

Volume 1 Issue 1, December 2013

**International Journal of Advanced Engineering
and Nano Technology**



Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.

Exploring Innovation: A Key for Dedicated Services

Address:

22, First Floor, ShivLoka Phase-IV,
Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India

Website: www.blueeyesintelligence.org

Email: director@blueeyesintelligence.org, blueeyes@gmail.com

Cell #: +91-9669981618, **WhatsApp #:** +91-9669981618, **Viber #:** +91-9669981618

Skype #: beiesp, **Twitter #:** beiesp

Editor In Chief

Dr. Shiv K Sahu

Ph.D. (CSE), M.Tech. (IT, Honors), B.Tech. (IT)

Director, Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal (M.P.), India

Dr. Shachi Sahu

Ph.D. (Chemistry), M.Sc. (Organic Chemistry)

Additional Director, Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal(M.P.), India

Vice Editor In Chief

Dr. Vahid Nourani

Professor, Faculty of Civil Engineering, University of Tabriz, Iran

Prof. (Dr.) Anuranjan Misra

Professor & Head, Computer Science & Engineering and Information Technology & Engineering, Noida International University, Noida (U.P.), India

Chief Advisory Board

Prof. (Dr.) Hamid Saremi

Vice Chancellor of Islamic Azad University of Iran, Quchan Branch, Quchan-Iran

Dr. Uma Shanker

Professor & Head, Department of Mathematics, CEC, Bilaspur(C.G.), India

Dr. Rama Shanker

Professor & Head, Department of Statistics, Eritrea Institute of Technology, Asmara, Eritrea

Dr. Vinita Kumari

Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., India

Dr. Kapil Kumar Bansal

Head (Research and Publication), SRM University, Gaziabad (U.P.), India

Dr. Deepak Garg

Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India, Senior Member of IEEE, Secretary of IEEE Computer Society (Delhi Section), Life Member of Computer Society of India (CSI), Indian Society of Technical Education (ISTE), Indian Science Congress Association Kolkata.

Dr. Vijay Anant Athavale

Director of SVS Group of Institutions, Mawana, Meerut (U.P.) India/ U.P. Technical University, India

Dr. T.C. Manjunath

Principal & Professor, HKBK College of Engg, Nagawara, Arabic College Road, Bengaluru-560045, Karnataka, India

Dr. Kosta Yogeshwar Prasad

Director, Technical Campus, Marwadi Education Foundation's Group of Institutions, Rajkot-Morbi Highway, Gauridada, Rajkot, Gujarat, India

Dr. Dinesh Varshney

Director of College Development Counseling, Devi Ahilya University, Indore (M.P.), Professor, School of Physics, Devi Ahilya University, Indore (M.P.), and Regional Director, Madhya Pradesh Bhoj (Open) University, Indore (M.P.), India

Dr. P. Dananjayan

Professor, Department of Department of ECE, Pondicherry Engineering College, Pondicherry, India

Dr. Sadhana Vishwakarma

Associate Professor, Department of Engineering Chemistry, Technocrat Institute of Technology, Bhopal(M.P.), India

Dr. Kamal Mehta

Associate Professor, Deptment of Computer Engineering, Institute of Technology, NIRMA University, Ahmedabad (Gujarat), India

Dr. CheeFai Tan

Faculty of Mechanical Engineering, University Technical, Malaysia Melaka, Malaysia

Dr. Suresh Babu Perli

Professor & Head, Department of Electrical and Electronic Engineering, Narasaraopeta Engineering College, Guntur, A.P., India

Dr. Binod Kumar

Associate Professor, School of Engineering and Computer Technology, Faculty of Integrative Sciences and Technology, Quest International University, Ipoh, Perak, Malaysia

Dr. Chiladze George

Professor, Faculty of Law, Akhaltsikhe State University, Tbilisi University, Georgia

Dr. Kavita Khare

Professor, Department of Electronics & Communication Engineering., MANIT, Bhopal (M.P.), INDIA

Dr. C. Saravanan

Associate Professor (System Manager) & Head, Computer Center, NIT, Durgapur, W.B. India

Dr. S. Saravanan

Professor, Department of Electrical and Electronics Engineering, Muthayamal Engineering College, Resipuram, Tamilnadu, India

Dr. Amit Kumar Garg

Professor & Head, Department of Electronics and Communication Engineering, Maharishi Markandeshwar University, Mullana, Ambala (Haryana), India

