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	Paper Title:	Smart Water Distribution for Irrigation System (SWDIS)	
	<p>Abstract: Agriculture plays a vital role in the economy of any country. Therefore it needs more enhancements by improving its manual methods with the help of technology. In irrigation system, water plays a vital role in crop production. This study proposes smart water distribution system for irrigation system. Microcontroller is used to control the water distribution according to the requirements of crops. Real time watering requirements are measured through embedded sensors placed in each field. A user-friendly GUI based application is developed that enables the user to monitor and control the water distribution. By using this application, user can schedule the water distribution plan for automatic distribution in advance. User can also easily analyze the history of water distribution in the form of graphs and also estimate the consumption of power with respect to crops.</p> <p>Keywords: Smart Water Distribution, Intelligent irrigation, Automatic Irrigation System, Smart Irrigation System, Renewable Energy.</p> <p>References:</p> <ol style="list-style-type: none"> Andreas P. Savva, Karen Frenken, "Crop Water Requirements and Irrigation Scheduling", Irrigation Manual Module 4, Water Resources Development and Management Officers FAO Sub-Regional Office for East and Southern Africa. T.A. Howell, From pp. 21-33, In C.R. Camp, E.J. Sadler, and R.E. Yoder (eds.), "Irrigation Scheduling Research and Its Impact on Water Use," Evapotranspiration and Irrigation Scheduling, Proceedings of the International Conference, San Antonio, TX, American Society of Agricultural Engineers, St. Joseph, MI, Nov. 3-6, 1996 Neelam R. Prakash, Dilip Kumar, Tejender Sheoran, "Microcontroller based closed loop automatic irrigation system," International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-1, Issue-1, June 2012. SatyaPrasanthYalla, B.Ramesh, A.Ramesh, "Autonomous solar powered irrigation system," International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622, Vol. 3, Issue 1, January -February 2013, pp.060-065. S. Harishankar, R. Sathish Kumar, Sudharsan K.P, U. Vignesh and T.Viveknath, "Solar powered smart irrigation system," Advance in Electronic and Electric Engineering, ISSN 2231-1297, Volume 4, Number 4 (2014), pp. 341-346. Hemant Ingale, N.N.Kasat, "Automated solar based agriculture pumping," International Journal of Advanced Research in Computer Science and Software Engineering, Volume 2, Issue 11, November 2012, ISSN: 2277 128X. Venkata Narayana Eluri, K. Madhusudhana Rao, A. Srinag, "Wireless Solution for Water Saving In Agriculture Using Embedded System," International Journal of Computer Science and Business Informatics, ISSN: 1694-2108 Vol. 2, No. 1. JUNE 2013. Agriculture Department, Govt. of Sindh, "SCHEDULING OF IRRIGATION", available on http://sindhagri.gov.pk/water%20req.html Dr. Shamsuddin Tunio, "Wheat irrigation scheduling under water shortage conditions", Available on http://www.pakistaneconomist.com/issue2001/issue13/i&e4.htm Nadeem Abbas Raja, "Sugercane Overview", available on http://www.pakissan.com/english/allabout/crop/sugarcane.shtml. 		
