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1.	<b>Authors:</b>	<b>M. M. Manyuchi, A. Phiri., P. Muredzi, N. Chirinda</b>		
	<b>Paper Title:</b>	<b>Effect of Drying on Vermicompost Macronutrient Composition</b>		
	<p><b>Abstract:</b> Vermicomposting is widely being used for bio-conversion of organic wastes into bio-fertilizers. Vermicompost which was obtained from various food wastes was dried at 105°C for 5 minutes in a moisture analyzer. The dried vermicompost macronutrient composition was analyzed and quantified over the raw vermicompost. The dried vermicompost total nitrogen content was 31.25% lower as compared to the raw vermicompost whereas , the phosphorous and potassium content were 63.75% and 72.86% higher in the dried vermicompost compared to the raw vermicompost respectively. Vermicompost can be dried for easier packaging, storage and transportation as the drying process in overall enhances nutritional value to the vermicompost.</p> <p><b>Keywords:</b> Drying, earthworms, food wastes, nutrient composition, vermicompost.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M. M. Manyuchi, A. Phiri, N. Chirinda, P. Muredzi, J. Govha and T. Sengudzwa, "Vermicomposting of Waste Corn Pulp Blended with Cow Dung Manure using Eisenia Fetida", World Academy of Science, Engineering and Technology, 68, pp. 1306-1309, 2012.</li> <li>2. M. M. Manyuchi, T. Chitambwe., P. Muredzi and Kanhukamwe, Q. "Continuous flow-through vermireactor for medium scale vermicomposting", Asian Journal of Engineering and Technology, 1 (1), pp. 44-48, 2013.</li> <li>3. S. Quaik, A. Embrandiri, P. F. Rupani, R. P. Singh, M. H. Ibrahim, "Effect of Vermiwash and Vermicomposting Leachate in Hydroponics Culture of Indian Borage (Plectranthusambionicus) Plantlets", UMT 11th International Annual Symposium on Sustainability Science and Management, pp. 210-214, 2012.</li> <li>4. M. M. Manyuchi, A. Phiri, P. Muredzi and S. Boka, "Comparison of vermicompost and vermiwash bio-fertilizers from vermicomposting waste corn pulp", World Academy of Science, Engineering and Technology, 78, pp. 365-368, 2013.</li> <li>5. A. A. Ansari and K. Sukhraj, "Effect of vermiwash and vermicompost on soil parameters and productivity of okra (Abelmoschus esculentus) in Guyana", African J. Agricultural Research, vol. 5 (14), pp. 1794-1798, 2010.</li> <li>6. M. M. Manyuchi, T. Chitambwe., A. Phiri., P. Muredzi and Q. Kanhukamwe, "Effect of vermicompost, vermiwash and application time on soil physicochemical properties", International Journal of Chemical and Environmental Engineering, 2013 (article in press).</li> <li>7. M. M. Manyuchi., L. Kadzungura., A. Phiri., P. Muredzi and Q. Kanhukamwe, "Effect of vermicompost, vermiwash and application time on soil micronutrients", International Journal of Engineering and Advanced Technology, 2 (5), pp. 215-218, 2013.</li> <li>8. M. M. Manyuchi., T. Chitambwe., A. Phiri., P. Muredzi and Q. Kanhukamwe, "Effect of vermicompost, vermiwash and application time on Zea Mays growth", International Journal of Scientific Engineering and Technology, 2 (7), 638-641, 2013.</li> <li>9. K. Muthukumaravel, A. Amsath and M. Sukumaran, "Vermi-composting of vegetable wastes using cow dung", E – J. Chemistry, vol. 5 (4), pp. 810-813, 2008.</li> <li>10. M. M. Manyuchi and A. Phiri, "Effective separation of Eisenia fetida earthworms from vermicasts using a cylindrical rotary trommel separator", International Journal of Innovative Research in Science, Engineering and Technology, 2013 (submitted for publication).</li> <li>11. M. M. Manyuchi., A. Phiri., P. Muredzi and N. Chirinda, "Bio-conversion of food wastes into vermi-products", International Journal of Science and Modern Engineering, 2013 (article in press).</li> <li>12. A. A. Ansari and J. Rajpersaud, "Physicochemical changes during vermicomposting of water hyacinth (Eichhornia crassipes) and grass clippings", ISRN Soil Science, Article ID. 984783, pp. 1-6, 2012.</li> <li>13. S. Indrajeet, N. Rai and J. Singh, "Vermicomposting of farm garbage manure in different combination", J. Recent Advances in Applied Sciences, vol. 25, pp. 15-18, 2010.</li> <li>14. A.Kiefer and J. Rivin, "The effects of storage on the quality of vermicompost", University of Wisconsin-Stevens Point, 2012.</li> <li>15. P. Pittaway, "What is a quality vermicompost", National Centre for Engineering in Agriculture, University of Southern Queensland, Toowoomba, Can Do Sheet 7.</li> <li>16. L. Abbey., S. A. Rao., L. N. Hodgins and F. Briet, "Drying and rehydration of vermicasts do not affect nutrient bioavailability and seedling growth", American Journal of Inventive Engineering and Sciences, pp. 1-10, 2012.</li> </ol>			1-3
2.	<b>Authors:</b>	<b>Gunjan Kotwani, Pawan Kalyani</b>		
	<b>Paper Title:</b>	<b>Applicability of Open Source Software (OSS) with Cloud Computing</b>		
	<p><b>Abstract:</b> Cloud computing is a very new and innovative technology being used in today's business scenario. Everything is available on the cloud; you can access the data, files, software, etc. from anywhere in the world. You do not need a particular type of hardware or software configuration. In large companies cloud computing is used as a strategic tool for outsourcing their IT or other requirements. The companies have to ensure maximum usage of expensive server and storage investments. Cloud computing data centers deploy input/output and networking solutions that scale to support any level of performance. Open Source Software is a unique concept where everybody is free to change the code of software and upgrade its utility. The concept behind the development of Open Source Software (OSS) has been sharing of source code for modification, improvement and dissemination. IT professionals from all over the world are joining in this revolution. We can just imagine the future of cloud computing and open source software, together. Open Source's main attributes of openness and community based collaboration make OSS and Cloud Computing strongly synergetic, thus laying the foundation for a technological revolution, majorly helping the small and middle sized companies with their services. Limitless opportunity of programming, website hosting, new business opportunity, strategic tool, cost effective, etc. could be the few reasons to make this technology popular in future. In this research paper we explore the options of Open Source Software that can add to the productivity and applicability of Cloud Computing.</p> <p><b>Keywords:</b> Cloud Computing, Open Source Software, Future technology, small and middle sized companies.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. "Cloud Computing and Open Source: An Industry Altering One-Two Punch" (ID #G00159058)</li> <li>2. IT@Intel White Paper, Open Source Cloud Integration September 2012</li> <li>3. Yang, Zhihe, Construction of OSS-based E-Learning Cloud in China, Education Technology and Computer(ICETC), 2010 (ISBN: 978-1-4244-6367-1)</li> </ol>			4-10