Dr. T.C.Manjunath

Principal & Professor, HKBK College of Engg, Nagawara, Arabic College Road, Bengaluru-560045, Karnataka, India

Dr. P. Dananjayan

Professor, Department of Department of ECE, Pondicherry Engineering College, Pondicherry, India

Dr. Kamal K Mehta

Associate Professor, Department of Computer Engineering, Institute of Technology, NIRMA University, Ahmedabad (Gujarat), India

Dr. Rajiv Srivastava

Director, Department of Computer Science & Engineering, Sagar Institute of Research & Technology, Bhopal (M.P.), India

Dr. Chakunta Venkata Guru Rao

Professor, Department of Computer Science & Engineering, SR Engineering College, Ananthasagar, Warangal, Andhra Pradesh, India

Dr. Anuranjan Misra

Professor, Department of Computer Science & Engineering, Bhagwant Institute of Technology, NH-24, Jindal Nagar, Ghaziabad, India

Dr. Robert Brian Smith

International Development Assistance Consultant, Department of AEC Consultants Pty Ltd, AEC Consultants Pty Ltd, Macquarie Centre, North Ryde, New South Wales, Australia

Dr. Saber Mohamed Abd-Allah

Associate Professor, Department of Biochemistry, Shanghai Institute of Biochemistry and Cell Biology, Yue Yang Road, Shanghai, China

Dr. Himani Sharma

Professor & Dean, Department of Electronics & Communication Engineering, MLR Institute of Technology, Laxman Reddy Avenue, Dundigal, Hyderabad, India

Dr. Sahab Singh

Associate Professor, Department of Management Studies, Dronacharya Group of Institutions, Knowledge Park-III, Greater Noida, India

Dr. Umesh Kumar

Principal: Govt Women Poly, Ranchi, India

Dr. Syed Zaheer Hasan

Scientist-G Petroleum Research Wing, Gujarat Energy Research and Management Institute, Energy Building, Pandit Deendayal Petroleum University Campus, Raisan, Gandhinagar-382007, Gujarat, India.

Dr. Jaswant Singh Bhomrah

Director, Department of Profit Oriented Technique, 1 – B Crystal Gold, Vijalpore Road, Navsari 396445, Gujarat. India

Technical Advisory Board

Dr. Mohd. Husain

Director, MG Institute of Management & Technology, Banthara, Lucknow (U.P.), India

Dr. T. Jayanthi

Principal, Panimalar Institute of Technology, Chennai (TN), India

Dr. Umesh A.S.

Director, Technocrats Institute of Technology & Science, Bhopal(M.P.), India

Dr. B. Kanagasabapathi

Infosys Labs, Infosys Limited, Center for Advance Modeling and Simulation, Infosys Labs, Infosys Limited, Electronics City, Bangalore, India

Dr. C.B. Gupta

Professor, Department of Mathematics, Birla Institute of Technology & Sciences, Pilani (Rajasthan), India

Dr. Sunandan Bhunia

Associate Professor & Head,, Dept. of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Jaydeb Bhaumik

Associate Professor, Dept. of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Rajesh Das

Associate Professor, School of Applied Sciences, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Mrutyunjaya Panda

Professor & Head, Department of EEE, Gandhi Institute for Technological Development, Bhubaneswar, Odisha, India

Dr. Mohd. Nazri Ismail

Associate Professor, Department of System and Networking, University of Kuala (UniKL), Kuala Lumpur, Malaysia

Dr. Haw Su Cheng

Faculty of Information Technology, Multimedia University (MMU), Jalan Multimedia, 63100 Cyberjaya

Dr. Hossein Rajabalipour Cheshmehgaz

Industrial Modeling and Computing Department, Faculty of Computer Science and Information Systems, Universiti Teknologi Malaysia (UTM) 81310, Skudai, Malaysia

Dr. Sudhinder Singh Chowhan

Associate Professor, Institute of Management and Computer Science, NIMS University, Jaipur (Rajasthan), India

Dr. Neeta Sharma

Professor & Head, Department of Communication Skills, Technocrat Institute of Technology, Bhopal(M.P.), India

Dr. Ashish Rastogi

Associate Professor, Department of CSIT, Guru Ghansi Das University, Bilaspur (C.G.), India

Dr. Santosh Kumar Nanda

Professor, Department of Computer Science and Engineering, Eastern Academy of Science and Technology (EAST), Khurda (Orisa), India

