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Rowan University
Chemical Engineering
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EDUCATION

Ph.D. in Chemical Engineering (1999)

The University of Oklahoma, Norman, Oklahoma
Research Field: Process Synthesis and Optimization.

Master's Degree in Chemical Engineering (1994)

The University of Tulsa, Tulsa, Oklahoma
Research Field: Steady Movement of Solid/Liquid/Fluid Contact Lines

Chemical Engineering Degree (1991)

University of Buenos Aires, Buenos Aires, Argentina
Other Majors: Mathematics and Chemistry
Minor: Physics

ACADEMIC EXPERIENCE

Rowan University, Chemical Engineering Department.

- ◆ Associate Professor. Since September 2004
- ◆ Assistant Professor. September 1999- August 2004

University of Oklahoma. School of Chemical Engineering and Material Science.

- ◆ Chemical Engineering Design I – Instructor. Summer 1999
- ◆ Unit Operations Laboratory – Instructor. Spring 1999
- ◆ Chemical Engineering Design I – Instructor. Fall 1998
- ◆ Unit Operations Laboratory – Instructor. Spring 1998
- ◆ Chemical Engineering Design I – TA. Fall 1997
- ◆ Advance Design – TA. Spring 1997

University of Tulsa. Chemical Engineering Department

- ◆ Fluid Mechanics – TA. Fall 1992/93

University of Buenos Aires. College of Engineering.

- ◆ Mathematics Department. Advanced Linear Algebra – Instructor (1995-96)
- ◆ Chemistry Department. General Chemistry – TA (1986-87)
- ◆ Chemistry Department. Analytical Chemistry – TA (1985)

PROFESSIONAL EXPERIENCE

Kellogg Company, Pilar Industrial Plant, Pilar, Buenos Aires Province, Argentina (1995-96)

Position: Quality and Technology Engineer

Main responsibilities: Quality Programs: GMP, Sanitation, Product Evaluation, Environmental Protection Programs, and Wastewater Quality Control. New products and Baseline runs coordination. Technical training coordination. Instructor of new Plant Personnel. Safety Programs and Safety Training Coordination.

SADE-SKANSKA Engineering and Constructions, Argentina (1987-91)

Position: Process Design Engineer

Main responsibilities: Process Simulation. Multiphase flow analysis. Pipelines simulations and designs. Equipment design for oil and natural gas industries.

AFFILIATIONS

- Member of the American Institute of Chemical Engineers.
- Member of the American Society of Engineering Education.

REFEERED PUBLICATIONS

1. Sujo D., Scodari L.A., Slater C.S., Dahm K., and **Savelski M.J.**, "Retrofit of Sour Water Networks in Oil Refineries: A Case Study," *Chemical Engineering & Processing: Process Intensification*, vol. 48, pp. 892-901, 2009.
2. McGinness C.A., Slater C.S., and **Savelski M.J.**, "Pervaporation study for the dehydration of tetrahydrofuran - water mixtures by polymeric and ceramic membranes", *Journal of Environmental Science and Health*, Part A, vol 43, 2008.
3. Bagajewicz M., Sujo D., Martinez D., and **Savelski M.J.**, "Driving Without Petroleum: A Comparative Guide to Biofuels, Gas-to-Liquids and Coal-to-Liquids as Fuels for Transportation", *Energy Charter Secretariat*, ISBN: 978-90-5948-050-6, Brussels, Belgium, May 2007.
4. Slater C.S. and **Savelski M.J.**, "A method to characterize the greenness of solvents used in pharmaceutical manufacture", *Journal of Environmental Science and Health*, Part A, vol. A42 (11), 2007.
5. Jahan K. and **Savelski M.J.**, "Research Experience for Undergraduates (REU) in Pollution Prevention and Sustainability", *WSEAS Transactions on Advances in Engineering Education*, issue no. 5, vol. 3, 2006.
6. Jahan K., Everett J.W., and **Savelski M.J.**, "The Value of Undergraduate Research", *World Transactions on Engineering and Technology Education*, vol. 4, no. 1, 2005.
7. Dahm K., Hesketh R. P., and **Savelski M. J.**, "Micromixing Experiments in the Introductory Chemical Reaction Engineering Course", *Chemical Engineering Education*, vol. 39, no. 2, 2005.
8. Farrell S., Hesketh R.P., and **Savelski M. J.**, "Energy Balances on the Human Body", *Chemical Engineering Education*, vol. 39, no. 1, 2005.

