Ltd to be elevated to international business arena.

2012: *e-Research Adaptive User Interface (eRaUI: <http://eraui.blogspot.ae/>)*. London Metropolitan University- UK.. **Prof. F. Marir Led £40K research project funded by UK JISC organization for the development of a portable widget called eRaUI (e-Research Adaptive User Interface)** for NaCTeM. The widget can be hosted on any web site to track users' behavior. Many online companies purchased the widget to track their customers' behavior and adapt their web interfaces to improve the services to their customers.

2012: *Remote Sensing Information Service Grid Node Project*. London Metropolitan University- UK.. **Prof. F. Marir collaborated on a Remote Sensing Information Service Grid Node Project in collaboration** with TGP Group which is based in China

(http://www.tgp.ac.cn/ResearchResult_EN.jsp). This system can provide quantitative retrieval of terrestrial and atmospheric parameters based on the MODIS data obtained from ground stations or distributed database. To cope with the sheer volume of remote sensing data and produce accurate analysis of this data the team integrated grid computing, workflow, and artificial intelligence technologies to manage distributed heterogeneous complex

2011: *Mobile Proactive Anti-Obesity System*. London Metropolitan University- UK.. **Prof. F. Marir led £10K Research Project funded by UK Knowledge Connect** for the development of a mobile application for capturing daily food intake of obese children and monitor their obesity in collaboration with Cal2Cal and UK National Health Services.

2011: *Online Training on Power plate machine*. London Metropolitan University- UK.. **Prof. F. Marir Led £10K a research project funded by the UK Knowledge Connect** for the development of online training on Power plate machines.

2009: *An investigation into the e-health workflow and its impact on the communication and information flow across organisational boundaries in the diabetes care pathway*. London Metropolitan University- UK.. **Prof Marir led £397K SDO NHS funded e-Health Project** in collaboration with Social & health Science department.

2008: *Transport efficiency and Artistic heritage Recovery (ISHTAR) (£750,000 EU funding)*. London Metropolitan University- UK.. **Prof Marir was co-investigator in a £750K EU funded research project** in collaboration with CITIES Institute (<http://www.citiesinstitute.org/>) and Seven European partners. The project integrates heterogeneous scientific data collected from three European cities Paris, Athens and Roma using complex mathematical models of pollutants, noise and pattern of people movements and also Cost-Benefit Analysis and Multi-Criteria Analysis to assess their individual and aggregate level of impact on human health and monument to support local authorities develop sustainable and harmless transport system,

2007: *Network for Comfort and Energy Use in Buildings (UK EPSRC funding: £60,000)*. London Metropolitan University- UK.. **Prof. F. Marir Co-Investigator in a £60K EPSRC funded Network for Comfort and Energy Use in Buildings (NCEUB: <http://www.nceub.org.uk/>)**. It aims at defining and promote the research effort needed to understand and enhance the thermal comfort of building occupants whilst also minimising the energy use of buildings, in particular those without year-round mechanical heating and cooling. Pr. Marir team collected data on the occupants and buildings' controls to develop a variety of optimal models for energy saving through placement and layout of building components and energy controller.

2007: *Accessibility and User Needs in Transport for Sustainable Urban Environments (AUNT-SUE) (UK EPSRC funding: £199K)*. London Metropolitan University- UK.. **Prof. F. Marir co-holder of £199K UK EPSRC funded project in collaboration with CITIE Institute (<http://www.citiesinstitute.org/>) and a consortium of 5 Universities and the Royal National Institute for the Blind, the London Borough and a County Council**. Prof Marir team built a knowledge repository (case-base) of previous successful/failing experiences which can be used for designing new accessible and usable Transport infrastructure that benefits locals and promote Sustainable Urban Environments. One of the case studies in which the consortium was involved is the new Kings Cross & St Pancras International railways station in London.

2007: *An integrated data model and meta-data management tool*. London Metropolitan University- UK. **Prof Marir Led £25K Jump Start project funded by LDA** for the development of an integrated data model and meta-data management tool.

2003: *VIGILANT 2: Further enhancement of video surveillance in public spaces (Private Security Company: £75,000)*. London Metropolitan University- UK.. **Prof. F. Marir Led the £75K private funding for VIGILANT2**: Implementation of the VIGILANT 1 object model for video surveillance and identification of suspicious events in public places like bus stations and underground in London.

1999: *VIGILANT1: Development of an enhanced object model for content-based indexing and retrieval of video surveillance (Private Funding: £25K)*. Kingston University, London, UK. **Prof. F. Marir led the £25K VIGILANT 1 Private funding project** for the development of an enhanced object model with description logic for real time video surveillance content & event based indexing and retrieval.

1999: *Enhancing AUTOCAD12 with OO features & KBS*. Kingston University, London, UK. **Prof. F. Marir led the £120K Teaching Company Scheme (TCS) Project** for enhancing AUTOCAD12 with OO features & KBS

1998: *Track users activities on the network to detect suspicious behavior (UK TCS funding: £120,000)*. Kingston University, London, UK. **Prof. F. Marir was co-Investigator on £120,000 UK TCS on Security & Networking**. The project aims at tracking users and analyse their activities on the network to detect suspicious behavior

1998: *Enhancing AUTOCAD12 with OO features & KBS (TCS funding: £120K)*. Kingston University, London, UK. **Prof. F. Marir awarded £120,000 from a UK government Teaching Company Scheme (TCS)** for enhancing AUTOCAD12 with Object oriented features & knowledge based system.

1998: *Developing an information system course for Matra Marconi Space company*. Kingston University, London, UK. **Prof awarded £26K MSc by Learning Contract Scheme funded by Matra Marconi Space Company** for designing an information management system course for the company staff development.

1997: *development of a data model for documents management in European construction projects (EU Funding: £1.2Million)*. Salford University, UK. **Prof Marir was Senior IT Project Manager for a £1.2Million ESPRIT funded project (CONDOR)** for the development of a data model for documents management in European construction projects

1996: *Open Systems for Construction (OSCON) (UK DoE funding: £150K)*. Salford University, UK. **Prof Marir was Senior Research Fellow co-investigat** on a **£150K DoE funded project Open Systems for Construction (OSCON) project** which used object orientation modelling, design patterns abstract classes, AUTOCAD systems, and virtual reality for integrating AEC information and tackling communication through sharing and displaying the same construction information e.g. architecture design, bill of quantities, costing, schedule and planning in a format that is suitable to each construction stake holders' computer applications.

1995: *CBRefurb: CBR for estimating the cost of refurbishing buildings (UK EPSRC funding: £75K)*. Salford University, UK. **Prof Marir was Senior Research Fellow co-investigat** on an **£75K PSRC funded CBRefurb project**. It used Case-Based Reasoning (CBR) paradigm, nearest neighbor, ID3 algorithms and some similarity measures techniques to index and retrieve similar cases for estimating the cost of refurbishing new buildings.

1995: *GIS project: Localizing GIS tools to Arabic (Dubai Urban Development & North West contractors: £1.2Million)*. Salford University Business Services, UK. **Prof. F. Marir was Senior IT Project Manager and Software Develop** for **£1.2Million GIS projects**. It was concerned with the localization of GIS SYSTEM 9 to Arabic for Dubai urban development department and on transport for Transport Authority in the North West of England.

1982: University Computer Centre: **Prof F. Marir was the project manager for the DA 2.5 Million project** for setting up the first university Computer Center for the University of Batna, Algeria.