Dr. Hai Shanker Hota

Associate Professor, Department of CSIT, Guru Ghansi Das University, Bilaspur (C.G.), India

Dr. Sunil Kumar Singla

Professor, Department of Electrical and Instrumentation Engineering, Thapar University, Patiala (Punjab), India

Dr. A. K. Verma

Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India

Dr. Durgesh Mishra

Chairman, IEEE Computer Society Chapter Bombay Section, Chairman IEEE MP Subsection, Professor & Dean (R&D), Acropolis Institute of Technology, Indore (M.P.), India

Dr. Xiaoguang Yue

Associate Professor, College of Computer and Information, Southwest Forestry University, Kunming (Yunnan), China

Dr. Veronica Mc Gowan

Associate Professor, Department of Computer and Business Information Systems, Delaware Valley College, Doylestown, PA, Allman China

Dr. Mohd. Ali Hussain

Professor, Department of Computer Science and Engineering, Sri Sai Madhavi Institute of Science & Technology, Rajahmundry (A.P.), India

Dr. Mohd. Nazri Ismail

Professor, System and Networking Department, Jalan Sultan Ismail, Kuala Lumpur, MALAYSIA

Dr. Sunil Mishra

Associate Professor, Department of Communication Skills (English), Dronacharya College of Engineering, Farrukhnagar, Gurgaon (Haryana), India

Dr. Labib Francis Gergis Rofaiel

Associate Professor, Department of Digital Communications and Electronics, Misr Academy for Engineering and Technology, Mansoura City, Egypt

Dr. Pavol Tanuska

Associate Professor, Department of Applied Informatics, Automation, and Mathematics, Trnava, Slovakia

Dr. VS Giridhar Akula

Professor, Avanthi's Research & Technological Academy, Gunthapally, Hyderabad, Andhra Pradesh, India

Dr. S. Satyanarayana

Associate Professor, Department of Computer Science and Engineering, KL University, Guntur, Andhra Pradesh, India

Dr. Bhupendra Kumar Sharma

Associate Professor, Department of Mathematics, KL University, BITS, Pilani, India

Dr. Praveen Agarwal

Associate Professor & Head, Department of Mathematics, Anand International College of Engineering, Jaipur (Rajasthan), India

Dr. Manoj Kumar

Professor, Department of Mathematics, Rashtriya Kishan Post Graduate Degree, College, Shamli, Prabhudh Nagar, (U.P.), India

Dr. Shaikh Abdul Hannan

Associate Professor, Department of Computer Science, Vivekanand Arts Sardar Dalipsing Arts and Science College, Aurangabad (Maharashtra), India

Dr. K.M. Pandey

Professor, Department of Mechanical Engineering, National Institute of Technology, Silchar, India

Prof. Pranav Parashar

Technical Advisor, International Journal of Soft Computing and Engineering (IJSCE), Bhopal (M.P.), India

Dr. Biswajit Chakraborty

MECON Limited, Research and Development Division (A Govt. of India Enterprise), Ranchi-834002, Jharkhand, India

Dr. D.V. Ashoka

Professor & Head, Department of Information Science & Engineering, SJB Institute of Technology, Kengeri, Bangalore, India

Dr. Sasidhar Babu Suvanam

Professor & Academic Coordinator, Department of Computer Science & Engineering, Sree Narayana Gurukulam College of Engineering, Kadayiuruppu, Kolenchery, Kerala, India

Dr. C. Venkatesh

Professor & Dean, Faculty of Engineering, EBET Group of Institutions, Kangayam, Erode, Caimbatore (Tamil Nadu), India

Dr. Nilay Khare

Assoc. Professor & Head, Department of Computer Science, MANIT, Bhopal (M.P.), India

Dr. Sandra De Iaco

Professor, Dip.to Di Scienze Dell'Economia-Sez. Matematico-Statistica, Italy

Dr. Yaduvir Singh

Associate Professor, Department of Computer Science & Engineering, Ideal Institute of Technology, Govindpuram Ghaziabad, Lucknow (U.P.), India

Dr. Angela Amphawan

Head of Optical Technology, School of Computing, School Of Computing, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia

Dr. Ashwini Kumar Arya

Associate Professor, Department of Electronics & Communication Engineering, Faculty of Engineering and Technology, Graphic Era University, Dehradun (U.K.), India

