

## Program Schedule

	Venue Police Club		Venue Mashreq University
Time/ Day	Saturday 21 <sup>st</sup> September	Sunday 22 <sup>nd</sup> September	
7:30-8:30	Registration		Registration
8:30-10:00	Opening Ceremony	Scientific Session	Workshop “One-Shot Deep Learning” <i>Prof. Mike Ashcroft</i>
10:00-10:30	Coffee Break		Coffee Break
10:30-12:00	Keynote Speech-1 <i>Prof. Mike Ashcroft</i>	Keynote Speech-2 <i>Dr. Hatim I. Elsayed</i>	
12:00-13:00	Lunch Break		Lunch Break
13:00-14:45	Scientific Sessions	Poster Session 13:00-13:45	Keynote Speech-3 <i>Prof. Sharief Babiker</i> 13:45-14:45
14:45-15:15	Social Networking		Social Networking
15:15-17:00	Scientific Sessions	Scientific Session	
			Closing Ceremony 16:30-18:00

**Saturday  
21<sup>st</sup> September**

		<b>ID</b>		<b>Title and Authors</b>	
<b>Seminar Room - 1</b>	13:00 - 14:45	<b>Artificial Intelligence and Data Mining</b>	<b>Chair Person:</b> Dr. Wafaa Faisal  <b>Co-Chair Person:</b> Dr. Amira Ibrahim	26	Improved Deep Neural Network for Recommendation Algorithm of Learning Resource Based on MLP <i>Haiwei Fan, Shuang Shi, Bomin Zhang, Yanping Zhang, Qi Lin and Huan Sun.</i>
				43	A Survey on Automatic Fake News Identification Techniques for Online and Socially Produced Data <i>Ebtihal Ahmed and Farid Meziane.</i>
				104	Local Search Heuristic for the Optimisation of Flight Connections <i>Maab Alrasheed, Wafaa Mohammed, Yaroslav Pylyavskyy and Ahmed Kheiri.</i>
				28	A Hybrid DW Design Method Using a Semantic Resource <i>Elhaj Babekir, Jamel Feki, Abuzar Babeker and Mohammed Salah.</i>
				58	Convolutional Neural Network for a Self-Driving Car <i>Mohamed Ahmed Omer Elawad, Mohamed Abdalazeem Babiker and Azza Hassan Ahmed.</i>
				81	Proposed Model for Arabic Grammar Error Correction Based on Convolutional Neural Network <i>Aiman Solyman, Zhenyu Wang and Qian Tao.</i>
				<b>Seminar Room - 2</b>	13:00 - 14:45
77	Detection of CT-Liver Lesions using Otsu Algorithm and Morphological Operations <i>Nebras Mohamed, Alwaleed Abdelrahman and Mawahib Ahmed.</i>				
137	Design of A Simple and Low Cost Near Infra-Red Imaging (NIRI) System for Breast Cancer Detection <i>Manal Mustafa, Minhee Kim and Jae Gwan Kim.</i>				
153	The effect of local bone density on stability of dental implants: a finite element analysis <i>Ebtisam Muawia Mohammed Khair and Mazin Salaheldin Sirry.</i>				
22	Development surface morphologies of porous hydroxyapatite scaffold hydrothermally for bone regeneration <i>Adil Elrayah, Jie Weng and Esra Suliman .</i>				
67	Numerical Analysis of Basal Metabolic Rate Heating Effect in Microwave Hyperthermia <i>Faihaa Eltigani, Sulafa Ahmed, Maged Yahya and Mawahib Ahmed.</i>				

