

SRINIVAS PALANKI

EDUCATION

- Certificate in Management and Leadership in Education, Harvard University, Cambridge, MA, 2018
- Ph.D., Chemical Engineering, The University of Michigan, Ann Arbor, MI, 1992
- M.S.E., Chemical Engineering, The University of Michigan, Ann Arbor, MI, 1987
- B.S., Chemical Engineering, Indian Institute of Technology, Delhi, India, 1986

PROFESSIONAL EXPERIENCE

- July 1, 2019 - present: **Regional Director, Texas Manufacturing Assistance Center, Professor** (with tenure), Department of Chemical Engineering, Lamar University, Beaumont, Texas.
- August 15, 2018 - August 31, 2019: **Associate Provost for Research and Sponsored Programs, Professor** (with tenure), Department of Chemical Engineering, Lamar University, Beaumont, Texas.
- July 1, 2015 - August 14, 2018: **Charles and Eleanor Garrett Dean, College of Engineering, Professor** (with tenure), Department of Chemical Engineering, Lamar University, Beaumont, Texas.
- January 1, 2007 - June 30, 2015: **Chair and Professor** (with tenure), Department of Chemical & Biomolecular Engineering, University of South Alabama, Mobile, Alabama.
- August 2004 - December 2006: **Associate Director**, Center for Intelligent Systems, Control and Robotics (CISCOR), Florida State University, Tallahassee, Florida.
- August 2003 - December 2006: **Professor** (with tenure), Department of Chemical & Biomedical Engineering, Florida State University, Tallahassee, Florida.
- August 1997 - July 2003: **Associate Professor** (with tenure), Department of Chemical Engineering, Florida State University, Tallahassee, Florida.
- September 1992 - July 1997: **Assistant Professor**, Department of Chemical Engineering, Florida State University, Tallahassee, Florida.

REFEREED JOURNAL PUBLICATIONS AND BOOK CHAPTERS

69. S. Moazami, **S. Palanki** and H. Zargarzadeh, "Kinematics of Spherical Robots Rolling Over 3D Terrains," *Complexity*, Article ID 7543969, 2019
68. N. Tripathi, **S. Palanki**, Q. Xu and K.D.P. Nigam, "Production of 1,3 Butadiene and Associated Co-Products Ethylene and Propylene from Lignin," *Industrial and Engineering Chemistry Research*, 58, 35, 16182-16189, 2019
67. N. Tripathi, **S. Palanki** and Q. Xu, "Modeling and Simulation of 1,3 Butadiene Extraction Process at Turndown Capacity," *Chem. Eng. Tech.*, 42, 12, 2649-2657, 2019
66. M. E. Haque, Q. Xu, and **S. Palanki**, "Glycol Loss Minimization for A Natural Gas Dehydration Plant under Upset Conditions," *Ind. Eng. Chem. Res.* 58(5): 1994-2008, 2019
65. G. Sabeeh, **S. Palanki**, N.D., Sylvester, and M.Y. El-Sharkh, "Analysis of Heat Transfer and Fluid Flow Characteristics of a Hydrogen Reformer for Fuel Cell Applications," *Heat Transfer Engineering*, 40:13-14, 1153-1161, 2019
64. Y. Kurle, Q. Xu, and **S. Palanki**, "Dynamic Simulation Study for Boil-off Gas Minimization at Liquefied Natural Gas Exporting Terminals," *Ind. Eng. Chem. Res.*, 57(17): 5903-5913, 2018

