

## Nitin Padhiyar

### Publications in Referred Journals

1. Padhiyar, N., Bhartiya, S. and Gudi, R.D., 2006, "Optimal Grade Transition in Polymerization Reactors: A Comparative Case Study", *Ind. Eng. Chem. Res.***45**, 3583-3592.
2. Padhiyar, N., Gupta, A., Gautam, A., Bhartiya, S., Doyle, F.J., Dash, S. and Gaikwad, S., 2006, "Nonlinear Inferential Multi-Rate Control Of Kappa Number At, Multiple Locations In A Continuous Pulp Digester", *J. Process Contr.***16**, 1037-1053.
3. Bapat, P.M., Padhiyar, N.U., Dave, N.D., Dash, S., Bhartiya, S., Wangikar, P.P., 2006, "Model based optimization of multi substrate feeding recipe for Rifamycin B fermentation in complex media", *AIChE J.***52**, 4248-4257.
4. Padhiyar, N., Bhartiya, S., 2009, "Profile control in distributed parameter systems using lexicographic optimization based MPC", *J. Process Contr.***19**, 100-109.
5. Mandal, B.P., Kundu, M., Padhiyar, N.U., and Bandyopadhyay, S.S., 2004, "Physical solubility and diffusivity of N<sub>2</sub>O and CO<sub>2</sub> into aqueous solutions of (2-amino-2-methyl-1-propanol + diethanolamine) and (N-methyldiethanolamine + diethanolamine)", *J. Chem. Engng. Data.***49**, 264-270.
6. Padhiyar N. and Shandilya, K., 2010, "A Comparative Case Study of Various Trial Functions in Sequential Approach for Optimal Control Problems" Submitted to *Ind. Eng. Chem. Res.*

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### **Publications in Conference Proceedings**

1. Padhiyar, N., Bhartiya, S. and Gudi, R.D., "Optimal grade transition in polymerization reactors: A comparative Case Study", International Symposium on Advanced Control of Chemical Processes Gramado, Brazil, April 2-5, 2006.
2. Padhiyar, N., Bhartiya, S., 2006, "Profile control using lexicographic method for a distributed parameter system", CHEMCON, December 27-30, 2006, Ankleshwar, India.
3. Padhiyar, N., Bhartiya, S. and Gudi, R.D., 2004, "Comparison between gradient based techniques and differential evolution for the optimal grade transition problem: Application to the polymer industry", Indo-US Joint Conference, Mumbai, India, December 27-30, 2004.
4. Padhiyar, N., Bhartiya, S., 2007, "Profile control in distributed parameter systems using lexicographic optimization based MPC", DYCOPS, June 6-8, 2007, Cancún, Mexico.
5. Padhiyar, N., Bhartiya, S., 2008, "Optimal grade transition in a continuous pulp digester", Control Systems/Pan Pacific Conference, June 16-18, 2008, Vancouver, Canada.
6. Mandal, B.P., Padhiyar, N.U., Biswas, A.K., and Bandyopadhyay, S.S., 2003, "Natural gas processing: simultaneous absorption of carbon dioxide and hydrogen sulfide into aqueous blends of 2-amino-2-methyl-1-propanol and diethanolamine", 10th Annual India Oil & Gas Review Symposium & International Exhibition (IORS 2003), 8-9 September, Mumbai, India.
7. Markana, N., Padhiyar, N. and Moudgalya, K., 2010, "Lexicographic Optimization based Model Predictive Control: Application to Quadruple Tank System", Submitted to ICMOC 2010, National Institute of Technology Durgapur, India
8. Patel, N. and Padhiyar, N., 2010, "Alien Genetic Algorithm for exploration of search space", ICMOC 2010, National Institute of Technology Durgapur, India

9. Padhiyar N. and Shandilya, K., 2010, " Dynamic optimization with control vector parameterization using different trial functions: A comparative case study" AIChE Conference 2010, Salt Lake City, USA.
10. Kapoor, P., Goulla, P. and Padhiyar, N., 2012, "Hybrid Differential Evolution for Optimization: Using modified Newton's Method", Submitted to ADCHEM 2012, Singapore.
11. Goulla, P., Kapoor, P. and Padhiyar, N., 2012, "Modified Differential Evolution for Optimization Using Alien Population Member", Submitted to ADCHEM 2012, Singapore.