2.	Authors:	Md Tabish Anjum, Tazeem Ahmad Khan	7-11
	Paper Title:	Analytical Study of Wireless LAN using MIMO with OSTBC	
	<p>Abstract: The use of multiple antennas for wireless communication systems has gained overwhelming interest of research in wireless communication. This paper deals with the effect on Multiple Input Multiple Output transmission technique for multiple fading channels using Phase shift keying (PSK) of Modulation Order (M=2) and Quadrature Amplitude Modulation (QAM), there are two transmitting (Tx1, Tx2) and Two Receiving antenna (Rx1,Rx2) are used for anticipation. In this paper, I also tried to show the effect on Frame Error Rate (FER) by increasing the signal to noise ratio (SNR) using OSTBC MIMO technique, Quadrature phase shift keying (QPSK) modulation technique is used for the modulation and there are two transmitting antenna (nTx1, nTx2) and one receiving antenna (nRx1) are used to simulate the Multiple Input Multiple Output (MIMO) for Quadrature Phase shift Keying (QPSK). The main concern of this paper is to show the specification and effect of 802.11ac protocol that deals with the QAM Modulation technique that leads MIMO transmission to higher level that can achieve milestone for wireless communication system.</p> <p>Keywords: PSK, QPSK, QAM, OSTBC</p> <p>References:</p> <ol style="list-style-type: none"> Narendra M R, "Study of Transmission Characteristics of MIMO System for Different Modulation Techniques", International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-3, Issue-1, June 2 013 Dr Daniel W. bliss, "Multiple-Antenna Techniques for Wireless Communications", Lincoln Laboratory, Massachusetts Institute of Technology, September 2013 Yakub kilic, "Multiple Input Multiple Output transmission technique and link adaptation in wireless system with dual Polarized", B.S, Electronics and Communication Engineering, Yildiz Technical University, 2007 Bachir Habib, Gheoghe Zahara, Ghais El Zein "MIMO Hardware Simulator: Digital Block Design for 802.11ac Applications with TGN Channel Model Test", IEEE VTC Spring 2012, May 2012, Yokohama, Japan Daniel W. Bliss, Keith W. Forsythe, and Amanda M. Chan, "MIMO Wireless communication", Lincoln Laboratory Journal, 2005 Bach duy vo, "802.11n Wireless Communication System Simulation Using Matlab and Implementation on FPGA", 2008-2009 Femi-Jemilohun Oladunni Juliet, Walker Stuart, "Emperical Performance Evaluation of enhanced throughput schemes of IEEE802.11 technology in wireless are networks", School Of Computer Science and Electronic Engineering University of Essex Colchester, Essex, United Kingdom S. M. Alamouti, "A simple transmit diversity technique for wireless communications," IEEE® Journal on Selected Areas in Communications, vol. 16, no. 8, pp. 1451-1458, Oct. 1998. V. Tarokh, H. Jafarkhani, and A. R. Calderbank, "Space-time block codes from orthogonal designs", IEEE Transactions on Information Theory, vol. 45, no. 5, pp. 1456-1467, Jul. 1999. Shubhangi Chaudhary, A.J. Patil, "performance analysis of MIMO-Space Time Block Coding with different modulation technique", Department of Electronics and Telecommunication, Cummins College of Engineering for Women, India Department of Electronics and 		

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3.	<table border="1"> <tr> <td data-bbox="119 168 335 212">Authors:</td> <td data-bbox="335 168 1412 212">Omid Toutian Esfahani, Ata Jahangir Moshayedi</td> </tr> <tr> <td data-bbox="119 212 335 257">Paper Title:</td> <td data-bbox="335 212 1412 257">Design and Development of Arduino Healthcare Tracker System for Alzheimer Patients</td> </tr> </table>	Authors:	Omid Toutian Esfahani, Ata Jahangir Moshayedi	Paper Title:	Design and Development of Arduino Healthcare Tracker System for Alzheimer Patients	12-16
Authors:	Omid Toutian Esfahani, Ata Jahangir Moshayedi					
Paper Title:	Design and Development of Arduino Healthcare Tracker System for Alzheimer Patients					