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**Authors:** K. Madhavi, B. Sreekanth Reddy, Ch. Ganapathy Reddy

**Paper Title:** Weighted Feature Points Extraction based Video Stabilization

**Abstract:** Camera global motion estimation is critical to the success of video stabilization. An extension of Video stabilization using principal component analysis (PCA) and scale invariant feature transform (SIFT) in particle filter framework is proposed. In the proposed method the feature points are collected from based on Speeded Up Robust Features (SURF). Random Samples Consensus (RANSAC) is used to remove local motion vectors and incorrect correspondences. A particle filter is used to estimate the weight of feature points, solving the issue of Different Depth of Field (DDOF) for feature points weighted least square (WLS) algorithm is applied in the global motion estimation. Finally, a Kalman filter estimates the intentional motion, and the unintentional motion is compensated to obtain stable video sequences. The algorithm has the characteristics of high precision and good robustness.

**Keywords:** Particle filter, principal component analysis (PCA), scale invariant feature transform (SIFT), speeded up robust features (SURF).

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**Authors:** Shweta M. Kulkarni, Shubhada S. Kulkarni

**Paper Title:** Generation of Shorter Length Keys for Broadcast and Multicast Services Using 2-way Hash Chain Schemes

**Abstract:** Broadcasting is the distribution of message to dispersed audience via communicating channels. Whereas, multicasting refers to sending of message to a selected group. Key management for multicast and broadcast services has difficulty to find an appropriate security mechanism because, a very high number of users consume data simultaneously. Thus our project is focused on new Key Management Scheme, called 2-way Hash Chains Scheme (2HCS), that focus on the reduction of transmission overhead caused above and thus, effectively reduces the number and the size of keying messages.

