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	Paper Title:	Modeling and Optimization of Brackish Water Solar Desalination Plant Working on Reverse Osmosis Process	
	<p>Abstract: Nowadays, brackish and sea water desalination has become one of important fresh water sources in arid and semi-arid regions suffering from water scarcity. The reverse osmosis process which is one of desalination process requires large amount of electric energy, it's around 3.5–5.0 kWh/m³. Hence, solar energy-powered reverse osmosis systems are promising technologies for brackish and seawater desalination notably for small remote communities. These systems can be designed according to water demand and energy resource. This work aims to minimize the specific energy consumption (SEC) of a solar desalination plant working on reverse osmosis process to produce fresh water from brackish water (BWRO). Two scenarios are taken into account; (1) BWRO without recovery device, (2) BWRO with energy recovery device (turbine). A mathematical model and an algorithm in the MATLAB area have been developed and validated. The results show that the minimum value of specific energy consumption for the proposed plant is about 0.1269 kWh/m³ for 47% of water recovery.</p> <p>Keywords: Reverse Osmosis process, renewable energy, specific energy consumption, modelisation, optimization</p> <p>References:</p> <ol style="list-style-type: none"> 1. Val S. Frenkel. «Seawater Desalination: Trends and Technologies,Desalination » Trends and Technologies, Michael Schorr (Ed.), ISBN: 978-953-307-311-8,2011. 2. Veerapaneni, S., B. Long, S. Freeman and R. Bond. 2007. Reducing Energy Consumption for Seawater Desalination. J.AWWA., 2007(6):95-106 3. David Hasson, Victor Lumelsky, Gal Greenberg, Yosef Pinhas, Raphael SemiatDevelopment of the electrochemical scale removal technique for desalination applications Desalination 230 , 329–342,2008 4. A .Subramani, Mhammad Badruzzaman,Joan , Oppenheimer ,Joseph G. Jacangelo ,Energy minimization strategies and renewable energy utilization for desalination: A review ,water research journal 1907-1920,2011. 5. Al-Karaghoul, “Renewable Energy Opportunities in Water Desalination,” in Desalination, Trends and Technologies, M. Schorr, Ed. InTech, 2011. 6. Bourouni, K., Chaïbi, M. Solar energy for application to desalination in Tunisia: description of a demonstration project. Renewable Energy in the Middle East, 125-149.2009 7. Clarke, D. P., Al-Abdeli, Y. M., & Kothapalli, G. (2011). Modelling Small-Scale Stand-Alone (PV) Energy Systems with Reverse Osmosis Integration. Paper presented at the International Congress on Modelling and Simulation,2011 8. Mariem Smaoui, Achraf Abdelkafi, Lotfi Krichen ,Optimal sizing of stand-alone photovoltaic/wind/hydrogen hybrid system supplying a desalination unit, Solar Energy 120 (2015) 263–276 9. Marjorie Gavach, « Detoxification of condensats of distillery by reverse osmosis exchanges of ions and their combination Application in the recycling in alcoholic fermentation », 27 mai 2010 10. Alain maurel, «Desalination of the sea water and the waters of brackish: and other processes non-conventional of water supply soft »,2nd edition 2006 11. Hanane Dach, « Comparison of the operations of nanofiltration and reverse osmosis for the selective desalination of brackish water: of the scale of the laboratory to the industrial pilot », doctorat , université d'Angers, mai 2008 12. Alice Daussy, Maxime Guérin, Tries Guth, « seawater desalination in Malte and Israël », technology university Compiègne, 2011 13. Yan Yue Lu,Yang D H ,« optimum design of reverse osmosis system under different feed concentration and product specification » journal de science membranaire 287 ,219-229 ,2007 14. Erik D, Juan MP. « A case suey: energy use and process design considerations for four desalination projects in California. In: IDA World Congress –Perth Centre Convention et Exhibition (PCEC). Perth, Western Australie, Septembre 4-9, 2011 15. K. Bourouni , T. Ben M'Barek , A. Al Tae,design and optimization of desalination reverse osmosis plants driven by renewable energies using genetic algorithmsRenewable Energy journal, 36 ,936-950, 2011 		1-4