9. Farrell S., Hesketh R.P., and **Savelski M. J.**, "A Respiration Experiment to Introduce Chemical Engineering Principles", *Chemical Engineering Education*, vol. 38, no. 3, 2004.
10. Hesketh R. P., Slater C. S., **Savelski M. J.**, Hollar K., and Farrell S., "A Program to Help in Designing Courses to Integrate Green Engineering Subjects", *International Journal of Engineering Education*, vol. 20, no. 1, pp. 11, 2004.
11. Koppol A., Bagajewicz M., Dericks B., and **Savelski M. J.**, "On Zero Water Discharge Solutions in the Process Industry", *VJ of Environmental Sustainability*, vol. 2, no. 2, 2004.
12. **Savelski M. J.**, "A Multidisciplinary Learning Experience: Control Valves Noise Testing and Modeling", *World Transactions on Engineering and Technology Education*, vol. 2, no. 2, 2003.
13. Farrell S., Hesketh R.P., **Savelski M. J.**, Dahm K.D., and Slater C.S., "Membrane Projects with an Industrial Focus in the Curriculum", *Chemical Engineering Education*, vol. 37, no. 1, 2003.
14. **Savelski M. J.** and Bagajewicz M., "On the Necessary Conditions of Optimality of Water Utilization Systems in Process Plants with Multiple Contaminants", *Chemical Engineering Science*, vol. 58, no. 23-24, 2003.
15. Koppol A., Bagajewicz M., Dericks B., and **Savelski M. J.**, "On Zero Water Discharge Solutions in The Process Industry", *Advance in Environmental Research*, vol. 8, no. 2, 2003.
16. Dahm K., Hesketh R. P., and **Savelski M. J.** "Is Process Simulation Used effectively in Chemical Engineering Courses?" *Chemical Engineering Education*, vol. 36, no. 3, 2002.
17. Farrell S., Newell J. A., and **Savelski M. J.**, "Teaching Product Design Through the Investigation of Commercial Beer", *Chemical Engineering Education*, vol. 36, no. 2, 2002.
18. Bagajewicz M, Rodera H., and **Savelski M. J.**, "Energy Efficient Water Utilization Systems in Process Plants", *Computers & Chemical Engineering*, vol. 26, no. 1, 2002.
19. Dericks B. J., **Savelski M. J.**, Koppol A. P. R., and Bagajewicz M., "Modeling the Feasibility of Zero Liquid Discharge Solutions in the Process Industry", *Hazardous and Industrial Wastes*, vol. 33, 2001.
20. Rodera H., **Savelski M. J.**, and Bagajewicz M., "Energy Retrofit with Simultaneous Optimization for a Crude Fractionation Unit", *Latin American Applied Research*, vol. 31, no. 5, 2001.
21. **Savelski M. J.** and Bagajewicz M. "On the Use of Linear Models for the Design of Water Utilization Systems in Refineries and Process Plants", *Chemical Engineering Research and Design*, vol. 79, Part A, July 2001.
22. **Savelski M. J.** and Bagajewicz M. "Algorithmic Procedure to Design Water Utilization Systems in Refineries and Process Plants", *Chemical Engineering Science*, vol. 56, 2001.
23. Gómez J., **Savelski M. J.**, and Bagajewicz M., "On a Systematic Design Procedure for Water Utilization Systems in Refineries and Process Plants", *Chemical Engineering Communications*, vol. 186, Aug. 2001.

24. **Savelski M. J.** and Bagajewicz M., "Design of water utilization systems in process plants with a single contaminant", *Waste Management*, vol. 20, Dec. 2000.
25. **Savelski M. J.** and Bagajewicz M., "On the Optimality Conditions of Water Utilization Systems in Process Plants", *Chemical Engineering Science*, vol. 55-21, Nov. 2000.
26. Bagajewicz M., Rivas M., and **Savelski M. J.**, "A robust method to obtain optimal and sub-optimal design and retrofit solutions of water utilization systems with multiple contaminants in process plants", *Computers and Chemical Engineering*, vol. 24, Jul. 2000.
27. **Savelski M. J.**, Shetty S. A., Kolb W. B., and Cerro R. L., "Flow Patterns associated with the steady movement of a solid/liquid/fluid Contact Line", *Journal of Colloids and Interface Science*, vol. 176, 117-127, 1995.