Dr. Yash Pal Singh

Professor, Department of Electronics & Communication Engg, Director, KLS Institute Of Engg.& Technology, Director, KLSIET, Chandok, Bijnor, (U.P.), India

Dr. Ashish Jain

Associate Professor, Department of Computer Science & Engineering, Accurate Institute of Management & Technology, Gr. Noida (U.P.), India

Dr. Abhay Saxena

Associate Professor&Head, Department. of Computer Science, Dev Sanskriti University, Haridwar, Utrakhand, India

Dr. Judy. M.V

Associate Professor, Head of the Department CS &IT, Amrita School of Arts and Sciences, Amrita Vishwa Vidyapeetham, Brahmasthanam, Edapally, Cochin, Kerala, India

Dr. Sangkyun Kim

Professor, Department of Industrial Engineering, Kangwon National University, Hyoja 2 dong, Chunche0nsi, Gangwondo, Korea

Dr. Sanjay M. Gulhane

Professor, Department of Electronics & Telecommunication Engineering, Jawaharlal Darda Institute of Engineering & Technology, Yavatmal, Maharastra, India

Dr. K.K. Thyagarajan

Principal & Professor, Department of Informational Technology, RMK College of Engineering & Technology, RSM Nagar, Thiruyallur, Tamil Nadu, India

Dr. P. Subashini

Assoc. Professor, Department of Computer Science, Coimbatore, India

Dr. G. Srinivasrao

Professor, Department of Mechanical Engineering, RVR & JC, College of Engineering, Chowdavaram, Guntur, India

Dr. Rajesh Verma

Professor, Department of Computer Science & Engg. and Deptt. of Information Technology, Kurukshetra Institute of Technology & Management, Bhor Sadian, Pehowa, Kurukshetra (Haryana), India

Dr. Pawan Kumar Shukla

Associate Professor, Satya College of Engineering & Technology, Haryana, India

Dr. U C Srivastava

Associate Professor, Department of Applied Physics, Amity Institute of Applied Sciences, Amity University, Noida, India

Dr. Reena Dadhich

Prof. & Head, Department of Computer Science and Informatics, MBS MArg, Near Kabir Circle, University of Kota, Rajasthan, India

Dr. Aashis. S. Roy

Department of Materials Engineering, Indian Institute of Science, Bangalore Karnataka, India

Dr. Sudhir Nigam

Professor Department of Civil Engineering, Principal, Lakshmi Narain College of Technology and Science, Raisen, Road, Bhopal, (M.P.), India

Dr. S. Senthil Kumar

Doctorate, Department of Center for Advanced Image and Information Technology, Division of Computer Science and Engineering, Graduate School of Electronics and Information Engineering, Chon Buk National University Deok Jin-Dong, Jeonju, Chon Buk, 561-756, South Korea Tamilnadu, India

Dr. Gufran Ahmad Ansari

Associate Professor, Department of Information Technology, College of Computer, Qassim University, Al-Qassim, Kingdom of Saudi Arabia (KSA)

Dr. R. Navaneetha krishnan

Associate Professor, Department of MCA, Bharathiyar College of Engg & Tech, Karaikal Puducherry, India

Dr. Hossein Rajabalipour Cheshmejjaz

Industrial Modeling and Computing Department, Faculty of Computer Science and Information Systems, Universiti Teknologi Skudai, Malaysia

Dr. Veronica McGowan

Associate Professor, Department of Computer and Business Information Systems, Delaware Valley College, Doylestown, PA, Allman China

Dr. Sanjay Sharma

Associate Professor, Department of Mathematics, Bhilai Institute of Technology, Durg, Chhattisgarh, India

Dr. Taghreed Hashim Al-Noor

Professor, Department of Chemistry, Ibn-Al-Haitham Education for pure Science College, University of Baghdad, Iraq

Dr. Madhumita Dash

Professor, Department of Electronics & Telecommunication, Orissa Engineering College, Bhubaneswar, Odisha, India

Dr. Anita Sagadevan Ethiraj

Associate Professor, Department of Centre for Nanotechnology Research (CNR), School of Electronics Engineering (Sense), Vellore Institute of Technology (VIT) University, Tamilnadu, India

Dr. Sibasis Acharya

Project Consultant, Department of Metallurgy & Mineral Processing, Midas Tech International, 30 Mukin Street, Jindalee-4074, Queensland, Australia