2.	Authors:	Lyudmila Aleksandrova	
	Paper Title:	Materials and Surrounding Structures for Implementation of "Medical" Modules In Extreme Situations	
	<p>Abstract: The use of fruit warehouses (as a secondary use) for medical purposes in extreme situations requires appropriate solutions for protection of the structures from destructive external influence, e.g. concentrated hits by vehicles, sanitary carts and others. In this regard various solutions have been developed i.e. patented inventions for protection of the internal spaces in case of radiation, bacteriological contamination, military conflicts and others. Here are also explained the applications of stretched membranes as well as the use of tensegrity structures as a way of execution of protective screens for the chambers and volumes to be used under other harmful external conditions – acid rain, volcanic ash, formations of smog and others.</p> <p>Keywords: materials, surrounding structures, "medical" modules, extreme situations</p> <p>References:</p> <ol style="list-style-type: none"> 1. Aleksandrova Liudmila Dissertation „Adaptation of the chambers of fruit storehouses and refrigeration warehouses for use for medical purposes in extreme situations”. 2009. 2. Aleksandrova Liudmila Module planning schemes with dimensions and surfaces suitable for situation of three or four operation rooms in refrigeration chambers. III-27-34; PROCEEDINGS, VOLUME1. ISBN: 978-954-331-019-7. JUBILEE INTERNATIONAL SCIENTIFIC CONFERENCE VSU, 2008. 3. Aleksandrova Liudmila Chapter 5. „Connection of the walls of operation blocks with rectangular shape to the coordination axes of the carrying construction of refrigeration chambers, according to Ukrainian norms”, in the monograph “Exploitation of medical modules and sub-modules in extreme situations”. 2016. ISBN 978-954-331-068-5. 4. Aleskandrov Yanko Abstract of the dissertation: „Innovative solutions with inventive step of elements for refrigeration chambers of fruit storehouses and refrigeration warehouses” for the degree “Doctor of Sciences”, Scientific specialization: 02.17.05. „Architecture of buildings, constructions and details”. 2014. 5. Aleksandrov Yanko Refrigeration chambers and volumes for use in extreme situations. IJITEE- India. Volume- 6, Issue 2, July 2016. Page 		5-14

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Authors:	Shivalinga Saboji S, Nagarajappa D. P, Manjunath N.T, Manjunatha K		
Paper Title:	Effect of Garden Grass Adsorbent on the Performance of Soil Aquifer Treatment (SAT)		
3.	<p>Abstract: In the present work, Garden Grass was used to enhance the removal efficiency of Soil Aquifer System (SAT) for the removal of Cadmium(Cd) and Lead(Pb). The column studies were carried out using 3 different concentrations for both metals in Synthetic water (5, 15, 25mg/L) and varying adsorbent heights (20%, 40%, 60%, and 80%) in 0.8m soil depth. Soil properties were determined and Loamy Sand soil was used. The efficiency of SAT to remove Cd and Pb without Garden Grass resulted in 47.2%, 49.8%, 45.5% for Cd and 38.4%, 44.5%, 43% for Pb. The conjunction of Garden Grass in SAT resulted in increased removal efficiency. Whereas the efficiency was observed maximum at 80% height of adsorbent resulting in 81.6%, 82.4%, 69.7% for Cd and 36.7%, 57.2%, 48.2% for Pb. Comparison studies show that SAT in conjunction with Garden Grass showed better performance than without adsorbent one.</p> <p>Keywords: Cadmium, Garden Grass SAT, Synthetic water.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Sunil Kulkarni, Sonali Dhokpande, Dr. Jayant Kaware, "A Review on Spectrophotometric Determination of Heavy Metals with emphasis on Cadmium and Nickel Determination by U.V. Spectrophotometry", International Journal of Advanced Engineering Research and Science, vol. 2, no.9, pp.35-38, 2015. 