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| | Paper Title: | A Modified RSA Cryptosystems and Analysis | |
| | <p>Abstract: As the growth of the Internet and electronic commerce have brought to the forefront the issue of privacy in electronic communication. Large volumes of personal and sensitive information are electronically transmitted every day. In this paper we present modified RSA algorithm and analysis for secure data transmission. The security of RSA public key cryptosystem is based on the assumption that factoring of a large number (modulus) is difficult. In RSA if one can factor modulus into its prime numbers then the private key is also detected and hence the security of the cryptosystem is broken. Encryption is the standard method for making a communication private with RSA Algorithm. In which one public key and one private have introduced, resulted from two prime number introduced. Here we have introduce n Prime number with evolve method in a modified RSA cryptosystem to provide security over the networks. So, the security of RSA public key cryptosystem is increased due to increase in difficulty of the factoring of a large number (modulus) with increase in prime number and this technique provides more efficiency and reliability over the networks.</p> <p>Keywords: Key, Encryption, Decryption, n prime numbers, RSA Algorithm.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Ajay Kakkar, M. L. Singh and P. K. Bansal, "Comparison of Various Encryption Algorithms and Techniques for Secured Data Communication in Multinode Network", International Journal of Engineering and Technology, Volume 2 No. 1, pp. 87-92, January 2012 2. Behrouz A Forouzan, "Data Communications and Networking", McGraw-Hill, 4th Edition. 3. Xin Zhou, Xiaofei Tang, "Research and Implementation of RSA Algorithm for Encryption and Decryption", IEEE The 6th International Forum on Strategic Technology, 2011, Volume 2, page 22-24. 4. Davis, R, "The data encryption standard in perspective", Communications Society Magazine, IEEE, 2003, pp. 5 – 9, ISSN 0148-9615. 5. Shashi Mehrotra Seth, Rajan Mishra, "Comparative Analysis of Encryption Algorithms for Data Communication", International Journal of Computer Science and Technology, June 2011, Vol. 2, Issue 2, pp. 292-294. 6. Rajan.S.Jamegar, Geeta Shantanu Joshi, "File Encryption and Decryption Using Secure RSA", International Journal of Emerging Science and Engineering (JESE), February 2013, Volume-1, Issue-4, ISSN: 2319-6378. 7. S. Sharma, P. Sharma, R. Shankar Dhakar, "RSA Algorithm Using Modified Subset Sum Cryptosystem", Computer and Communication Technology (ICCCCT), 2011 2nd International Conference, Sept. 2011, pp. 457 - 461 8. Yunfei Li, Qing Liu, Tong Li, "Design and implementation of an improved RSA algorithm" E-Health Networking, Digital Ecosystems and Technologies (EDT), 2010 International Conference (Volume:1), April 2010, pp. 390 – 393. | | 1-3 |
| 2. | Authors: | Omar AL-Masari, Musa AL-Masari | |
| | Paper Title: | Enhancement of Small Signal Stability of Wind Farms by Using STATCOM and HVDC Link | |
| | <p>Abstract: Small signal instability problems in wind farms often lead to power system blackouts. This paper reports a comprehensive study of small signal stability in three different types of wind generator when coupling to a power system: doubly-fed induction generators (DFIG), squirrel cage induction generators (SCIG) and permanent magnet synchronous generators (PMSG). Time-domain analysis and Eigenvalue analysis were used to identify small signal instability problems in wind farm power systems. A static synchronous compensator (STATCOM) and power system stabilizer (PSS) was modelled and applied to the power system to enhance small signal stability. In addition, the performance of high voltage direct current (HVDC) and high-voltage alternating current (HVAC) links was examined in connecting the wind farm to the grid. The results show improvement in small signal stability by using HVDC rather than HVAC. The IEEE 14 Bus test system and all simulation models were implemented using the DIgSILENT PowerFactory software tool.</p> <p>Keywords: Wind Turbine Generators, Small Signal Stability, Oscillatory Stability, Eigenvalue analysis, SCIG, PMSG, DFIG, STATCOM, PSS, HVDC, HVAC, IEEE 14 Bus test system, DIgSILENT PowerFactory.</p> <p>References:</p> <ol style="list-style-type: none"> 1. K. R. Steve Sawyer, "Global Wind Report," belgium 2010. 2. K. R. Steve Sawyer, "Global Wind energy Outlook 2010," belgium 2010. 3. S. Heier, Grid Integration of Wind Energy Conversion System, 1998. 4. D. Thakur and N. Mithulananthan, "Influence of Constant Speed Wind Turbine Generator on Power System Oscillation," Electric Power Components and Systems, vol. 37, pp. 478-494, 2009. 5. G. Rogers, power system Oscillations: Kluwer Academic Publishers, 2000. 6. P. W. Sauer, Power System Dynamics and Stability: Prentice-Hall, Inc., 1998. 7. P. Kundur, Power System Stability and Control. New York: McGraw-Hill, Inc., 1994. 8. O. A. Almasari, "Low Frequency Oscillatory Stability Study of Power System with Wind Farms," Master Degree, School of Information Technology and Electrical Engineering, The University of Queensland, Brisbane, 2011. 9. W. Chen, S. Libao, W. Liming, and N. Yixin, "Small signal stability analysis considering grid-connected wind farms of DFIG type," in Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century, 2008 IEEE, 2008, pp. 1-6. 10. F. Snyder, "Inter-Area Oscillation Damping with Power System Stabilizers and synchronized Phasor Measurements," Master thesis, Electrical Engineering, Virginia Polytechnic Institute and State University, 1997. 11. F. J. Swift and H. F. Wang, "The connection between modal analysis and electric torque analysis in studying the oscillation stability of multi-machine power systems," International Journal of Electrical Power & Energy Systems, vol. 19, pp. 321-330, Jun 1997. 12. J. G. Sloopweg and W. L. Kling, "The impact of large scale wind power generation on power system oscillations," Electric Power Systems Research, vol. 67, pp. 9-20, Oct 2003. 13. R. C. Burchett and G. T. Heydt, "Probabilistic Methods For Power System Dynamic Stability Studies," Power Apparatus and Systems, IEEE Transactions on, vol. PAS-97, pp. 695-702, 1978. 14. R. D. Fernández, R. J. Mantz, and P. E. Battaiotto, "Impact of wind farms on a power system. An eigenvalue analysis approach," Renewable Energy, vol. 32, pp. 1676-1688, 2007. | | 4-10 |