63. M. Colomb, **S. Palanki**, N.D. Sylvester, "Experimental Verification of Scalable Model for the Hydrochlorination Reaction in a Pilot-Scale Fluidized Bed Reactor," *Powder Technology*, 301:989-998, 2016
62. M. Colomb, **S. Palanki**, N.D. Sylvester, "Modeling the Hydrochlorination Reaction in a Laboratory-scale Fluidized Bed Reactor," *Powder Technology*, 292:242-250, 2016
61. R. Palanki, J. Poiroux, and **S. Palanki**, "Design and Evaluation of a Low-cost Piezoelectric Device for Remote Diagnosis of Respiratory Diseases," *Int. J. Bioautomation*, 19(4): 521-530, 2015
60. R. Palanki, S. Arora, N. Tyagi, L. Rusu, A.P. Singh, **S. Palanki**, J.E. Carter, and S. Singh, "Size is an Essential Parameter in Governing the UVB-protective Efficacy of Silver Nanoparticles in Human Keratinocytes," *BMC Cancer*, 15:636, 2015
59. S. Arora, N. Tyagi, A. Bhardwaj, L. Rusu, R. Palanki, K. Vig, S.R. Singh, A.P. Singh, **S. Palanki**, M.E. Miller, J.E. Carter, and S. Singh, "Silver Nanoparticles Protect Human Keratinocytes against UVB Radiation-Induced DNA Damage and Apoptosis: Potential for Prevention of Skin Carcinogenesis," *Nanomedicine: Nanotechnology, Biology and Medicine*, 11(5), 1265-1275; 2015
58. **S. Palanki** and N.D. Sylvester, "Modeling and Analysis of Miniaturized Packed-bed Reactor for Mobile Devices Powered by Fuel-cells," in *Fuel Cell: Micro and Nano Engineering*, ed. Y.C. Leung and J. Xuan, Chapter 10, CRC Press, Taylor and Francis, 2015
57. D. O'Keefe, J. Telotte, Y. El-Sharkh and **S. Palanki**, "Temperature Dynamics and Control of a Water-Cooled Fuel Cell Stack," *J. Power Sources*, 256, 470-478 (2014)
56. **S. Palanki**, "Design and Analysis of Glycerol Reformer for Stationary Fuel Cell Applications," *Ind. Chem. Eng.*, 55, 3, 189-199 (2013)
55. **S. Palanki**, "Chemical Engineering at the University of South Alabama," *Chemical Engineering Education*, 47, 1, 2-8 (2013)
54. **S. Palanki**, "The Application of Pontryagin's Minimum Principle for End-Point Optimization of Batch Processes," *Control and Optimization with Differential-Algebraic Constraints*, L.T. Biegler, S.L. Campbell and V. Mehrmann (eds.), SIAM, Philadelphia, 2012
53. **S. Palanki**, "The Use of Podcasts in Teaching Process Control," *J. Eng. Edu.*, Vol. XXV, 4, 70-75 (2012)
52. **S. Palanki**, D.V. Khakhar, and R. Bajpai, "Preface to the Prof. K.D.P. Nigam Festschrift," *Ind. Eng. Chem. Res.*, 51, 4, 1435-1436 (2012)
51. V. Vadlamudi and **S. Palanki**, "Modeling and Analysis of Miniaturized Methanol Reformer For Fuel Cell Powered Mobile Applications," *Int. J. of Hydrogen Energy*, 36, 3364-3370 (2011)
50. V. Alagharu, **S. Palanki**, and K.N. West, "Analysis of Ammonia Decomposition Reactor to Generate Hydrogen for Fuel Cell Applications." *J. of Power Sources*, 195, 829-833 (2010)
49. W. Teichmiller and **S. Palanki**, "Analysis of Radial Flow Reformer for Fuel Cell Applications," *Chemical Engineering and Processing: Process Intensification*, 48, 1482-1486 (2009)
48. C.Y. Nah and **S. Palanki**, "Analysis of Heptane Autothermal Reformer to Generate Hydrogen for Fuel Cell Applications," *Int. J. of Hydrogen Energy*, 34, 8566-8573 (2009)
47. P. Kolavennu, J.C. Telotte, and **S. Palanki**, "Analysis of Battery Backup and Switching Controller for a Fuel Cell Powered Automobile," *Int. J. of Hydrogen Energy*, 34, 380-387 (2009)
46. R.S. Sista, A.E. Eckhardt, V. Srinivasan, M.G. Pollack, **S. Palanki** and V.K. Pamula, "Heterogeneous Immunoassays Using Magnetic Beads on a Digital Microfluidic Platform," *Lab on a Chip*, 8, 2188-2196 (2008)