<b>Seminar Room - 3</b>	<b>13:00 - 14:45</b>	<b>Computer Networks and Security</b>  <b>Chair Person:</b> Dr. Abdeldime M. <b>Co-Chair Person:</b> Dr. Yasir A.	146	Intra Rack Traffic Communication and Peers aware Placement Algorithm for Cloud Data Centers <i>Nuha M.Elhassan Tahir, Fatima Abdelhalim Elballa</i>
			103	Secure Data Using Quick Response Code <i>El-Toma El-Zain and Faisal Ali.</i>
			116	Multi-Level Steganography Aided with Compression <i>Mohamed Elmahi and Talaat Wahbi.</i>
			154	Energy Optimization in WSNs using Successive Addition and Successive Reduction Methods <i>Safa Mahgoub and Sharief Babiker.</i>
			88	A Comparative Study of In-network Caching Strategies for Information Centric Networks <i>Ibrahim Gaffer, Murtada Elbashir, Awadallah M.Ahmed and Tsabih Abdalla.</i>
			112	The Integrated History based Prediction for Future Networks <i>Safa Abdalla, Sharifah H. Syed Ariffin</i>
<b>Seminar Room - 4</b>	<b>13:00 - 14:45</b>	<b>Control Systems</b>  <b>Chair Person:</b> Dr. Abdelnasir M. <b>Co-Chair Person:</b> Dr. Edris Abdallah	35	Lateral and Longitudinal Controllers Design for a Fixed Wing UAV <i>Mohammed Osman, Huda Abdalla and Mustafa Nawari.</i>
			135	Developed Resonant PIRSMC Control for DFIG-WPG System under Harmonic Deformation on the Grid Voltage <i>Omar Busati Alzain, Xiangjie Liu, Xiaobing Kong, Mohammed.A.Abdalla and Alhassan Busati Alzain.</i>
			136	Improved DFIG-WPGS Efficiency via the tuned PI-Resonant Unit Controller based on BAT Algorithm <i>Omar Busati Alzain, Xiangjie Liu, Xiaobing Kong, Elhassan Busati Alzain and Mohammed.A.Abdalla.</i>
			145	Adaptive sliding mode control design for the 2-DOF robot arm manipulator <i>Ahmed Eltayeb, Mohd Fua'ad Rahmat, M. A Mohammed Eltoum and Ibrahim M. H. Sanhoury.</i>
			108	LabVIEW based Fuzzy Logic Controller for PLC <i>Dr. Dereje Shiferaw, Addisalem Hailegnaw, Alemie Assefa, Daniel Abebe, Eyob Dagne and Getsh Fekadie.</i>
			33	Performance Enhancement of Wind Farms Integrated with UPFC Using Adaptive Neuro-Fuzzy Inference System <i>Salah Kamel, Yousry Ibrahim, Ahmed Rashad, Loai S. Nasrat, Kaigui Xie .</i>