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Authors: **Tasnim N. Shaikh, Satyajee Chaudhari, B. H. Patel, Megha Patel**

Paper Title: **Study of Conductivity Behavior of Nano Copper Loaded Nonwoven Polypropylene Based Textile Electrode for ECG**

Abstract: ECG technique is employed in medical science for measuring electrical activity of the heart. This technique often criticized for skin irritation due to the wet gel media applied on the body. The condition becomes more crucial for long-term monitoring. Wet electrodes need to be replaced with dry one and in that disposable form. Textile electrode is a potential choice for the purpose. Many reports are also available where knitted and woven polyester, nylon; cotton and acrylic fabrics were used as conductive electrode. The desired conductivity was imparted by conductive material surface treatment for woven or using conductive steel filaments in knitted. But due to higher stiffness they sound uncomfortable on use. The present research therefore designed to develop highly conductive textile material with better comfort properties. Polypropylene nonwoven fabric, a most versatile, economical and highly preferred base material in medical textile is used for the purpose. It is loaded with different concentrations of copper Nano particles. The prepared polypropylene nonwoven fabric was then characterized using polarized microscope and FTIR technique. The electrical conductivity of copper loaded textile was measured by Precision Multimeter 8846A tester. Better conductivity is observed with increased deposition.

Keywords: Electrocardiogram, FTIR, Conductivity, polypropylene, Nano particles.

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Authors: **Pushpalata Pujari, Babita Majhi**

Paper Title: **A Survey on Odia Character Recognition**

4.

Abstract: Recognition of Odia handwritten and machine characters and numerals is an emerging area of research and finds extensive applications in banks, offices and industries. Very little standard research work has been reported on recognition of handwritten and machine characters and numerals. This paper makes an in depth study on the existing literature on recognition of machine and handwritten Odia characters and numerals. The key steps [44] such as preprocessing, segmentation, feature extraction and classification involved in the recognition process of Odia characters are dealt in details. The well known techniques employed for segmentation, feature extraction and classification tasks of Odia characters are reviewed and their relative strengths and weaknesses are outlined. The paper also discusses the current trends and future research scope in the area of Odia character recognition. It is expected that this paper will be useful to those who will be interested to work in the fields of recognition of Odia characters.

Keywords: Preprocessing, Segmentation, Feature extraction, Classification, Post Processing

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Paper Title: Performance Evaluation of Cooking Stove Working on Spent Cooking Oil

Abstract: This paper deals with the use of spent cooking as a fuel in kerosene stove In order to avoid the reuse of spent cooking oil for cooking which has adverse effects on the health of human being, corrective steps are needed to be taken. With an approach of alternative fuel for kerosene pressurized cooking stove, blends of kerosene and spent soya bean cooking oil of various proportions have been prepared. These samples were tested one by one in an existing kerosene pressurized cooking stove at various pressures. From the study, it has been found that at 1.5 bar pressure, efficiency of 50% proportion of spent soya bean oil with 50% proportion of kerosene is better than pure kerosene.

Keywords: kerosene stove, spent soya bean oil, magnetization, efficiency, calorific value.

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