Dr. Neelam Ruhil

Professor, Department of Electronics & Computer Engineering, Dronacharya College of Engineering, Gurgaon, Haryana, India

Dr. Faizullah Mahar

Professor, Department of Electrical Engineering, Balochistan University of Engineering and Technology, Pakistan

Dr. K. Selvaraju

Head, PG & Research, Department of Physics, Kandaswami Kandars College (Govt. Aided), Velur (PO), Namakkal DT. Tamil Nadu, India

Dr. M. K. Bhanarkar

Associate Professor, Department of Electronics, Shivaji University, Kolhapur, Maharashtra, India

Dr. Sanjay Hari Sawant

Professor, Department of Mechanical Engineering, Dr. J. J. Magdum College of Engineering, Jaysingpur, India

Dr. Arindam Ghosal

Professor, Department of Mechanical Engineering, Dronacharya Group of Institutions, B-27, Part-III, Knowledge Park, Greater Noida, India

Dr. M. Chithirai Pon Selvan

Associate Professor, Department of Mechanical Engineering, School of Engineering & Information Technology Manipal University, Dubai, UAE

Dr. S. Sambhu Prasad

Professor & Principal, Department of Mechanical Engineering, Pragati College of Engineering, Andhra Pradesh, India.

Dr. Muhammad Attique Khan Shahid

Professor of Physics & Chairman, Department of Physics, Advisor (SAAP) at Government Post Graduate College of Science, Faisalabad.

Dr. Kuldeep Pareta

Professor & Head, Department of Remote Sensing/GIS & NRM, B-30 Kailash Colony, New Delhi 110 048, India

Dr. Th. Kiranbala Devi

Associate Professor, Department of Civil Engineering, Manipur Institute of Technology, Takyelpat, Imphal, Manipur, India

Dr. Nirmala Mungamuru

Associate Professor, Department of Computing, School of Engineering, Adama Science and Technology University, Ethiopia

Dr. Srilalitha Girija Kumari Sagi

Associate Professor, Department of Management, Gandhi Institute of Technology and Management, India

Dr. Vishnu Narayan Mishra

Associate Professor, Department of Mathematics, Sardar Vallabhbhai National Institute of Technology, Ichchhanath Mahadev Dumas Road, Surat (Gujarat), India

Dr. Yash Pal Singh

Director/Principal, Somany (P.G.) Institute of Technology & Management, Garhi Bolni Road , Rewari Haryana, India.

Dr. Sripada Rama Sree

Vice Principal, Associate Professor, Department of Computer Science and Engineering, Aditya Engineering College, Surampalem, Andhra Pradesh. India.

Dr. Rustom Mamlook

Associate Professor, Department of Electrical and Computer Engineering, Dhofar University, Salalah, Oman. Middle East.

Managing Editor

Mr. Jitendra Kumar Sen

International Journal of Advanced Engineering and Nano Technology (IJAENT)

Editorial Board

Dr. Saeed Balochian

Associate Professor, Gonaabad Branch, Islamic Azad University, Gonabad, Iratan

Dr. Mongey Ram

Associate Professor, Department of Mathematics, Graphics Era University, Dehradun, India

Dr. Arupratan Santra

Sr. Project Manager, Infosys Technologies Ltd, Hyderabad (A.P.)-500005, India

Dr. Ashish Jolly

Dean, Department of Computer Applications, Guru Nanak Khalsa Institute & Management Studies, Yamuna Nagar (Haryana), India

Dr. Israel Gonzalez Carrasco

Associate Professor, Department of Computer Science, Universidad Carlos III de Madrid, Leganes, Madrid, Spain

Dr. Guoxiang Liu

Member of IEEE, University of North Dakota, Grand Forks, N.D., USA

Dr. Khushali Menaria

Associate Professor, Department of Bio-Informatics, Maulana Azad National Institute of Technology (MANIT), Bhopal (M.P.), India

Dr. R. Sukumar

Professor, Sethu Institute of Technology, Pulloor, Kariapatti, Virudhunagar, Tamilnadu, India

Dr. Cherouat Abel

Professor, University of Technology of Troyes, France

Dr. Rinkle Aggrawal

Associate Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India

Dr. Parteek Bhatia

Associate Professor, Department of Computer Science & Engineering, Thapar University, Patiala (Punjab), India

Dr. Manish Srivastava

Professor & Head, Computer Science and Engineering, Guru Ghasidas Central University, Bilaspur(C.G.), India