<b>Seminar Room - 1</b>	15:15 - 17:00	<b>Computing and Software Engineering</b>  <b>Chair Person:</b> Dr. Nisreen Beshir <b>Co-Chair Person:</b> Dr. Nahla Murtada	100	E-payment Adoption by Petroleum Companies in Sudan <i>Sahar Abdelrahman and Azza Zeinelabdin.</i>
			45	The Impact of Service Quality on Customer Satisfaction in Location Based Service (Mishwar and Tirhal as Case Studies) <i>Selma Elnour and Azza Karra.</i>
			23	Bridging the Gap between Service Oriented Architecture and Cloud Software as a Service <i>Shaymaa Altayeb Mohamed and Adil Yousif.</i>
			29	A Novel Method to Improve the Retrieved Multilingual Documents Score <i>Abas Aboras, Aiman Solyman, Albaraa Abobieda and Hajer Yousif.</i>
			139	Multidimensional Knapsack Problem for Resource Allocation in a Distributed Competitive Environment Based on Genetic Algorithm <i>Jihad Siddig, Chen Xianqiao, Shi Bing and Aiman Solyman.</i>
			130	A robust and Adaptable Method for Moving the Mouse Cursor Based on Eye Gazing Technique <i>Anfal Bilal Elemam Hammad and Rayan Mahgoub Seedahmed Mahgoub</i>
<b>Seminar Room - 2</b>	15:15 - 17:00	<b>Electrical Engineering</b>  <b>Chair Person:</b> Dr. Elfadil Zakaria <b>Co-Chair Person:</b> Dr. Kamal Ramadan	152	Application of Optimization Algorithms the Improvement of the Transient Stability of SMIB Integrated with SSSC Controller <i>Ammar Atif, Sulaiman Ahmed, Ibrahim Elamin and Mahdi Alzubair.</i>
			68	Mitigation of SMIB Oscillations Using PSS Based on Particle Swarm Optimization Algorithm <i>Abdel-Rahman Saifedin Alawad Ali and Kamal Ramadan Daud.</i>
			156	ZnO Solar Cells Based on Dye And Polymers Materials and Dye Synthesized Solar Cells (DSSC) <i>Nada Talib, N Khalifa, Manahil Mofdal, Nada Osman, Hassan Wardi, Hdeel Albushra and Nashwa Eassa.</i>
			30	Sizing and Evaluation Analysis of Hybrid Solar-Wind Distributed Generations in Real Distribution Network Considering the Uncertainty <i>Salah Kamel, Ashraf Ramadan, Mohamed Ebeed, Loai Nasrat, Juan Yu</i>
			11	Sine Cosine Algorithm for Load Frequency Control Design of Two Area Interconnected Power System with DFIG Based Wind Turbine <i>Salah Kamel, Ahmed. H. A. Elkasem, Ahmed Korashy, Mohammed Hassan Ahmed, Juan Yu</i>
			15	Augmented Atom Search Algorithm for Optimal Distribution Network Reconfiguration <i>Salah Kamel, Hanan Hamour, Mohammed Hassan Ahmed, Loai Nasrat</i>

<b>Seminar Room - 3</b>	<b>15:15 - 17:00</b>	<b>Electronics Engineering</b>  <b>Chair Person:</b> Dr. Babiker A. <b>Co-Chair Person:</b> Dr. Abdel Motalib	92	Design and Simulation of a Wireless Data Acquisition System for Fully Interconnected Medical Environment <i>Rania Mohammed, Yousif Elhadi Elsedig Ahmed, Sally Awadalkareem and Tsabih Abdalla.</i>
			13	Series Parallel Cascaded H-Bridge Inverter Based on A Simple Staircase Modulation <i>Ahmed Abdelghafar Awad, Othman Hassan Abdalla, Hesham Norallah and Mohamed Ismail Jibril.</i>
			79	Video Security System for Intrusion Detection <i>Mohamed Tajelsir Awad, Sally Mohamed Aldaw, Salma Mohamed Aldaw and Babekir A.Rahman Osman.</i>
			80	Design of A Simple and Low Cost Electrical Impedance Tomography System <i>Manal Mustafa, Musab Elkheir, and Mohamed Abdallah</i>
			97	A comparative study on human loco-motor activity recognition using wearable sensors <i>Amna Abdallah, Rawan Saifelddeen and Magdi Amien</i>
			106	Arabic-Numbers Recognition System for Car Plates <i>Yasir Hassan, Omar Awadelkarim and Sharief Babikir.</i>
<b>Seminar Room - 4</b>	<b>15:15 - 17:00</b>	<b>Telecommunications Engineering</b>  <b>Chair Person:</b> Dr. Ahmed M. <b>Co-Chair Person:</b> Dr. Mustafa Ahmed	158	Investigating the Probability Density Function of the Detected Intensity of Overlapping Laser Sources in an FSO Turbulent Environment <i>Ahmed Alhassan, Eithar Isaam, Rashidi C.B.M and Syed Aljunid.</i>
			164	Implementation of a Simplified Wireless Area Network <i>Ahmed Nabray and Ahmed Alhassan.</i>
			54	Nonlinear Adaptive Beamforming Algorithms and Bit Error Rate Analysis for MU-MIMO mmWave Communication System <i>Adam Abdo, Aamer Mohamed Huroon Mohamed, Mahmoud Ahmed Suliman Ali, Xiongwen Zhao and Mohammed Adam.</i>
			46	Vertical Handover E-TOPSIS Algorithm Mathematical Model using AHP and Standard Deviation Weighting Method <i>Israa Ahmed, Aridegbe Ipaye, Dimitrios.N.G.Mitropoulos, Kauther Amer, and Ali Ibrahim.</i>
			83	Design and Implementation of High Power Stripline Directional coupler For VHF Radars <i>Hamid Makkawi.</i>
			144	Development of An Emperical Model for Dust Storm Attenuation Prediction In Arid-Area <i>Elfatih Elsheikh, Islam Rafiqul, Mohamed Habaebi .</i>

