

This research paper provides an overview of the current state of Jordan's energy sector, an explanation of smart grid technology, and an analysis of the advantages and disadvantages of ...

Automatic Fault Identification in WSN Based Smart Grid Environment \*1Rekha M N, 2Dr. U B Mahadevaswamy \*1Department of Electrical & Electronics Engineering JSS Science & Technology University ...

An architecture for monitoring power in smart grid applications using wireless sensor network (WSN) technology, designed and developed to calculate the power for any kind of loads and a novel Power theft detection algorithm is proposed and simulated. Smart grid technology is one of the recent developments in the area of electric power systems that aid the ...

The implementation of a smart grid in Jordan offers many potential advantages, such as improved reliability and efficiency of the power grid, expanded integration of renewable energy sources...

Abstract: The Smart Grid (SG) is conceived as the evolution of the current electrical grid representing a big leap in terms of efficiency, reliability and flexibility compared to today's electrical network. To achieve this goal, the Wireless Sensor Networks (WSNs) are

a WSN testbed in a real Smart Grid environment. A performance evaluation is conducted in the wired and wireless architectures in order to test some of the metrics that could be evaluated in this testbed, particularly the end to end delay and the packet delivery ratio. Index Terms--Smart Grids, Wireless Sensor Networks, Contiki

Wireless sensor networks (WSN) provide very high quality and accurate analysis for monitoring of both spatial and temporal data, thus providing the opportunity to monitor harsh outdoor environments. However, to deploy and maintain a WSN in such harsh environments is a great challenge for researchers and scientists.

Introduction. The electrical grid is a critical infrastructure that could have a major impact on human lives, economics, and politics [1]. Hence, any instabilities related to the structural and operational characteristics of the existing power grid, equipment failures, blackouts, poor communication, and lack of effective monitoring of the infrastructure, create additional challenges to the ...

Modeling and Simulation of a Wireless Sensor Network for Smart Grid Applications, 2018. Recently, the use of Wireless Sensor Networks (WSNs) with Advanced Metering Infrastructures (AMIs) has played a major role in various ...

Modeling and Simulation of a Wireless Sensor Network for Smart Grid Applications, 2018. Recently, the use of Wireless Sensor Networks (WSNs) with Advanced Metering Infrastructures (AMIs) has played a major role in various aspects of today's power distribution grid, especially at the end-user that will be an essential element of the next generation of electrical power grid ...

Wireless sensor networks (WSNs) will play a key role in the extension of the smart grid towards residential premises, and enable various demand and energy management applications.

With the development of Internet of Things (IoT) and Wireless Sensor Networking (WSN) technologies, Smart Grid (SG) concept is becoming more attractive, whereby it refers to upgrading conventional power-grid infrastructure in order to offer automated control over the resources and emerging technologies in smart and sustainable cities.

A number of surveys have been published to address SG challenges from different perspectives. In [108], the focus is on utilizing SG technologies in green information and communication technologies (ICTs). Another survey in [109] discusses the SG technology and its potentials. In addition, that study presents wireless communications for HANs and NANs ...

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Wireless Sensor Networks (WSNs) is a strong candidate for smart grid applications, such as advanced metering infrastructure, demand response management, dynamic pricing, load control, electricity ...

Adaptive Zigbee-Aquila communication protocol (AZACP) is used to find the shortest optimal path for transmitting the sensed data to base station with low cost and less time consumption and Enhanced Recurrent Equilibrium Neural Network (ERENN) is introduced to identify the fault in data transmission. : Wireless Sensor Network (WSNs) plays a vital role in smart grid (SG) ...

The Smart Grid (SG) aims to cope with the problems of the traditional grid, using renewable power generators. Similarly, SG benefits from the deployment of wireless sensor networks (WSNs) to enhance its aspects by monitoring the physical behavior of the power generators. However, new threats and attacks may arise due to the open nature and large ...

A Smart Sensor Grid to Enhance Irrigation Techniques in Jordan Using a Novel Event-Based Routing Protocol ... A Smart Sensor Grid to Enhance Irrigation Techniques in Jordan Using a Novel Event-Based Routing Protocol. Orhan Gemikonakli. ...

A. Setting up of Wireless Sensor Networks In this work, WSN is built using IRIS motes and MDA300 data acquisition board from Crossbow for power monitoring in electrical distribution systems of smart grid. MDA300 has free ADC channels to be accessed and hence can be used to develop an application. The IRIS motes were

Wireless sensor networks (WSN) are part of a growing technology that has been designed to support a wide range of applications in wireless environments [1,2]. Although sensor networks have

C.-W. Lu, S.-C. Li, and Q. Wu, "Interconnecting ZigBee and 6LoWPAN wireless sensor networks for smart grid applications," in Proceedings of the 5th International Conference on Sensing Technology (ICST '11), pp. 267-272, Palmerston North, New Zealand, December 2011. [10] A. M. Gaouda, "Adaptive Partial Discharge monitoring system for ...

Recently, there have been great advances in internet of things (IoT) and wireless sensor networks (WSNs) leading to the fourth industrial revolution in power grid, namely, Smart Grid Industry 4.0 ...

WSN Gateways Fault Tolerance for Surveillance Transmission in Smart Grid Communication . Kaixuan Wang 1,2, Xuesong Qiu, Ning Fu3, and Haijian Yang3. 1 State Key Laboratory of Networking and Switching Technology, Beijing University of Posts and Telecommunications, Beijing, 100876, China . 2 Faculty of Information Management, Shanxi University of Finance ...

The energy efficiency of the Wireless Sensor Network (WSN) deployed in a Smart Grid facility is a key criterion for the performance of a WSN integrated supporting system. Since small form factor sensors used in the Smart Grid have limited battery capacity, the energy saving for sensor nodes is a major design goal for WSN protocols. In the past, our strategy is to install a large number ...

A sample of algorithms that can be adaptable for smart grid applications is surveyed, based on data rate, delay, latency, congestion, congestion and so on. With the increasing concern for reliability and quality of service, power grid in many countries is undergoing revolution towards a more distribute and flexible "Smart Grid". In the development of envisioned smart grid, ...

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