



in thibition 2010 (IRIJE 20)

H & H &

**VELOPMENT** 



## Science, Engineering and Technology

the consumer and the substation. As result, complete DAS fault isolation system has been developed for cost reduction, maintenance time saving and less human intervention during faults. This research has developed Automated Meter Reading (AMR) system in addition to DAS.

## P-192 Ligninolytic Activities of Some Malaysian White Rot Fungi

Parveen Jamal, Tijani I. D. Ruqayyah, Md. Zahangir Alam, Md. Elwathig S. Mirghani Biotechnology Engineering, Kulliyyah of Engineering International Islamic University Malaysia

White rot fungi have been known for their extracellular secretion of ligninolytic enzymes. 19 white rot fungi were isolated around Gombak area. The white rot fungi were subcultured until pure cultures were achieved. They were first screened on solid media plates for their lignin modifying enzymes by using Poly R-478 and ABTS. Of the 19 white rot fungi tested 7 were able to decolorized Poly R-478 and 18 showed significant ABTS-oxidation activities. The positive strains were tested on liquid media for lignin peroxidases, Manganese peroxidases and laccase activity. From the result 6 strains were able to secrete the three enzymes, only one was able to secrete two out of three and 18 strains secreted one of the three enzymes.

## P-194 Taylor-Newton Homotopy Method for Computing the Depth of Flow Rate for a Channel

Talib Hashim Hasan, Kiyota Yamamura, L.T. Watson Science in Engineering, Kulliyyah of Engineering International Islamic University Malaysia

Homotopy approximation methods (HAM) can be considered as one of the new methods belong to the general classification of the computational methods which can be used to find the numerical solution of many types of the problems in science and engineering. The general problem relates to the flow and the depth of water in open channels such as rivers and canals is a nonlinear algebraic equation which is known as continuity equation. The solution of this equation is the depth of the water. This paper represents attempt to solve the equation of depth and flow using Newton homotopy based on Taylor series. Numerical example is given to show the effectiveness of the purposed method using MATLAB language.

## P-199 Natural Sources of Antidiabetic Inhibitor from Malaysian Medicinal Herbs

Parveen Jamal, Anumsima Binti Ahmad Barkat, Azura Amid Biotechnology Engineering, Kulliyyah of Engineering International Islamic University Malaysia

Diabetes is one of the chronic diseases affecting worldwide population. Presently, there is a growing interest in herbal remedies due to the side effects associated with the use of insulin and oral hypoglycaemic agents for diabetic patient. Therefore an investigation is required in a bionetwork rich and industrially-developed country like Malaysia to use alternative approaches to treat diabetics, such as plant based medicine. In this study, forty types of Malaysian antidiabetic plants were examined on the basis of their use in traditional medicines throughout Southeast Asia, to develop an understanding of the distribution and to give an assessment of the diversity present in the selected plants. Extracts of all 40 species of Malaysian medicinal plants were examined for  $\beta$ -glucosidase inhibition using an in-vitro model. Most of the plants showed varying degree of inhibitory activity (%) but Centella asiatica had the maximum percentage of  $\beta$ -glucosidase inhibitory activity. Another two potential plants which gave higher inhibitory activity were Cucumis sativus (93.95%) and Euphorbia tircalli L. (90.56%). To enhance the percentage inhibition of  $\beta$ -glucosidase inhibitory a study based on statistical design was employed. A mathematical model was developed to show the effects of each factor and their combinatorial interaction on percentage