

Representative System and Wave-Pedagogy Aspects of Vitagen Education

¹Professor Dmytro A. Zubov and ²Professor D. Singh Karaulia

¹System Engineering Department of East Ukrainian National University named V.Dahl
dzubovua@mail.ru, Ukraine, 91034, Lugansk city, Molodezhny kvartal, 20a

²Department of Computer Engineering & Applications, National Institute of Technical Teachers' Training and Research,
Shamla Hills, Bhopal – 462 002 (M.P.), India, e-mail: dskaraulia@nittrbpl.ac.in, prof_dsk@yahoo.co.in

Abstract

In this paper, authors have presented two educational approaches: 1. “Two projections method” in which two screens for educational material illustration are used, a small screen for main items and/or showing main terms, and a large screen for projecting detailed information. It has been found that the method could cater to the needs of more than 60 % students with “visual” representative system preference for learning, and could also provide for “audio”, “discrete”, and “kinesthetic” students. 2. “Wave-pedagogy” method based on the personality’s wave psychological processes has been used to show that seminars’ difficulty has rising trend with waves where ‘wave’ time period equaled two weeks approximately. On the basis of the feedback of students’ improvement in educational process involving teaching/learning has been found in comparison with other classical approaches.

Key words: university education, “two projections” method, “wave-pedagogy” method, vitagen education, representative systems.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Computer Software for Design of Flexible Pavement by Triaxial and Burmister Method

¹Hemant Sood and ²Jyothi PM

¹Associate Professor, Department of Civil Engineering, National Institute of Technical Teachers Training & Research,
Chandigarh; sood_hemant@yahoo.co.in

²Technician, Department of Civil Engineering, National Institute of Technical Teachers Training & Research, Chandigarh;
jyothi24@yahoo.com

Abstract

The essential requirement of a pavement is to possess adequate stability to withstand the design traffic under prevailing climatic and subgrade conditions throughout its design life. Though in India, CBR method is the most widely used design method, a need is always felt for easy application of alternative design methods for the sake of comparison of results. The tests for modulus of elasticity (‘E’) provide a basic relationship between stiffness and stress state of pavement materials for use in layered pavement system. Hence, the design procedures based on ‘E’ value can be used for determining layer combinations of comparable strength for the pavement structure and carry out further analysis to arrive at the lowest cost options. This paper focuses on the details of development of software for estimating the thickness of pavement layers by Triaxial and Burmister methods, as these methods are based on ‘E’ values. The program gives results, which can be used for determining pavement thickness with great accuracy.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

A Metamorphosis for Rural Development via KM & ICT

¹MS Narayana, ²G Srinivas Praveen and ³M Vidya Sagar

¹Director of PG Studies, PNC & KR College of PG Studies, Narasaraopet, Guntur; dr.srinivasanarayana@gmail.com

²Associate Professor, Nalanda Institute of Engg. & Tech., Kantepudi, Sattenapalli, Guntur; srinivaspraveen.gudhi@gmail.com

³Assistant Professor, Department of Master of Business Administration, Sri Mittapalli College of Engineering & Technology

Abstract

Transferring information and knowledge is an enduring issue in Technical cooperation (TC) projects and programmes. Knowledge Management (KM) is a relatively novel management press on for newly innovation of development for Information and Communication Technology (ICT). Linguistic and cultural barriers impede effective communication between rural procedures and outgoing growths. To better understand prospective it's vital to know the differences in exchange of data, information, and knowledge to practice national and state level policies with appropriate marginal levy reduction. It ensures intercession belief of equity and employment in bridging the knowledge gaps, augmenting value-addition in routing eco-technologies. Extra dialogue with rural representatives makes innovative knowledge acquisition in design of rural characters and optimal knowledge utilization. In this paper the authors make an attempt to present the relationship between knowledge management and Information communication technology towards improving the Rural Development and Agripreneurship.