**Sunday  
22<sup>nd</sup> September**

<b>Seminar Room - 1</b>	<b>8:30- 10:00</b>	<b>Electrical Engineering</b>  <b>Chair Person:</b> Dr. Elfadil Zakaria <b>Co-Chair Person:</b> Dr. Kamal Ramadan	16	Modeling Analysis of Downdraft Gasification Integrated with SOFC for Power Generation <i>Salah Kamel, Shaymaa Bakheet, Hoda Abd El-Sattar, Francisco Jurado, Kaigui Xie.</i>
			19	Integration of Downdraft Gasifier Integrated with Solid Oxide Fuel Cell and Organic Rankine Cycle for Power Production <i>Salah Kamel, Shaymaa Bakheet, Hoda Abd El-Sattar, Francisco Jurado, Kaigui Xie.</i>
			20	Maximization of Power System Loadability by Optimal FACTS Allocation <i>Mahrous A. Taher, Salah Kamel and Francisco Jurado.</i>
			56	Waste- to- Energy Production of Alternative Energy Source Using Landfill Technology <i>Sadah A. T. Muawad, Sara A. M. Wedaa, Abuelnuor A. A. Abuelnuor, Abusabah E. Elemam, Ammar Mohammed Ali, Ahmed Said Gamer Aldin and Ibrahim Ishag Osman.</i>
			64	Impact of Different Locations of Integrating SCIG Wind Turbine into Distributed Network Using Continuation Power Flow Method <i>Shaheer Osman, G.K Irungu and D.K Murage.</i>
			69	Irradiance Variation Effect on the Electrical Performance of a Grid Connected PV System <i>Amna Taha and Sharief Babiker.</i>
			110	Voltage Profile Enhancement In Middle District Of Sudan Electric Grid Using Neplan Software <i>Mazen Khaled and Amr Osama Ahmed Elsayed.</i>

Seminar Room - 1	15:15 - 17:00	<b>Electrical Engineering</b>  <b>Chair Person:</b> Dr. Elfadil Zakaria <b>Co-Chair Person:</b> Dr. Kamal Ramadan	131	SVC-based Controller Design via Ant Colony Optimization Algorithm <i>Luay Elkhidir, Abubaker Hassan, and Muhammad khalid</i>
			134	Application of Piezoelectric Energy Harvesting with an Industrial Machine <i>Marrian Gebreselassie, Safaa Alshafie, Mohamed Abd Al-Hafeez and Khalid Ibrahim.</i>
			140	Application of coyote optimizer for Optimal DG Placement in Radial Distribution Systems <i>Salah Kamel, Amal Amin, Ali Selim, Mohammed Hassan Ahmed, Juan Yu</i>
			32	Operating Cost Comparison of Sudan's Power System Grid with and without NPP Integration <i>Mohamed Hayati and Shraf Eldin Sati.</i>
			36	Optimal Placement of DG and Capacitor in Radial Distribution Systems Considering Load Variation <i>Salah Kamel, Amal Amin, Ali Selim, Juan Yu, Kaigui Xie</i>
			38	Analysis of Environmental Impact of Gaseous Pathway Released from Hypothetical NPP Site in Sudan <i>Ruaa Elbadry.</i>
			124	Prediction of Landfill Gas Emissions and Energy Recovery Potential from an Engineered Landfill, in Khartoum State- Sudan <i>Sadah A. T. Muawad.</i>
			76	Plans and Challenges of the Renewable Energy Integration in Sudan <i>Hatim Elsayed Mohamed, Ashraf Khadam and Omer Hag Ali Hag Elhassan.</i>
Seminar Room - 2	15:15 - 17:00	<ul style="list-style-type: none"> <li>• <b>Artificial Intelligence &amp; Data Mining</b></li> <li>• <b>Computing and Software Engineering</b></li> <li>• <b>Computational &amp; Applied Mathematics</b></li> </ul> <b>Chair Person:</b> Dr. Wafaa Faisal <b>Co-Chair Person:</b> Dr. Nisreen Beshir	105	Performance Evaluation of Dijkstra and A* Traffic Routing Algorithms in Smart Cities <i>Enas Dawod Salih Derar and Mukhtar M.E. Mahmoud.</i>
			133	Facial Impression Recognition using Artificial Neural Network <i>Montaser Ali, Osman Elfadil and Adil Elsinnari.</i>
			91	Build and Conquer: Solving N Queens Problem using iterative compression <i>Ahmed Alhassan.</i>
			143	Adopting Continuous Integration and Continuous Delivery for Small Teams <i>Moutaman Kamal, Abubaker Motassem, Mohannad Waheed and Rahama Ibrahim.</i>
			132	The use of ontologies in Requirement Engineering: A survey <i>Abdalmoneim Khair.</i>