S. No	Volume-1 Issue-1, December 2013, ISSN: 2347-6389 (Online) Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.		Page No.
	Authors:	H. S. Mohapatra, A. Chatterjee, Pramod Kumar	
	Paper Title:	New Generation Application of Polypropylene Fibre	
1.	<p>Abstract: In recent years, polypropylene (PP) is one of the most important and fastest growing polymers currently produced. And it is also a major synthetic material for textile and composite industry. A major virtue of polypropylene is its ability to be used in a wide range of fibrous forms. Fibrous forms of polypropylene include staple, bicomponent staple, monofilament, multifilament, slit film yarns, slit-fibrillated film yarns, nonwovens, composites for low velocity impact etc. Here in this article applications of polypropylene in the field of geotextiles, filtration, electrical, flame retardant, automobiles, disposable diapers, hospital/medical care, and protective clothing etc. Also here an attempt has been made to summarize the history and various application of polypropylene fibre.</p> <p>Keywords: Polypropylene fibre, Ziegler-Natta catalyst, Metallocene catalyst, impact properties, Filter, Nonwovens.</p> <p>References:</p> <ol style="list-style-type: none"> Kothari. V K, Gupta. V B (1997), "Manufactured fiber technology", published by Springer Page 457-480. Mishra. S P (2000), "A Text Book of Fiber science", published by new age international, Page 244-261. Cook J.G., Handbook of Polyolefin Fibres, Merrow Publishing Company Ltd, Watford, 1967. Schmenk B, Mieze Meyer R, Steffens M., Wulforst B. and Gleixner G, 'Polypropylene fiber table', Chem Fibers Int, 50, 233-253, (2000). Albizzati E., Giannini D., Collina G., Noristi L. and Resconi L., 'Catalysts and polymerizations' in Polypropylene Handbook, editor Moore E.P. Hanser, Munich, Vienna and New York, 1996, pp. 11-111. Sinn H. and Kaminsky W., 'Ziegler-Natta catalysis', Advances in Organometallic Chemistry, Vol. 18, Academic Press, New York, 1980, pp. 99-149. Brintzinger H. H., Fischer D, Miilhaupt R., Rieger B. and Waymouth R. M., 'Stereospecific olefin polymerization with chiral metallocene catalysts', Angew Chem Int Ed, 1995,34,1143-1170. Gleixner G. and Vollmar A, 'Fibers of metallocene polyolefines', Chem Fibers Int, 1998, 48, 393-394. Van Parys M., 'PP fiber engineering: latest developments', Chem Fibers Int, 1998, 48, 317-322. Scott N.D., 'Metallocenes and polypropylene -new solutions to old problems in textile end-uses?', Chem Fibers Int, 1997,47, 125-126. Gibson V. and Wass D., 'Iron age polymers', Chemistry in Britain, 1999,35,20-23. Ward J.H., Shahar A. and Peppas N.A., ' Kinetics of 'living' radical polymerizations of multifunctional monomers', Polymer, 2002, 43, 1745-1752. Hagimoto H., Shiono T. and Ikeda T, 'Living polymerization of propene with a chelating diamide complex of titanium using dried methyl aluminoxane', Macromol Rapid Commun, 2002, 23,73-76. An article on the ability to dye polypropylene fibers using conventional disperse dyes makes the fibers more attractive for apparel end uses, by TW special report in september/october 2006 in textile world.com, page 74-76. Sheng Zhang, A. Richard Horrocks, (2003), A review of flame retardant polypropylene fiber, progress in polymer science (28) 2003, pp 1517-1538. Graves, V. " A Commodity Plastic Reaches Record highs in 1994 Production", Modern Plastic Encyclopedia. P B-62, (1996). Gilmore, T.F. Danis, H.A. and. Batra, S.K. " Thermal Bonding of Nonwoven Fabrics", Textile Progress. 26(2), p24-32, (1995). Capiati, N.J. and Porter, R.S. J. Polym. Sci, Phys Ed. 13, p1177, (1975). Weeks, N.E. and Porter, P.S. J. Polym. Sci, Phys Ed. 12, p635, (1974). Jong G Lim,etal, " The Potential for High Performance Fiber from Nylon 6", Prog. Polym. Sci. 14, p 763-809, (1989). Baumann,H.P., " The Mechanism of dyeing polypropylene", American Dyestuff Reporter 79(1963) 527-529 Shah, C.D. & Jain, D.K., " Dyeing of modified polypropylene: cationic dyes on brominated polypropylene" Textile Research Journal 54 (1984) 742-748 Shengmei Yuan and Roger E. Marchant "Surface Modification of Polyethylene Film By Plasma Polymerization and Subsequent Chemical Derivatization@ Plasma Deposition of Polymeric Thin Films, John Wiley & Sons, 77-80 (1994) Nam Sik Yoon and Yong Jin Lim, Mitsuru Tahara, Toru Takashi, "Mechanical and Dyeing Properties of Wool and Cotton Fabrics Treated with Low Temperature Plasma and Enzymes", Textile Res. J. 66(5), 329 (1996). Dr. Lado Benisek, "Burning Issues", Textile Month", July 1999. 19-23 http://tancon.utk.edu/2003/Richeson.pdf. John E. Luke, "Carpet's New King", America's Textiles International, 28, Feb. 1999, 54-57. Colin White, "Baby Diapers and Training Pants", Nonwovens Industry, 30, Jan. 1999, 26-39. Freddy Gustavo Rewald, "Nonwovens in Automotive Uses", Nonwovens Industry, 30, March 1999. "BBA Nonwovens" Nonwovens Industry, 28, April 1997, 80. Hautajarvi J. and Leijala A., 'A morphological study of melt-spun polypropylene filaments by atomic force microscopy', J Appl Polym Sci, 1999,74, 1242-1249. Ahmed M., Polypropylene Fibers -Science and Technology, Elsevier, Amsterdam, Oxford and New York, 1982. Horrocks A.R. and D'Souza J.A., 'Degradation of polymers in geomembranes and geotextiles' in Handbook of Polymer Degradation, editors Hamid H.S. , Amin M.B. and Maadheh A.G., Marcel Dekker, New York, 1992, pp. 433-506. Horrocks AR., Mwila J., Mirafab Mo, Liu M. and Chohan S.S., 'The influence of carbon black on properties of orientated polypropylene. 2. Thermal and photodegradation' , Polym Degrad Stab, 1999,65,25-36. Mukhopadhyay S.K. and Partridge J.F., 'Automotive Textiles', Text. Prog., 1999, 29(1/2), 1-128. Fung W. and Hardcastle M., Textiles in Automotive Engineering, Woodhead Publishing Limited, Cambridge, 2001. Rigby AJ., Anand S.e. and Horrocks A.R., 'Textile materials for medical and healthcare applications',JText Inst Part 3,1997, 88,83-93. Horrocks A.R, Richards AF. and Ghosh S., 'Inclusion of waste polymer on the performance of oriented polypropylene geotextile tapes'. Part I: Effect on textile properties', Text Res J, 1995,65,601-606. Albizzati E., Giannini D., Collina G., Noristi L. and Resconi L., 'Catalysts and polymerizations' in Polypropylene Handbook, editor Moore E.P., Hanser, Munich, Vienna and New York, 1996, pp. 11-111. BrintzingerH.H.,FischerD.,MiilhauptR.,RiegerB.andWaymouthR.M.,'Stereospecific olefin polymerization with chiral metallocene catalysts', Angew Chem Int Ed, 1995,34,1143-1170. 		1-9