2. T. Selvakumar , Madhavi Ganesan. "Water Quality Improvements in Soil Aquifer Treatment (SAT) Simulated Soil Columns", Indian Journal of Science and Technology, vol. 8, no. 28, pp.1-6, 2015. 3. Evbuomwan B. O, Atuka M.M, "Kinetics and Thermodynamic Studies of Biosorption of Cadmium (ii) from Aqueous Solution onto Garden Grass (GAG)", Journal of Chemistry and Materials Research, vol.1, no. 1, pp.12-22, 2014. 4. Lokendra Singh Thakur, Pradeep Semil, "Adsorption of Heavy Metal (Cd²⁺, Cr⁶⁺ and Pb²⁺) from Synthetic Waste Water by Coconut husk Adsorbent", International Journal of Chemical Studies, vol. 1, no. 4, pp.64-72, 2013. 5. Pushpendra Kumar Sharma, Sohail Ayub, Chandra Nath Tripathi, "Agro and Horticultural Wastes as Low Cost Adsorbents for Removal of Heavy Metals from Wastewater: A Review", International Refereed Journal of Engineering and Science, vol. 2, no. 8, pp.18-27, 2013. 6. Ghanshyam G. Pandhare, Nikhilesh Trivedi, Rajesh Pathrabe, S. D. Dawande, "Adsorption of Cadmium (II) And Lead (II) from a Stock Solution Using Neem Leaves Powder as a Low-Cost Adsorbent", International Journal of Innovative Research in Science, Engineering and Technology, vol. 2, no.10, pp.5752-5761, 2013. 7. Nagarajappa D.P, Manjunatha K and Manjunath N.T, "Effects Of Soil Types on Peformance Of Soil Aquifer Treatment (SAT) System", J. Indian Geotech Conference, pp: 425- 428,2010. 		
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Authors:	Adnan Hussein Ali, Ahmed Rashid Ajel		
Paper Title:	OPNET Scenarios of WiFi and WIMAX Networks Performance Analysis		
4.	<p>Abstract: Worldwide interoperability for microwave access (WiMAX) network and wireless (WiFi) fidelity IEEE 802.11 and IEEE 802.16 standards. WiFi and WiMAX, wireless LANs, MANs and LAN promise broadband access solutions. WiMAX technology provides wireless broadband access in the IP network the most exciting solutions for high data transfer rates and high-quality of service (QoS) fixed and mobile devices, WiFi is a wireless broadband access to indoor, commercial Internet subscribers. Use the OPNET Modeller sub-regional networks, simulate and finish the performance in terms of WiFi and WiMAX, compare and compare MAC delay voice packets. Simulation results show that.</p> <p>Keywords: Worldwide, (WiMAX), Network, LANs, WiFi, (QoS), MAC, IEEE 802.11 and IEEE 802.16 standards.</p> <p>References:</p> <ol style="list-style-type: none"> 1. R. Paul, S. Lally and L.Trajkovic, "Simulation and Performance Evaluation of Wi-Fi and WiMAX using OPNET," Simon Fraser University, Vancouver, British Columbia, Opnetwork, 2011. 2. Linda Zhao, Claire Liu, Alan Fang, Quality of Service Analysis of Video Conferencing over WiFi and Ethernet Network, Final Project Presentation, COMMUNICATION NETWORKS, SPRING 2012. 3. Farzin, "OPNET Simulation of IEEE 802.11(WiFi) and IEEE 802.16 (WiMAX) in a small area", Final Project, spring publisher, 2010. 4. Dheeraj Sikhwal, Rakesh Rathi, WiMAX (802.16) - A Study of Mobility and MAC layer, International Refereed Journal of Engineering and Science (IRJES), Vol. 3, Issue 3, PP.61-66 (March 2014). 5. S. Islam, M. Rashid, M. Tarique, Performance Analysis of WiMax/WiFi System under Different Codecs, International Journal of Computer Applications, Volume 18- No.6, March 2011. 6. Garima Malik *, Ajit Singh, Performance Evaluation of WiFi and WiMax Using Opnet, International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 6, June 2013. 7. Chakraborty, M. and D. Bhattacharyya, Overview of End-to-end WiMAX Network Architecture. WiMAX Security and Quality of Service, 		