Seminar Room - 3	15:15 - 17:00	<ul style="list-style-type: none"> <li>• Electronics Engineering</li> <li>• Telecomm. Engineering</li> <li>• Control System</li> </ul> <p><b>Chair Person:</b> Dr. Ahmed M.</p> <p><b>Co-Chair Person:</b> Dr. Babiker A.</p>	39	In Efficiency of New Horizontal Barcoded Staff Coding and Automatic Leveling Measurement <i>Mohammed Almujtaba, Mohammed Nasser, Mohammed Gsm, Hussein Osman, Awadelgeed Mohammed Awadelgeed and Kamal Abdellatif Sami.</i>
			74	Design of Nano scale optimum CMOS inverter with a vision of enhancing it's Functionalities by integrating with RRAM to get a new hybrid device <i>Ali Mohamed.</i>
			157	Performance Evaluation of SDN Controllers in Ofnet Emulation Environment <i>Ahmed Hassan, Ahmed Alhssan, and Fathia Izzeldean</i>
			160	Performance Analysis of ONOS and Floodlight SDN Controller based on TCP and UDP Traffic <i>Arwa Eljack , Ahmed Hassan and Hala Hassan</i>
			161	Tracking Control of Pneumatic Muscle Using Adaptive Passivity Based Control <i>Youssif Elobaid and Ahmed Hassan.</i>
Seminar Room - 4	15:15 - 17:00	<ul style="list-style-type: none"> <li>• Biomedical &amp; Biomechanics Engineering</li> </ul> <p><b>Chair Person:</b> Dr. Gihad Ibrahim</p> <p><b>Co-Chair Person:</b> Dr. Omer Gadura</p>	70	Ultrasound strain electrographic based automatic quantitative analysis for evaluation of solid breast lesions <i>Hiba Elfatih and Musab Salih.</i>
			85	Simulation of Drug Release from Biodegradable and Erodable Polymers <i>Razan Atif, Ibtihag Yahya and Megdi Eltayeb</i>
			86	Computational Modeling of drug release profiles from swellable polymeric Nanoparticles <i>Lina Ahmed, Ibtihag Yahya and Megdi Eltayeb</i>
			148	Enhance the Performance of U-Net in MRI Brain Tumour Segmentation using HardELiSH activation Function <i>Mushtaq Salih, Musab Salih and Mohamed Ahmed.</i>
			62	Diagnosis of Cardiac Disorders in ECG Signal using Artificial Neural Network Algorithm <i>Nebras.A.Mohamed, Maison Yaseen, Weam Hateem, Thuria Musa, and Safaa Ismail</i>
			165	CFD Modelling of The Turbulence Flow in Mathematical Models of The Central Airways <i>Gihad Ibrahim, Fathalrahman Omer, and Omer Gaddoura</i>

