

Volume 3 Issue 8, July 2015

**International Journal of Innovative
Science and Modern Engineering**

ISSN : 2319 - 6386 (Online)

Website: www.ijisme.org



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Exploring Innovation: A Key for Dedicated Services

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1.	Authors:	S. R. Jadhao, Sampada Bhonde	
	Paper Title:	Securing Privacy of Data in E-Marketing Against Malicious User	
	<p>Abstract: Internet is at its best for personal as well as professional use as long as it is involved in anonymous communication. There are many technologies which are evolving and growing consistently in the field of computer one of them is cloud computing. But, the security issues and threats associated with it still serve as hindrances. The focal point of this paper is privacy preserving of data in cloud. There are different approaches for preserving privacy of data. Our main concentration would be securing privacy of data in cloud by assigning ID's (further referred as token) which are unique. The goal of unique ID's is to eliminate the privacy risk by modifying the dataset in such a way that only owner can access the original data. Preferably, any authority, server or an adversary alone should not know any client's personal information. This paper analyses and discusses various approaches for securing data like adopting cryptographic methods, writing access rights and policies, anonymising data, assigning unique ID's or token .Finally, the approach is made as why anonymity technique is used. Algorithms are discussed for anonymous sharing of private data among N parties. A technique is used so that ID numbers are used ranging from 1 to N.This assignment is anonymous such that when the identities are received at other end these are unknown to the other members of the group.</p> <p>Keywords: Anonymization and de-anonymization, cloud and distributed computing systems, multiparty computation, privacy preserving data mining, privacy protection.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Wang J, Zhao Y et al. (2009). Providing Privacy Preserving in cloud computing, International Conference on Test and Measurement, vol 2, 213-216. 2. Larry A. Dunning, Member, IEEE, and Ray Kresman "Privacy Preserving Data Sharing With Anonymous ID Assignment", IEEE Transactions on information forensic and security, vol. 8, no. 2, February 2013. 3. Jana, A. Chaudhuri, and B. B. Bhaumik, "Privacy and anonymity protection in computational grid services," Int. J. Comput. Sci. Applicat., vol. 6, no. 1, pp. 98-107, Jan. 2009. 4. Friedman, R. Wolff, and A. Schuster, "Providing k-anonymity in data mining," VLDB Journal, vol. 17, no. 4, pp. 789-804, Jul. 2008.[5]Cloud computing:http://www.south.cattetelecom.com/Technologies/CloudCo mputing/0071626948_chap01.pdf 5. Information Commissioner's office, "Anonymization: managing data protection risk, code of practice", 2012 6. Cryptographic hash function: https://en.wikipedia.org/wiki/Cryptographic_hash_function 7. Data breach, causes of data breach: http://www.techopedia.com/definition/13601/data-breach 		1-5
2.	Authors:	M. A. Gopalan, K. Geetha, Manju Somanath	
	Paper Title:	On the Homogeneous Biquadratic Equation with 5 Unknowns $\left(x^2 - y^2\right)\left((4k - 1)\left(x^2 + y^2\right) - (4k - 2)xy\right) = 2(4k - 1)\left(p^2 - q^2\right)z^2$	
	<p>Abstract: The homogeneous biquadratic equation with five unknowns given by $\left(x^2 - y^2\right)\left((4k - 1)\left(x^2 + y^2\right) - (4k - 2)xy\right) = 2(4k - 1)\left(p^2 - q^2\right)z^2$ is considered and analyzed for finding its non zero distinct integral solutions. Introducing the linear transformations $x = u + v, y = u - v, p = 2u + v, q = 2u - v$ and employing the method of factorization different patterns of non zero distinct integer solutions of the equation under the above equation are obtained. A few interesting relations between the integral solutions and the special numbers namely Polygonal numbers, Pyramidal numbers, Centered Polygonal numbers, Centered Pyramidal numbers, Thabit-ibn-Kurrah number, Carol number, Mersenne number are exhibited.</p> <p>Keywords: Homogeneous equation, Integral solutions, Polygonal numbers, Pyramidal numbers and Special numbers. 2010 Mathematics Subject Classification Code: 11D25.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Carmichael R.D., The Theory of numbers and Diophantine analysis, Dover publications, new York, 1959. 2. Dickson L.E., History of theory of Numbers, Chelsea Publishing company, New Yors, 1952. 3. Gopalan.M.A., and Pandichelvi.V., On the solutions of the Biquadratic equation $\left(x^2 - y^2\right)^2 = \left(z^2 - 1\right)^2 + w^4$, International conference on Mathematical methods and Computation,Pg:24-25, july 2009. 4. Gopalan.M.A., and Sangeetha. G., Integral solutions of Ternary Quartic equation $x^2 - y^2 + 2xy = z^4$, Antartica J.Math., 7(1), 95-101, 2010. 5. Gopalan.M.A., and Sangeetha. G., Integral solutions of non-homogeneous Quartic equation $x^4 - y^4 = \left(2\alpha^2 + 2\alpha + 1\right)\left(z^2 - w^2\right)$, impact J.Sci.Tech., 4(3), (July-Sep), 15-21, 2010. 6. Gopalan.M.A., and Sangeetha. G., Integral solutions of Non-homogeneous biquadratic $x^4 + x^2 + y^2 - y = z^2 + z$, Acta Ciencia Indica, Vol.XXXVII M.No.4, 799-803, 2011. 7. Gopalan .M.A., and Sivkami.B., Integral solutions of quartic equation with four unknowns 		6-10

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Paper Title: Dielectric and Microstructural Properties of PbO Doped BaTiO₃

Abstract: The Barium Titanate (BaTiO₃) based ceramics has potential technological applications in multilayer Ceramics Capacitors (MLCC), thermistors, self-regulating electric heating system, transducers etc. The aim of the research is to find out the structural modifications and corresponding change in properties of BaTiO₃ when small amount of glass was added. Lead oxide (PbO) was used as glass for the doping which was in the powder form. In this research the effects of different level of PbO doping, sintering parameters and dielectric properties of PbO doped BaTiO₃ were observed and studied. At first, PbO was mixed with pure BaTiO₃ nanopowder at two different compositions by ball milling. Mixed powder was dried and after the addition of binder, the powder was pressed into pellets with the 5 ton pressure. After that, the green pellets were again dried. Then sintering was done at 8000C in a muffle furnace. After sintering, percentage theoretical density was measured. Then, using the ‘Precision Impedance Analyzer’, Dielectric constant, Dielectric loss and Capacitance were observed for the two different doping levels up to 10MHz frequency. Scanning electron microscopy (SEM) of the sample was then performed to observe the microstructural properties precisely. The result of the experiment was quite fascinating. It is found out that by modifying the sintering parameters and doping level of PbO with BaTiO₃, better dielectric properties can be attained. Scanning Electron Micrograph indicates that by increasing the doping level of PbO, grain refinement is possible within 100nm range with precise uniformity.

Keywords: Barium Titanate based ceramic, Nano-doping, Di-electric constant, Di-electric loss, Grain refinement.

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