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	<p>Head, Department of Information Technology, Institute of Engineering and Management, Salt Lake, Kolkata, India, 2010.</p> <p>8. Lawal, A. Md Said and A. Aminu Mu'azu, Simulation Model to Improve QoS Performance over Fixed WiMAX using OPNET, Research Journal of Applied Sciences, Engineering and Technology 6(21): 3933-3945, 2013.</p> <p>9. Motorola and Intel, WiMAX and WiFi together deployment models and user scenarios, white paper [Online]. Available: http://www.motorola.com/WiMAX_and_WiFi.</p> <p>10. W. Hruday and Lj. Trajkovic, "Mobile WiMAX MAC and PHY layer optimization for IPTV," Mathematical and Computer Modelling, Elsevier, vol. 53, pp. 2119–2135, Mar. 2011.</p> <p>11. D. Xiao, Y. Fan and H. Xiaopeng, "ENSC 427 Communication Networks LAN-WiMAX Analysis OPNET", Final Report, Springer, 2009.</p> <p>12. N. Bazamah, A. Shah, R. Ramle, N. Awang, and M. F. Yusuf, Fixed and Mobile WiMAX: A Comparison towards the Distance and Height Effects on Performance Degradation, Lecture Notes on Software Engineering, Vol. 1, No. 1, February 2013.</p>	
	<p>Authors: M. Durairaj, P. Sagaya Aurelia</p>	
5.	<p>Paper Title: Interactive and Integrated Learning and Teaching System Through Mobile Augmented Reality System – An Innovative Approach</p> <p>Abstract: Mobile augmented reality is growing rapidly because of the growth of smartphones. Due to the portable nature of smartphones, mobile augmented reality devices have become the most widely deployed consumer augmented reality display devices. The role of the user is identified and forwarded to the respective module. When a general optical tracking platform provided, the reachability and performance can be increased without affecting the efficiency, which will be done in AllinoneAR. Module. An integrated framework consisting of three above stated modules is proposed in this paper.</p> <p>Keywords: Augmented reality, Learnability, usability, authoring, Role</p> <p>References:</p> <ol style="list-style-type: none"> Zarwina Yusoff, Halina Mohammed Dahlan, "Mobile based learning: An integrated framework to support learning engagement through augmented reality environment", 3rd International Conference on Research and Innovation in Information Systems-2013(ICRIIS'13) R. Francese, I.Passero and Genoveffa Tortora,"Current challenges for Mobile Location-Based Pervasive Content Sharing Application", Ubiquitous Computing www.intechopen.com,Feburary 2011 PP 199-214 Ming Liu, Xiao Li, Xaio Lei, Sheng Wu, "Research of Mobile Augmented Reality Technology applied in Agriculture", International Conference on Advanced Computer Science and Electronic Information(ICACSEI 2013) pp 311-315 Abhishekh, Ramakantha reddy,Raja kumar, Rajewsarappa,"Interactive learning in education using augmented reality", International Journal of Scientific and engineering research Volume 4, Issue 1, January-2013, PP 1-4 Clemens Arth, Dieter Schmalstieg, "Challenges of Large-Scale Augmented Reality on Smartphone", Graz university of Technology, Austria,2011 Rachel Harrison, Derek Flood and David Duce,"Usability of mobile applications: literature review and rationale for a new usability model", Journal of Interaction science 2013 pp 1-16 Jan Robert Menzel, Michel Konigs, Leif Kobbelt , "A Framework for vision-based mobile AR applications", 2011 pp1-4 P.Sagaya Aurelia, Dr. Durai Raj, Dr. Omer Jomah, A Survey on Mobile Augmented reality based interactive, Collaborative and Location based storytelling, Mathematics and Computers in Science and Industry 2014 , ppno 197-205 P.Sagaya Aurelia, Dr. Durai Raj, Dr. Omer Jomah, Mobile Augmented Reality and Interactive Storytelling, Mathematics and Computers in Science and Industry 2014 , ppno 332-337 Sagaya Aurelia, Dr. M. Durai Raj, Omer Saleh, Mobile Augmented Reality and Location Based Service, Advances in Information Science and Applications- Volume II, pp 551-558 Sagaya Aurelia, Dr. M. Durai Raj, Omer Saleh, A Survey on Mobile Augmented Reality based Interactive Storytelling, International journal of Emerging Trends in Science and Technology, IJETST, Volume 01, Issue 05, pages 567-578 Sagaya Aurelia, Dr. Durai Raj, Dr. Omer Saleh,"Mobile Augmented Reality and Interactive Storytelling concepts, Integrations,Limitations and future", International Journal of Advanced Information Science and Technology, Vol 27, No.27, July 2014, ppno: 57-63 	25-27