**Keywords:** Communication system security, multimedia systems, security, hash function.

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5.	<b>Authors:</b>	<b>Dhiya A. Al-Nimma, Ali Saad Amin</b>
	<b>Paper Title:</b>	<b>Four Quadrant Operation of a Single Phase Improved Power Quality AC-DC Converters</b>
	<p><b>Abstract:</b> This paper presents the four quadrant operation of a boost type single phase bidirectional ac-dc convertor via modeling and simulation. Improved power quality with unity input power factor has been achieved by adopting the hysteresis band current control technique. The simulation results confirm the efficacy of the hysteresis control that renders operation of the boost converter as the operating point transfers between the four quadrants at a unity power factor.</p> <p><b>Keywords:</b> Bidirectional ac-dc converter, improved power quality, boost convertors.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. IEEE Recommended Practices and Requirements for Harmonics Control In Electric Power Systems, IEEE Std. 519, 1992.</li> <li>2. H. Wei and I. Batarseh, "Comparison of basic converter topologies for power correction," in Proc. IEEE SOUTHEASTCON'98, 1998, pp. 348-353.</li> <li>3. IEEE Recommended Practices and Requirements for Harmonics Control in Electric Power Systems, IEEE Std. 519,1992.</li> <li>4. Draft-Revision of Publication IEC 555-2: Harmonics, Equipment for Connection to the Public Low Voltage Supply System, IEC SC 77A, 1990.</li> <li>5. Bhim Singh, B. N. Singh, A. Chandra, Kamal Al-Haddad, Ashish Pandey, and D. P. Kothari, "A Review of Single-Phase Improved Power Quality AC-DC Converters," IEEE Trans. Ind. Electron., vol. 50, No. 5, pp. 962-981, October 2003.</li> <li>6. Bhim Singh, B. N. Singh, A. Chandra, Kamal Al-Haddad, Ashish Pandey, And D. P. Kothari, "A Review of Three-Phase Improved Power Quality AC-DC Converters," IEEE Trans. Ind. Electron., vol. 51, No. 3, pp. 641-660, June 2004.</li> <li>7. B. T. Ooi, J. C. Salmon, J. W. Dixon, and A. B. Kulkarni, "A 3-phase controlled current PWM converter with leading power Factor," IEEE Trans. Ind. Applicant., vol. IA-23, No.1, Jan./Feb. 1987, 78-84.</li> <li>8. Bhim Singh, B. N. Singh, A. Chandra, Kamal Al-Haddad, Ashish Pandey, and D. P. Kothari, "A Review of Three-Phase Improved Power Quality AC-DC Converters," IEEE Trans. Ind. Electron., vol. 51, No. 3, pp. 641-660, June 2004.</li> <li>9. A. N. Arvindan, V. K. Sharma and M.Subbiah, "Harmonic Analysis of Microprocessor based Three-Phase Improved Power Quality AC/AC Voltage Controller using Power MOSFETs," in Proc. IEEE-ISIE-'06,2006,pp.763_768</li> <li>10. V. K. Sharma and A.N. Arvindan, "Simulation based Performance Analysis of the High Frequency Bi-directional Improved Power Quality AC-DC Converter with Four Quadrant Switch Realizations" in Proc. IEEE-IES International Conference on Industrial Technology, ICIT- '05, 2005, pp.981-986</li> </ol>	
6.	<b>Authors:</b>	<b>Kunja viswasanthi, Chindam Hari Prasad, Ch. Ganapathy Reddy</b>
	<b>Paper Title:</b>	<b>Minimization of Loop-Back Self Interference in Full-Duplex Relaying</b>
	<p><b>Abstract:</b> Full duplex relaying is more spectrally efficient than the half-duplex relaying. Multi-hop communication is a promising technique to provide more extensive coverage area, high throughput, better performance and it consumes low transmit power. Loop-back self interference maybe occurred due to signal leakage from relay transmission to its own reception. Previous technique i.e.; time-domain cancellation tackle the problem that it does not exploit the spatial domain. e.g., low rank cannot be exploited to improve the performance. In order to overcome the drawback of time-domain cancellation, propose a Spatial suppression scheme i.e., Null-space projection which exploits the spatial domain and improves the performance.</p> <p><b>Keywords:</b> Full-duplex, interference cancellation, multiple-input multiple-output (MIMO) relay, minimum mean square error (MMSE), null-space projection, self-interference.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. C.B. Chae, T. Tang, R.W.Heath, Jr, and S. Cho, "MIMO relaying with linear processing for multiuser transmission in fixed relay networks," IEEE Trans. Signal Process., vol. 56, no. 2, pp. 727-738, Feb. 2008.</li> <li>2. H. Hamazumi, K. Imamura, N. Iai, K. Shibuya, and M. Sasaki, "A study of a loop interference canceller for the relay stations in an SFN for digital terrestrial broadcasting", in Proc. IEEE Global Telecommun.Conf., vol. 1,no.11, pp.2341-2355 , Nov. 2000.</li> <li>3. H. Ju. E. Oh, and D. Hong, "Improving efficiency of resource usage in two-hop full duplex relay systems based on resource sharing and interference cancellation," IEEE Trans. Wireless Commun., vol. 8, no.8, pp. 3933-3938, Aug. 2009.</li> <li>4. Y. Y. Kang and J. H. Cho, "Capacity of MIMO wireless channel with full-duplex amplify-and-forward relay," in Proc. IEEE 20th Int. Symp.Pers., Indoor and Mobile Radio Commun., Sep. 2009.</li> <li>5. S. W. Peters and R. W. Heath, "Non regenerative MIMO relaying with optimal transmit antenna selection," IEEE Signal Process. Lett.,vol. 15, pp. 421-424 , Feb. 2008.</li> <li>6. T. Rihonen, Dept. of Signal Process. &amp; Acoust., "Mitigation Of Loopback Self-interference in Full-duplex MIMO Relying" , IEEE Transaction On Signal Processing, vol. 59, no. 12, pp. 5983-5993, December 2011.</li> <li>7. T. Riihonen, S. Werner, and R. Wichman, "Spatial loop interference suppression in full-duplex MIMO relays," in Proc. 43rd Ann. Asilomar Conf. Signals, Syst. Comput., pp. 239-243, Nov. 2009.</li> <li>8. V. R. Cadambe and S. A. Jafar, "Degrees of freedom of wireless networks with relays, feedback, cooperation, and full duplex operation," IEEE Transactions on Information Theory, vol. 55,no. 5, pp. 2334 - 2344, April 2009.</li> </ol>	