in medium voltage distribution systems", 18th international conference on electricity distribution, CIRED, Session No.3, Turin, 6-9 June 2005.

[5] *Abdelsalam Mohamed Flhaffar, "Power transmission line fault location based on current travelling wave", Ph.D. Thesis, Helsinki University of technology, Finland, March 2008.*

[6] *Francisco Salgado Carvalho & Sandoval Carneiro, "Detection of fault induced transients in EHV transmission lines for the development of a fault locator system", International Conference on power systems transients-IPST, USA, 2003.*

[7] *E.H.Shehab-Eldin and P.G.McLaren, "Travelling Wave Distance Protection – Problem Areas and Solutions", IEEE Transaction on Power Delivery, Vol.3, No.3, July 1988, pp.894-902.*

[8] *Zeng Xiangjun, Zhou Yanling, Liu Zhengyi and Lin Gan, "The Sensor of Travelling-Wave for Fault Location in Power Systems", International Conference on Power System Technology–POWERCON 2004, Singapore, 21-24 November 2004, pp. 1518-1521.*

[9] *Zhang Xiaoli, Zeng Xiangjun, Li Zewen, Deng Feng, "Travelling Wave fault location of transmission line using Hilbert-Huang Transform", the third International Conference on Electric Utility Deregulation and Restructuring and Power Technologies (DRPT 2008), 6-9 April, 2008, China.*

[10] *David W.P.Thomas, Ricardo J.O Carvalho & Elisete T. Pereira, "Fault location in distribution system based on travelling waves", IEEE Bologna Power Tech Conference, Italy, June 23rd-26th 2003.*

[11] *Kit Po Wong and Kelvin Lee, "Visualizing Wavelet Transformed Travelling waves on Power Transmission Line using JAVA", the 5th International Conference on Advances in Power System Control, Operation and Management, APSCOM 2000, Hong Kong, October 2000, pp.349-353.*

[12] *V.Pathirana and P.G. McLaren, "Improving Relay Reach and Speed Through a Hybrid Algorithm", IEEE Bologna Power Tech Conference, Italy, June 23rd-26th 2003.*

[13] *P.G. McLaren and V.Pathirana, "A Hybrid Algorithm for High Speed Transmission Line Protection", IEEE Transaction on Power Delivery, Vol.20, No.4, Oct.2005, pp.2422-2428.*

[14] *T I A H Mustafa, D W P Thomas, C Christopoulos and A Raizer, "Comparison of Simulated and Recorded Transients for Travelling Wave Fault Location", IEEE Bologna Power Tech Conference, Italy, June 23rd-26th 2003.*

[15] *Mahmoud I. Gilany, El Sayed M. Tag Eldin, Mohamed Mamdouh Abdel Aziz, and Doaa K. Ibrahim, "Travelling Wave-Based Fault Location Scheme for Aged Underground Cable Combined with Overhead Line", International Journal of Emerging Electric Power Systems", Volume 2, Issue 2, Article 1032, 2005.*

[16] *Vajira Pathirana, Mark Mihalchuk, Ralph Kurth and Mansour Jalali, "Design, Implementation and Commissioning of a Hybrid Substation Automation System Using IEC 61850" Western Power Delivery Automation Conference Spokane, Washington, April 8-10, 2008.*

[17] *Ravindra P. Singh, "Digital Power System Protection", Prentice-Hall of India private Limited, New Delhi, 2007.*

[18] *Arun G. Phadke & James S. Thorp, "Computer relaying for power systems", John Wiley & Sons Inc., New York, 1988.*

[19] *I.J.Nagrath & D.P.Kothari, "Modern power system analysis", Tata McGraw-Hill publishing company ltd, New Delhi, 1980.*

[20] *William D. Stevenson, "Elements of power system analysis", McGraw-Hill, Third Edition.*