45. J.C. Telotte, J. Kern and **S. Palanki**, "Miniaturized Methanol Reformer For Fuel Cell Powered Mobile Applications," *Int. J. Chemical Reactor Engineering*, Vol 6, A64 (2008)
44. P. Kolavennu, **S. Palanki**, D.A. Cartes, and J.C. Telotte, "Adaptive Controller for Tracking Power Profile in a Fuel Cell Powered Automobile," *J. Process Control*, 18, 558-567 (2008)
43. A. Darabi, D. W. Nelson, and **S. Palanki**, "Acquisition of Troubleshooting Skills in a Complex Learning Environment: Worked example vs. conventional problem solving instructional strategies," *Computers in Human Behavior*, 23, 4, 1809-1819 (2007)
42. A. Darabi, E.G. Sikorski, D.W. Nelson and **S. Palanki**, "Efficient, motivational, and effective strategies for complex learning: Computer-based simulation experiments in troubleshooting," *Technology, Instruction, Cognition, and Learning*, 3, 233-247 (2006)
41. J. Vemuri and **S. Palanki**, "Optimal Operation of Baker's Yeast Fermentation in the Presence of Uncertainty," *Asia Pacific J. Chem. Eng.*, 1, 92-103 (2006)
40. E. G. Collins, M. F. Selekwia, R. B. Walker, **S. Palanki**, "A Stacked Model Structure for Parameter Variation Estimation in Multi-Equilibria Nonlinear Systems by Kalman Filtering," *European J. Control*, 12, 4, 353-364 (2006)
39. P. Kolavennu, J.C. Telotte, and **S. Palanki**, "Design of a Fuel Cell Power System for Automotive Applications," *Int. J. Chemical Reactor Engineering*, Vol 4, Article A19 (2006)
38. P. Kolavennu, J.C. Telotte, and **S. Palanki**, "Design of a Fuel Processor System for Generating Hydrogen for Automotive Application," *Chemical Engineering Education*, Summer Issue (2006)
37. **S. Palanki** and J. Vemuri, "Optimal Operation of Semi-Batch Processes with a Single Reaction." *Int. J. Chemical Reactor Engineering*, Vol 3, Article A17 (2005)
36. E. Elisante, G. P. Rangaiah, and **S. Palanki**, "Robust Controller Synthesis for Multivariable Nonlinear Systems with Unmeasured Disturbances," *Chem. Eng. Sci.*, 59, 5, 977-986 (2004)
35. B. Srinivasan, **S. Palanki**, and D. Bonvin, "Dynamic Optimization of Batch Processes: I Characterization of the Nominal Solution," *Comp. Chem. Eng.*, 27, 1, 1-26 (2003)
(*Best Paper Award for papers published in Computers and Chemical Engineering in the year 2003*)
34. B. Srinivasan, E. Visser, D. Bonvin and **S. Palanki**, "Dynamic Optimization of Batch Processes: II Role of Measurements in Handling Uncertainty," *Comp. Chem. Eng.*, 27, 1, 27-44 (2003)
(*Best Paper Award for papers published in Computers and Chemical Engineering in the year 2003*)
33. **S. Palanki**, J.C. Cockburn and S. Kolavennu, "Robust State Feedback Synthesis for Control of Non Square Multivariable Nonlinear Systems," *J. Process Control*, 13, 7, 623-631 (2003)
32. **S. Palanki** and S. Kolavennu, "Simulation of Control of a CSTR Process," *IJEE*, 19, 3, 398-402 (2003)
31. M.E. van Wissen, **S. Palanki**, and J. Grievink, "Flatness-based Optimization of Batch Processes," *Computer Aided Chemical Engineering*, 10, 589-594 (2002)
30. **S. Palanki**, "Optimal Operation of Batch Reactors," in *Recent Developments in Optimization and Optimal Control in Chemical Engineering*, Ed. R. Luus, 37/661 (2), 179-193, Research Signpost, Trivandrum, 2002
29. K. Raghavan and **S. Palanki**, "Development of Automated RTM for Manufacture of Composite Polymer Parts," *Dev. Chem. Eng. Min. Proc.*, 10(1/2), 129-142 (2002)
28. V. Sampath, **S. Palanki**, J. C. Cockburn and J.P. Corriou, "Robust Controller Design for Temperature Tracking Problems in Jacketed Batch Reactors," *J. Process Control*, 12(1), 27-38 (2002)