	<p>Abstract: Nowadays after the revolution of robotics in industries, the healthcare and position monitoring systems became more and more demanding. The target position monitoring of an object will help for the better navigation as well as control of systems. One of the fields, which today use this kind of tracking, is the patient control like Alzheimer patients or handicap people. This paper is about an Adriano based positioning and healthcare system developed to help Alzheimer's patients and their caregivers to track patients and monitor their vital signs remotely. The result of the system and the case study obtained shows the capability of the system to handover this task and use as the helper for Alzheimer patients in various situations.</p> <p>Keywords: Arduino; positioning systems; healthcare; Alzheimer's patients</p> <p>References:</p> <ol style="list-style-type: none"> 1. C. Reitz, C. Brayne, and R. Mayeux, "Epidemiology of Alzheimer disease," Nature Reviews Neurology, vol. 7, no. 3, pp. 137-152, 2011. 2. Alzheimer Disease International. World Alzheimer report 2009. Lon- don: Alzheimer Disease International; 2009. 3. Alzheimer Disease International. World Alzheimer report 2010: the global economic impact of dementia. London: Alzheimer Disease International; 2010. 4. Prince M, Bryce R, Albanese E, Wimo A, Wagner R, Ferri CP. The global prevalence of dementia in 2010: a systematic review and meta-analysis. Alzheimer's Dement 2012;9:64-73 5. Wimo A, Jönsson L, Winblad B. An estimate of the total world- wide societal costs of dementia in 2005. Alzheimer's Dement 2007;3:81-91. 6. Wimo A, Winblad B, Jonsson L. The worldwide societal costs of dementia: estimates for 2009. Alzheimers Dement 2010; 6:98-103. 7. H. Koyuncu and S. H. Yang, "A survey of indoor positioning and object location systems," IJCSNS International Journal of Computer Science and Network Security, vol. 10, no. 5, pp. 121-128, 2010. 8. Esfahani, Omid Toutian, and Ata Jahangir Moshayedi. "Accuracy of the Positioning Systems for the Tracking of Alzheimer's Patients-A Review." International Journal of Applied Electronics in Physics & Robotics 2.2 (2014): 10-16. 9. Samantaryay, Devadutta, Debasmita Pattnaik, and Bonani Sahu. Microcontroller based implementation of a fuzzy knowledge based controller. Diss. 2013. 10. A Novel Technique for Controlling CNC Systems Hussein Sarhan Department of Mechatronics Engineering, Faculty of Engineering Technology, P. O. Box 15008, Amman, Jordan 11. Arduino Based Wireless Intrusion Detection Using IR Sensor and GSM 12 Prakash Kumar, Pradeep Kumar 12. Study on Microcontroller Based System to Measure and Control Various Physical Parameter Sudhakar Singh1*, M.K. Pathak 2, P. Mor 2 and J.M. Keller 2 1Department of Physics and Computer Science, Sardar Patel College of Technology Balaghat (M.P.), India 2 Department of Physics and Electronics, RDVV Jabalpur (M.P.), India 13. Arduino.cc, 'Arduino - ArduinoBoardMega2560', 2015.[Online]. Available: http://www.arduino.cc/en/Main/ArduinoBoardMega2560. [Accessed: 13- Jul- 2015]. 14. Wm.sim.com, 'SIM908', 2015. [Online]. Available: http://wm.sim.com/producten.aspx?id=1024. [Accessed: 13- Jul- 2015]. 15. Ti.com, 'LM35 Analog Output Local Temperature Sensors Description & parameters', 2015.[Online]. Available: http://www.ti.com/product/lm35. [Accessed: 13- Jul- 2015]. 16. Arduino.cc, 'Arduino - SD Card Notes', 2015.[Online]. Available: http://arduino.cc/en/pmwiki.php?n=Reference/SDCardNotes. [Accessed: 13- Jul- 2015]. 17. W. llc., 'Getting Started', World Famous Electronics llc., 2015. [Online]. Available: http://pulsesensor.com/pages/code-and-guide. [Accessed: 13- Jul- 2015]. 18. https://pulsesensor.googlecode.com/files/PulseSensorAmpedGettingStartedGuide.pdf 	12-16				
4.	<table border="1"> <tr> <td data-bbox="119 1355 335 1400">Authors:</td> <td data-bbox="335 1355 1412 1400">Md Khalid, Tazeem A Khan, A Shahid Khan</td> </tr> <tr> <td data-bbox="119 1400 335 1444">Paper Title:</td> <td data-bbox="335 1400 1412 1444">Watermarking using Blind Embedding and Linear Correlation Detection</td> </tr> </table> <p>Abstract: Watermarking technology serves a vital role in information security. It focuses on embedding message (audio, image etc.) inside a digital object such that the embedded message is separate bound to the object. In this paper, I represent Blind Embedding and Linear Correlation Detection based algorithm for watermarking in digital images. I have used MATLAB for my proposed technique because it is a high level technical computing language for algorithm development, data visualization and numerical computations.