## Poster Session

Venue: Exhibition Hall

Date: Sunday

Time: 13:00 – 13:45

ID	Title and Authors
93	Online Handwriting Recognition Using Encoder-Decoder Model <i>Abeer Eisa, Lina Abdalla, Mohanad Ahmed</i>
151	Computational investigation of the effect of loading conditions on traumatic mandibular fracture <i>Fatima Noreldin Osman and Mazin Salaheldin Sirry.</i>
9	A Comparison between Different Classifiers for Diagnoses of Atrial Fibrillation <i>Inas Salah.</i>
7	Enhanced Model for Cloud Data Security based on Searchable Encryption and Hybrid Fragmentation <i>Abdelrhman Sayed Awad , Adil Yousif, and Gada Kadoda.</i>
107	Enhancing Hybrid Intrusion Detection and Prevention System for Flooding Attacks Using Decision Tree <i>Mofti Ahmed and Faisal Ali.</i>
47	Mathematical model that describe the transmission of African Swine Fever through ticks and infected pigs <i>Mojeeb Al-Rahman El-Nor Osman, Cuihong Yang and Mohammed Salaheldeen Abdelgader Abas</i>
48	Malaria transmission model with standard incidence rate applied to DRC <i>Mojeeb Al-Rahman El-Nor Osman, Mohammed Salaheldeen Abdelgader Abas and Asmaa Amer</i>
63	On the optimization of spherical convolution integral: Efficiency analysis <i>Ahmed Abdalla, Vagner Ferreira, Clifford Mugnier and Ahmed Elzein</i>
53	Controlling Drone–using IOT platform <i>Ali Mohamed and Ahmed Elmustafa AbuElgasim</i>
34	Level Control Of Horizontal Cylindrical Tank <i>Sarrah Abdalla, Amna Mohamed, Eyas Awadelkarim Hamid Ali and Mustafa Nawari.</i>
27	Design of Speed Control System of DC motor Based on PID tuning with fuzzy define weighting point <i>Mohamed Elhaj Ahmed Mohamed, Yanling Guo and Babekir Abdorahman Osman, and Abdelmotalib Ahmed Mohamed</i>
5	Harmonized Software Quality Improvement Models for Sudanese SME Based on CMMI <i>Zeinab Mahmoud, Aiman Solayman and Arafat Abdulgader Mohammed Elhag.</i>

159	Using Firebase Cloud Messaging to Control Mobile Applications <i>Mohamed Abdalla Mokar , Sallam Osman Fageeri , and Saif Eldin Fattoh</i>
40	Waste to Energy as an Alternative Energy Source and Waste Management Solution <i>Sadah Taha and Adil Omara.</i>
101	Cascaded H-bridge Multilevel Inverter Balancing for Energy-Power Based on VSG <i>Hashim Hasabelrasul, Xiangwu Yan and Abuzaid Saeed Gadalla.</i>
119	The Improvement of LDR Based Solar Tracker's Action using Machine Learning <i>Gaafar Mustafa, Baraah Sidahmed, and Mustafa Nawari.</i>
84	Arabic Sign Language Recognition Using Microsoft Kinect Camera <i>Safaa Osman, Fatima Hamed, Mona Elamin and Mohammed Esmail.</i>
113	Automatic Satellite Antenna Alignment In X,Y Co-Ordinates <i>Ibrahim Ahmed Ibrahim, Nizar Ali Alhaj Abdellah, Ahmed Abd Elrahman Ali, Sayda Abdulla Hassan and Fath Elrahman Ismael</i>
155	10 GHz Investigation of Sudanese Dust Event Particles Characteristics <i>Eltahir Elnayal, Elfatih Elsheikh, Awad Babiker and Khalid Hamid.</i>