Keywords: Information and Communication Technology; Knowledge Management; Rural Development; Agripreneurship.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Filtering of Chirp Noise in Fractional Fourier Domain

¹Pooja Mohindru, ²Dr Rajesh Khanna and ³Dr SS Bhatia

¹Asst. Prof., ECE Deptt., University College of Engg., Punjabi University, Patiala (Punjab); pooja_citm13@rediffmail.com

²Professor, Department of Electronics & Communication Engg., Thapar University, Patiala; r_k_khanna2001@yahoo.com

³Professor and Head, School of Mathematics, Thapar University, Patiala; ssbhatia@thapar.edu

Abstract

The fractional Fourier transform (FrFT) has become quite recently an emerging area in signal processing community. This paper demonstrates a method for filtering chirp noise by using discrete fractional Fourier transform. If a signal and noise exist in separate bandwidths in frequency domain, simple filtering algorithm can filter out the noise from the received signal. But in actual life, signal and noise possibly overlap across a sizeable amount of the spectrum. Thus for the efficient noise removal, a more refined approach based on filtering in fractional Fourier transform is desired. The generalized convolution theorem for FRFT which preserves the convolution theorem of continuous Fourier transform (CFT) is used in this work for application in fractional Fourier domain filtering. The technique shows that chirp noise can be ably separated by using fractional filter.

Keywords: Fractional filter, fractional fourier transform (FrFT), discrete fractional Fourier transform (DFrFT), fractional convolution.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Performance Management of Heads of Departments in self-financing Engineering Colleges to meet Globalization of Engineering Education

¹M. Ponnuswamy and ²Dr. V Thanikachalam

¹Research Scholar, Center for International Affairs, National Institute of Technical Teachers Training & Research, Chennai

²Professor and Head, Center for International Affairs, National Institute of Technical Teachers Training & Research, Chennai

Abstract

The rapid Increase in the number of engineering institutions, specifically Self-Financing Engineering Colleges (SFECs) in Tamil Nadu in the past decade and particularly in the past five years, has caused both the positive and negative effects in globalization of Indian engineering education. Foreign Direct and Institutional Investments (FDI and FII) are increasing which demands for well qualified and innovative engineers for design, manufacture, and maintenance of automobile, Information Technology (IT), and Information Technology Enabled Service (ITES) industries. This is partly achieved by a few well run SFECs while many other SFECs are not able to cope up with the standards to meet the global requirements. A study has been made in Human Resources Development (HRD) by considering the Heads of Departments (HODs) in engineering institutions to make them more productive and thereby increase the productivity which would facilitate the students to attain more knowledge capital. By getting the data from various engineering institutions, analysis has been made to find out the high performing, low performing, and potentially low performing areas in SFECs. Performance Management of Heads of Departments in SFECs has been suggested to achieve the goals and objectives of the institutions and facilitate the administrators to maintain standards in academic quality for globalization of Indian engineering education.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Parametric Optimization of Cryogenic Treated D-3 for Metal Removal Rate in Wire Electrical Discharge Machining

¹Er. Rajesh Khanna and ²er. Hari Singh,

¹Research Scholar, National Institute of Technology, Kurukshetra, India

²Associate Professor, Department of Mechanical Engineering, National Institute of Technology, Kurukshetra;
raajeshvkkhanna@rediffmail.com

Abstract

Cryogenic treatment (“Cryo”) is a supplementary process to improve the properties of metals and alloys like high carbon high chromium alloy tool steels (D-3) which are increasingly used in manufacturing high performance cutting tools (dies and punches), blanking and punching tools, extrusion tools, parts of aerospace and automotive industries etc. The purpose of this study is to investigate the effect of parameters like pulse width, time between two pulses, maximum feed rate, servo reference mean voltage, short pulse time and wire mechanical tension, on metal removal rate of cryogenic treated D-3 in wire electrical discharge machining. An L27 orthogonal array standardized by Taguchi has been used to conduct experiments and statistically evaluate the experimental data by analysis of variance (ANOVA). It is found that pulse width, time between two pulses, servo reference mean voltage, short pulse time and wire mechanical tension significantly affect both the mean and the variation in the metal removal rate at 95% confidence level. The confirmation experiments have also been conducted to validate the results. The results found that MRR for cryogenic treated D-3 material has 4 percent increase than non Cryo D-3 material.

Keywords: WEDM, pulse width, time between two pulses, maximum feed rate, servo reference mean voltage, short pulse time, cryogenic treatment.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education