</p> <p>Keywords: Watermarking, Blind Embedding and Linear Cor Relation Detection</p> <p>References:</p> <ol style="list-style-type: none"> 1. Mei Jiansheng, Li Sukang and Tan Xiaomei "A Digital Watermarking Algorithm Based On DCT and DWT"- WISA'09, Nanchang, P.R. China, May 22-24, 2009, pp. 104-107. 2. Shradha S. Katariya(Patni) "Digital Watermarking: Review", IJEIT, Volume 1, Issue 2, February 2012, pp. 143-153. 3. Mohan Durvey and Devshri Satyarathi "A Review Paper on Digital Watermarking" - IJETICS, Volume 3, Issue 4, July- August 2014, pp. 99-105. 4. Radhika v. Tola and K.S. Bapat, "Comparative Analysis of Watermarking in Digital Images Using DCT and DWT" International Journal of Scientific and Research Publications, Volume 3, Issue 2, February 2013, pp. 1-4. 5. Keshav S. Rawat and Dheerendra S Tomar, "Digital Watermarking Schemes For Authorisation Against Copying Or Piracy Of Color Images", Indian Journal of Computer Science and Engineering, Volume 1, Number 4, pp. 295-300. 6. J. Anitha and S. Immanuel Alex Pandian, "A Color Image Digital Watermarking Scheme Based On SOFM" International Journal of Computer Science Issues, Volume 7, Issue 5, September 2010, pp. 302-309. 7. Dolley Shukla and Manisha Sharma, "Watermarking Schemes For Copy Protection: A Survey" International Journal of Computer Science and Engineering Services, volume 3, Number 1, February 2012, pp. 65-71. 8. Aseem Saxena, Amit Kumar Sinha, Shashank Chakarwari and Surabhi Charu, "Digital Watermarking Using MATLAB" International Journal of Advances in Science Engineering and Technology, Volume 1, Issue 3, June 2014, pp. 39-42. 9. Karnpriya Vyas, Kriti Sethiya and Sonu Jain- "Implementation of Digital Watermarking Using MATLAB Software COMPUSOFT" An International Journal of Advanced Computer Technology, Volume 1, Issue 1, 2012, pp. 1-7. 10. P. Ramana Reddy, V. N. K. Prasad and D. Sreenivasa Rao, "Robust Digital Watermarking of Color Images under Noise Attacks" - 	Authors:	Md Khalid, Tazeem A Khan, A Shahid Khan	Paper Title:	Watermarking using Blind Embedding and Linear Correlation Detection	17-19
Authors:	Md Khalid, Tazeem A Khan, A Shahid Khan					
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	<p>International Journal of Recent Trends in Engineering, Volume 1, Number 1, May 2009, pp. 334-338.</p> <p>11. Er. Deepak Aggarwal, Er. Sandeep Kaur and Er. Anantdeep, "An Efficient Watermarking Algorithm to Improve Payload and Robustness without Affecting Image Perceptual Quality" Journal of Computing, Volume 2, Issue 4, April 2010, pp. 105-109.</p> <p>12. P. Surekha and S. Sumathi, "Implementation of Genetic Algorithm for a DWT Based Image Watermarking Scheme" ICTACT Journal, Volume 2, Issue 1, July 2011, pp. 244-252.</p> <p>13. Sajjad Bagheri Baba Ahmad, "Image Watermarking: Blind Linear Correlation Technique" TI Journals, World Applied Programming, Volume 5, Number 5, May 2015, pp. 93-100.</p>	
Authors:	Mohd Nazarudin Zakaria, Mohd Fakharulzaman Raja Yahya, Sukirah Abd Rahman, Nooramirah Kamaruddin, Maizatunlisa Othman, Shahril Anuar Bahari	
Paper Title:	Comparative Study of Celluloses from Biofilm-Forming Bacteria for Development of Cellulose-Reinforced Products	
5.	<p>Abstract: This study was conducted to compare the celluloses from <i>Acetobacter xylinum</i> and <i>Pseudomonas fluorescens</i>. Results showed that <i>A. xylinum</i> and <i>P. fluorescens</i> produce insoluble and soluble cellulose respectively. The agitation at several speeds was found to affect the form and yield of bacterial celluloses. Based on FTIR spectroscopy, the biochemical composition of <i>A. xylinum</i> cellulose was apparently distinct from that of <i>P. fluorescens</i> with regards to the spectral region between 830 cm⁻¹ and 1400 cm⁻¹. Sample preparation of <i>P. fluorescens</i> cellulose for XRD analysis was unsuccessful due to its high solubility in culture medium whilst XRD analysis demonstrated the high crystallinity (92.13%) of <i>A. xylinum</i> cellulose. Collectively, the variations between <i>A. xylinum</i> and <i>P. fluorescens</i> celluloses could be observed in terms of cellulose form, cellulose yield, biochemical composition and crystallinity. The findings from this study are expected to assist the industries in choosing the right source of bacterial cellulose for their commercial products.