<p>41. Gleixner G. and Vollmar A, 'Fibers of metallocene polyolefines', Chem Fibers Int, 1998, 48, 393-394.</p> <p>42. Scott N.D., 'Metallocenes and polypropylene -new solutions to old problems in textile end-uses?', Chem Fibers Int, 1997,47, 125-126.</p> <p>43. Capiati NJ, Porter RS. J Mater Sci 1975;10:1671.</p> <p>44. Mead WT, Porter RS. J Appl Polym Sci 1978;22:3249.</p> <p>45. Bessel T, Shortall JB. J Mater Sci 1975;10:2035.</p> <p>46. Campbell D, Qayyum MM. J Mater Sci 1977;12:2427.</p> <p>47. Isada H, Bussi P. Macromolecules 1991;24:3569.</p> <p>48. Stern T, Wachtel E, Marom G. J Polym Sci, Polym Phys Ed 1997;35:2429.</p> <p>49. Andreassen E, Myhre OJ, Hinrichsen EL, Grøstad K. J Appl Polym Sci 1994;52:1505.</p> <p>50. Kirschbaum R, van Dingenen J.L.J. In: Lemstra PJ, Kleintjens LA, editors. Integration of fundamental polymer science and technology ,vol. 3. London: Elsevier, 1989, 178 p.</p> <p>51. Bastiaansen CMW, Lemstra PJ. Macromol Chem, Macromol Symp1989;28:73.</p> <p>52. Samuels R.J. J Polym Sci, Polym Phys Ed 1975;13:1417.</p> <p>53. Tanaka H, Takagi N, Okajima S. J Polym Sci, Polym Chem Ed 1974;12:2721.</p> <p>54. Tarim N, Findik F, Uzun H. Ballistic impact performance of composite structure. Compos Struct 2001;56(1):13–20.</p> <p>55. Findik F, Tarim N. Ballistic impact efficiency of polymer composites. Compos Struct 2003;61:187–92. Shockey DA, Erlich DC, Simmons JW. Lightweight fragment barriers for commercial aircraft. In: 18th International Symposium on Ballistics, San Antonio, TX, USA; 1999.</p>	
---	--