27. S. Kolavennu, **S. Palanki** and J. C. Cockburn, "Robust Controller Design for Multivariable Nonlinear Systems via Multimodel H_2/H_∞ Synthesis," *Chem. Eng. Sci.*, 56, 14, 4339-4349 (2001)
26. S. Kolavennu, **S. Palanki** and J. C. Cockburn, "Nonlinear Control of Nonsquare Multivariable Systems," *Chem. Eng. Sci.*, 56, 6, 2103-2110 (2001)
25. B. Srinivasan, **S. Palanki**, D. Grymonpre, and B.R. Locke, "Optimization of a Continuous Pulsed Corona Reactor," *Chem. Eng. Sci.*, 56, 3, 1035-1039 (2001)
24. E. Visser, B. Srinivasan, **S. Palanki**, and D. Bonvin, "A Feedback-Based Implementation Scheme for Batch Process Optimization," *J. Process Control*, 10, 5, 399-410 (2000)
23. S. Kolavennu, **S. Palanki** and J. C. Cockburn, "Robust Control of I/O Linearizable Systems via Multi-Model H_2/H_∞ Synthesis," *Chem. Eng. Sci.*, 55, 9, 1583-1589 (2000)
22. M. Krothapally and **S. Palanki**, "A Neural Network Strategy for End-Point Optimization of Batch Processes," *ISA Trans.*, 38, 383-396 (1999)
21. V. Sampath, **S. Palanki** and J. C. Cockburn, "Development of Gain Scheduling for Trajectory Tracking Problems in Input-Output Linearizable Batch Processes," *Comp. Chem. Eng.*, 23, 285-288 (1999)
20. S. Kolavennu, **S. Palanki** and J. C. Cockburn, "Synthesis of Robust Nonlinear State Feedback for Regulation of Uncertain MIMO Systems," *Comp. Chem. Eng.*, 23, 269-272 (1999)
19. M. Krothapally, B. Bennett, W. C. Finney and **S. Palanki**, "Experimental Implementation of an Online Optimization Scheme to Batch PMMA Synthesis," *ISA Trans.*, 38, 185-198 (1999)
18. **S. Palanki** and M. Krothapally, "Online Optimization of Batch Process," *Trends in Chemical Engineering*, Vol.5, 45-69 (1998)
17. M. Krothapally, J. C. Cockburn and **S. Palanki**, "Sliding Mode Control of I/O Linearizable Systems with Uncertainty," *ISA Trans.*, 37, 313-322 (1998)
16. A.K.M.S. Rahman and **S. Palanki**, "State Feedback Synthesis for On-Line Optimization of Batch Reactors with Multiple Manipulated Inputs," *Comp. Chem. Eng.*, 22, 10, 1429-1439 (1998)
15. V. Sampath and **S. Palanki**, "Optimization of Isothermal-Isobaric Chemical Vapor Infiltration," *Comp. Chem. Eng.*, 22, 773-776 (1998)
14. V. Sampath, **S. Palanki** and J. C. Cockburn, "Robust Nonlinear Control for Polymethylmethacrylate Production in a Batch Reactor," *Comp. Chem. Eng.*, 22, 451-457 (1998)
13. M. Krothapally and **S. Palanki**, "A Neural Network Strategy for Batch Process Optimization," *Comp. Chem. Eng.*, 21, 463-468 (1997)
12. **S. Palanki** and V. Sampath, "A Simple Experiment in Process Dynamics," *Chem. Eng. Ed.*, Vol. 31, 1, 64-69 (1997)
11. **S. Palanki** and C. Kravaris, "Input-Output Linearization of Time-Varying Systems," *Comp. Chem. Eng.*, Vol. 21, 8, 891-903 (1997)
10. A.K.M.S. Rahman and **S. Palanki**, "State Feedback Synthesis for On-Line Optimization in the Presence of Measurable Disturbances," *AIChE J.*, 42, 10, 2869-2882 (1996)
9. A.K.M.S. Rahman and **S. Palanki**, "Optimal State Feedback for On-Line Optimization of Batch Reactors with Two Manipulated Inputs," *Comp. Chem. Eng.*, 20, 1023-1028 (1996)
8. A.K.M.S. Rahman and **S. Palanki**, "On-Line Optimization of Batch Processes with Nonlinear Manipulated Input," *Chem. Eng. Sci.*, Vol. 51, No. 3, 449-459 (1996)
7. **S. Palanki**, C. Kravaris and H.Y. Wang, "Optimal Feedback Control of Batch Reactors with a State Inequality Constraint and Free Terminal Time," *Chem. Eng. Sci.*, Vol. 49, No. 1, 85-97 (1994)

6. **S. Palanki**, C. Kravaris and H.Y. Wang, "Synthesis of State Feedback Laws for End-Point Optimization in Batch Processes," *Chem. Eng. Sci.*, Vol. 48, No. 1, 135-152 (1993)
5. **S. Palanki**, X.M. Li, C. Kravaris and H.Y. Wang, "Transient Measurements and Analyses of Biosensors," *Process Sensing and Diagnostics*, ed. J.J. Ulbrecht, *AIChE Symp. Series*, Vol 85, **287**, 100-105, 1989
4. H.Y. Wang, **S. Palanki** and G. Hyatt, "Application of Affinity Adsorption in Thienamycin Fermentation," with *Appl. Microbiol. Biotechnol.*, **30**, 115-119 (1989)
3. C. Kravaris and **S. Palanki**, "A Lyapunov Approach for Robust Nonlinear State Feedback Synthesis," *IEEE Trans. Automat. Contr.*, **AC-33**, 1188-1191 (1988)
2. C. Kravaris and **S. Palanki**, "Robust Nonlinear State Feedback Under Structured Uncertainty," *AIChE J.*, **34**, 1119-1127 (1988)
1. **S. Palanki** and S. K. Gupta, "Analytical Design Equations for Multisolute Reverse Osmosis Systems," *Ind. Eng. Chem. Research*, **26**, 2449-2454 (1987)