</p> <p>Keywords: Bacteria cellulose, <i>Acetobacter xylinum</i>, <i>Pseudomonas fluorescens</i>, cellulose yield, crystallinity.</p> <p>References:</p> <ol style="list-style-type: none"> James Strachan (1938) Solubility of Cellulose in Water Nature 141, 332-333. Surma-Slusarska, B., Presler, S. and Danielewicz, D. (2008). Characteristics of bacterial cellulose obtained from <i>Acetobacter xylinum</i> culture for application in papermaking. <i>Fibres & Textile in Eastern Europe</i>, 16, 108-111. Jonas, R. and Farah, L.H. (1998). Production and application of microbial cellulose. <i>Polymer Degradation and Stability</i>, 59, 101-106. Neelobon Suwannapinunt, Jiraporn Burakorn, and Suwannee Thaenthane (2007). Effect of culture conditions on bacterial cellulose (BC) production from <i>Acetobacter Xylinum</i> TISTR976 and physical properties of BC parchment paper. <i>Suranaree J. Sci. Technol.</i> 14(4):357-365. Wojciech Czaja, Dwight Romanovicz, and R. malcolm Brown (2004). Structural investigations of microbial cellulose produced in stationary and agitated culture. <i>Cellulose</i>. 11: 403-411. Marchessault, R. H. and P. H Sundararajan (1983). Cellulose, p 11-25. In G. O. Aspinall (ed.) <i>The polysaccharides</i>. Vol. 2 Academic Press, Inc., New York. VanderHart D. I. and Atalla R. H. (1984). Studies of microstructure in native celluloses using solid-state ¹³C NMR. <i>Macromolecules</i> 17:1465-1472. Andrew J. Spiers, Yusuf Y. Deeni, Ayorinde O. Folorunso, Anna Koza, Olena Moshynets and Kamil Zawadzki (2013). Cellulose Expression in <i>Pseudomonas fluorescens</i> SBW25 and Other Environmental Pseudomonads, <i>Cellulose - Medical, Pharmaceutical and Electronic Applications</i>, Dr. Theo G.M. Van De Ven (Ed.), InTech, Schrecker ST, Gostomski PA. Determining the water holding capacity of microbial cellulose. <i>Biotechnol Lett</i> (2005);27(19) 1435-1438. Hiroaki Egawa, Shuei Maeda, Etsuo Yonemochi, Toshio Oguchi, Kenji Yamamoto, Yoshinobu Nakai (1992). Solubility Parameter and Dissolution Behavior of Cefalexin Powders with Different Crystallinity. <i>CHEMICAL & PHARMACEUTICAL BULLETIN</i>; ISSN:0009-2363; VOL.40; NO.3; PAGE.819-820. Prashant R. Chawla, Ishwar B. Bajaj, Shrikant A. Survase and Rekha S. Singhal (2009). Microbial Cellulose: Fermentative Production and Applications. <i>Food Technol. Biotechnol.</i> 47 (2) 107-124. Iguchi, M.; Yamanaka, S. and Budhiono, A. (2000). "Bacterial cellulose' a masterpiece of nature's arts". <i>Journal of Materials Science</i> 35 (2): 261-270. Wojciech K. Czaja, David J. Young, Marek Kawecki, and R. Malcolm Brown, Jr. (2007). "The Future Prospects of Microbial Cellulose in Biomedical Applications". <i>Biomacromolecules</i> 8 (1): 1-12. Susanne Udel, Dawn L. Arnold, Christina D. Moon, Tracey Timms-Wilson, Andrew J. Spiers. (2006) Biofilm formation and cellulose expression among diverse environmental <i>Pseudomonas</i> isolates. <i>Environmental Microbiology</i> Volume 8, Issue 11, pages 1997-2011. Gualdi L, Tagliabue L, Bertagnoli S, Ieranò T, De Castro C, Landini P. (2008) Cellulose modulates biofilm formation by counteracting curli-mediated colonization of solid surfaces in <i>Escherichia coli</i>. <i>Microbiology</i>. 2008 Jul;154(Pt 7):2017-2024. Lynd, L.R., P.J. Weimer, W.H. van Zy and I.S. Pretorius (2002). Microbial cellulose utilization: Fundamentals and biotechnology. <i>Microbiol. Mol. Biol. Rev.</i>, 66: 506-577. Shirai, A., N. Sakairi, N. Nishi and S. Tokur, (1997). Preparation of a novel (1-4)-b-d-glycan by <i>Acetobacter Xylinum</i>. <i>Carbohydr. Polym.</i>, 32: 223-227. James Holbery and Houston (2006). Natural-fiber-reinforced polymer composites in automotive applications. Volume 58, Issue 11, pp 80-86. A. Domsch (1992) <i>Die kosmetischen präparate</i> Verlag für Chemische Industrie, Augsburg. 	