Authors:	B. Praveen Kumar, D. Vishnu Vardhan
Paper Title:	Performance of Decision Feedback Equalizer over Frequency Selective Fading Channel in W-CDMA Systems

<p>Abstract: The CDMA systems provide the greater capacity in wireless communication environment. But a major obstacle for this is multipath fading which causes inter symbol interference (ISI). The conventional sub optimum receiver consisting of a bank of matched filters is often inefficient because interference is treated as noise. The device used to combat with ISI is named as equalizer. Among linear and non linear equalizers, non linear equalizer outperforms over linear equalizers. Here decision feedback equalizer is non linear equalizer. This paper considers a non linear equalizer such as decision feedback equalizer (DFE) to mitigate inter symbol interference (ISI) in code division multiple access (CDMA) systems.</p> <p>Keywords: Feed-forward and feedback filters, linear adaptive transversal equalizer (LTE), zero-forcing equalizer, direct sequence code division multiple access (DS-CDMA), and correlation.</p> <p>References:</p> <p>1. Fumiyuki Adachi, Mamoru Sawahashi, and Hirohito Suda NTT Mobile Communications Network Inc., "Wideband DS-CDMA for Next-Generation Mobile Communications Systems,"IEEE communication magazine,vol.47,pp.56-69, Sep.1998.</p> <p>2. J.G.Proakis, "adaptive equalization for TDMA digital radio," IEEE Trans. Veh., Technol., vol. 40, pp. 333-341, May 1991.</p> <p>3. G.D.Forney, Jr., "The Viterbi Algorithm," proceeding of the IEEE, Vol.61,No.3, pp.268-278, March1973.</p> <p>4. W. U. Lee and F.S. Hill, Jr., "A maximum likelihood sequence estimator with decision feedback equalization," IEEE Transactions on Communications. Vol.25.No9, pp971-979, September 1977.</p> <p>5. M.V. Eyuboglu and S.U. qureshi, "Reduced-state sequence estimation with set partitioning and decision feedback noise prediction with interleaving," IEEE Transactions on Communications, Vol.35, No.10, pp. 1022-1028, October 1987.</p> <p>6. M.K.Tastanis and G.B Giannakis, "optimal decorrelating receivers for DS-CDMA systems:signal processing frame work," IEEE transactions on Signal processing, vol.44,pp.3044-3054, Dec. 1996.</p> <p>7. J.G. Proakis, Digital communications, McGraw-Hill, Third Ed. 1995.</p> <p>8. N. Al-Dhahir, J.M. Cioffi, "MMSE Decision-Feedback Equalisers:Finite Length Results", IEEE Trans. on Information Theory, Vol.41, No.4, pp.961-975, July 1995.</p> <p>9. T. S. Rappaport, Wireless Communications, Prentice Hall, Second Ed. New Jersey, 1996.</p> <p>10. Sun Weijun, Zou Yongzhong, Li Daoben "CDMA Blind Channel Estimation: Performance Analysis" IEEE Tran. on Signal processing, vol.2, pp1765-68, Sept. 2004</p> <p>11. Hidehiro Andoh, Mamoru Sawahashi, and Fumiyuki Adachi, "Channel Estimation Filter Using Time-Multiplexed Pilot Channel for Coherent RAKE Combining in DS-CDMA Radio"IEICE Trans. Commun.,Vol.E81-B, NO.7, July 1998.</p>	<p>10-13</p>
--	---------------------