GRADUATE STUDENTS

Doctoral Students

1. Shamsur Rahman, Ph.D. (FSU), Spring 1996 (First Employer: Dow Chemical Co., Midland, MI)
2. Mohan Krothapally, Ph.D. (FSU), Spring 1998 (First Employer: Dow Chemical Co., Houston, TX)
3. Vishak Sampath, Ph.D. (FSU), Fall 1998 (First Employer: BF Goodrich, Cleveland, OH)
4. Soumitri Kolavennu, Ph.D (FSU), Fall 1999 (First Employer: Honeywell Inc., Minneapolis, MN)
5. Yagna Jyothy Vemuri, Ph.D (FSU), Summer 2004 (First Employer: Intel Corp., Portland, OR)
6. Panini Kolavennu, Ph.D (FSU), Spring 2006 (First Employer: Honeywell Inc., Minneapolis, MN)
7. Ramakrishna Sista, Ph.D (FSU), Spring 2007 (First Employer: Advanced Liquid Logic, Raleigh, NC)
8. Mathias Colomb, D.Sc (USA), Spring 2016 (First Employer: Mitsubishi Polysilicon, Theodore, AL)
9. Namit Tripathi, Ph.D. (LU, Spring 2020, First Employer: Praxair, Spring, TX)
10. Mohammed Emdadul Haque, Ph.D. (LU, Spring 2020) (*expected*)
11. Saeed Moazami, D.E. (LU, Summer 2020) (*expected*)
12. Tarun Gupta Ph.D. (LU, Spring 2021) (*expected*)

Masters Students

1. Kaushik Raghavan, M.S. (FSU), Spring 1998
2. Rhashan Walker, M.S. (FAMU), Spring 2000
3. Anindra Mazumdar, M.S. (FSU), Summer 2000
4. Ashish Nigam, M.S. (FSU), Fall 2001
5. Srilakshmi Mummavarapu, M.S. (FSU), Spring 2005
6. Phani Vinod Sukhavasi, M.S. (USA), Spring 2008
7. Peer Mohideen, M.S. (USA), Summer 2008
8. Chu Yan Nah, M.S. (USA), Summer 2008
9. Wesley Teichmiller, M.S. (USA), Fall 2008
10. Subin Hada, M.S. (USA), Spring 2009
11. Vinay Vadlamudi, M.S. (USA), Spring 2009
12. Vyjayanthi Alagharu, M.S. (USA), Summer 2009
13. Wesley Vaughn, M.S. (USA), Summer 2010
14. Krishna Priya Ayalasomayajula, M.S. (USA), Summer 2010

15. Daniel O'Keefe, M.S. (USA), Spring 2012
16. Misbahuddin Syed, M.S. (USA), Summer 2014
17. Ghanem Sabeeh, M.S. (USA), Fall 2014
18. Teri Curow, M.S. (USA), Spring 2015
19. Rajeswar Babu Ramesh, M.E.S. (Lamar), Summer 2018
20. Siva Chamarty, M.E.S. (Lamar), Summer 2019

HONORS AND AWARDS

1. Certificate in Management and Leadership in Education, Harvard University (2018)
2. ICT-Avon's Padmashree Dr. G.S. Sidhu CHEMCON Distinguished Speaker Award (2012)
3. University of South Alabama Outstanding Faculty Member Award (2011)
4. Olivia Rambo McGlothren National Alumni Outstanding Scholar Award (2011)
5. College of Engineering Excellence in Research Award (2011)
6. Academic Leadership Class of the University of South Alabama (2010)
7. DAAD Science Tour Award, Germany (2010)
8. BIRS Workshop on Control and Optimization with Constraints, Banff, Canada (2010)
9. Hetero Drugs Professor G S Laddha CHEMCON Distinguished Speaker Award (2005)
10. *Computers and Chemical Engineering* Best Paper Award (2004)
11. FRAP: FAMU Faculty Research Award (2002)
12. SUCCEED Teaching Award (2000)
13. College of Engineering Research Award (2000)
14. Department of Chemical Engineering Research Incentive Award (1999, 2000)
15. NSF Research Initiation Award (1994)
16. Phi Lambda Upsilon Honor Society (1987)
17. Chemical Engineering Graduate Fellowship (1986 - 1992)
18. National Talent Search Scholar (1980 - 1986)