REFEERED CONFERENCE PROCEEDINGS

1. Lefebvre B. G., **Savelski M. J.**, and Slater C. S., “Implementing Green Engineering Partnerships between the University and Pharmaceutical Industry”, *Proceedings of the 2008 ASEE Annual Conference*, paper 422, Pittsburgh, PA, June 2008.
2. Slater C. S., **Savelski M. J.**, and Hesketh R.P. “Green Engineering Design Through Project-Based Industrial Partnerships” *Proceedings of the 2006 ASEE Annual Conference*, paper 279, Chicago, IL, June 2006.
3. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S. “Experiments in Drug Delivery for Undergraduate Engineering Students” *Proceedings of the 2006 ASEE Annual Conference*, paper 432, Chicago, IL, June 2006.
4. Slater C. S., **Savelski M. J.**, and Hesketh R.P. “Academic - Industrial Partnerships to Advance Pollution Prevention” *Proceedings of the 2006 ASEE Annual Conference*, paper 261, Chicago, IL, June 2006.
5. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Funding for Educational Scholarship: Rowan’s Experience with the NSF CCLI Program”, *Proceedings of the 2005 ASEE Annual Conference*, Session 1513, Portland, OR, June 2005.
6. Jahan K. and **Savelski M. J.**, “Undergraduate Research in Pollution Prevention and Sustainability”, *Proceedings of the 2005 ASEE Annual Conference*, Session 1451, Portland, OR, June 2005.
7. Slater C. S., Farrell S., Hesketh R. P., and **Savelski M. J.**, “The Novel Use of Green Engineering Concepts in Teaching Separations”, *Proceedings of the 2004 ASEE Annual Conference*, Session 1793, Salt Lake City, UT, June 2004.
8. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Drug Delivery Experiments for Chemical Engineers”, *Proceedings of the 2004 ASEE Annual Conference*, Session 1526, Salt Lake City, UT, June 2004.
9. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Industry and Academia: A Synergistic Interaction that Enhances Undergraduate Education”, *Proceedings of the 2004 ASEE Annual Conference*, Session 1413, Salt Lake City, UT, June 2004.
10. **Savelski M. J.**, Dahm K., Farrell S., and Hesketh R. P., "Process Simulators in the ChE Curriculum", *Proceedings of the 2004 Western Simulation Conference*, paper I051, San Diego, CA, 2004.
11. Farrell S., Hesketh R. P., **Savelski M. J.**, and C. S. Slater, “A Model for Synergistic Interaction Between Industry and Universities with a Focus on Undergraduate Education”, *Proceedings of the 2003 International Conference on Engineering Education*, Paper 4852, Valencia, Spain, July 2003.
12. **Savelski M. J.**, “A New Chemical Engineering Senior Elective Course: Principles of Food Engineering”, *Proceedings of the 2003 ASEE Annual Conference*, Session 1313, Nashville, TN, 2003.
13. Hesketh R. P. and **Savelski M. J.**, “Issues Encountered with Students using Process Simulators”, *Proceedings of the 2003 ASEE Annual Conference*, Session 2793, June 2003.
14. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Fundamentals, Design and Applications of Drug Delivery Systems”, *Proceedings of the 2003 ASEE Annual Conference*, Session 1313, June 2003.

15. Farrell S., Hesketh R. P., **Savelski M. J.**, and C. S. Slater, “Hands-on Experiments in Pharmaceutical Drug Delivery”, *Proceedings of the 2003 ASEE Annual Conference*, Session 1526, June 2003.
16. Farrell S., Hesketh R. P., and **Savelski M. J.**, “ChE Power! A Hands-on Introduction to Energy Balances on the Human Body”, *Proceedings of the 2003 ASEE Annual Conference*, Session 2613, June 2003.
17. Dahm K., Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Realistic Reaction Engineering Experiments for the Undergraduate Curriculum”, *Proceedings of the 2003 ASEE Annual Conference*, Session 1526, June 2003.
18. **Savelski M. J.**, Farrell S., and Hesketh R. P., Slater C. S., “Non-traditional Laboratory Experiments: Olive Oil Manufacturing and Testing”, *Proceedings of the 2003 ASEE Annual Conference*, Session 1526, June 2003.
19. Jahan, K., Jess Everett, Joseph Orlins, Yusuf Mehta, Robert Hesketh, Stephanie Farrell, **Mariano J. Savelski**, Kathryn Hollar, Robi Polikar and Marianne Cinaglia (2002) “Undergraduate Education in Pollution Prevention”, *Proceedings of the 2003 World Water and Environmental Resources Congress*, June 23-26 Philadelphia, PA.
20. **Savelski M. J.**, Sorrentino L., and Farrell S., “Solubility of Vitamins in Supercritical Carbon Dioxide”, *Proceedings of the AIChE 2003 Spring Meeting*, Paper 107f, New Orleans, LA, April 2003.
21. Farrell S., Hesketh R. P., **Savelski M. J.**, “A Learning System for Pharmaceutical Drug Delivery”, *Proceedings of the 2002 ASEE/SEFI/TUB International Conference*, Berlin, Germany, October, 2002.
22. Farrell S., Jahan K., Hesketh R. P., J.A. Newell, **Savelski M. J.**, “Introducing Engineering Students to Chemical Product Design”, *Proceedings of the International Conference on Engineering Education (ICEE)*, Manchester, U.K., August, 2002.
23. Farrell S., Hesketh R. P., Hollar K., **Savelski M. J.**, Slater C. S., and R. Specht, “Don’t Waste Your Breath”, *Proceedings of the ASEE Annual Conference*, Session 1613, 2002.
24. Farrell S., Hesketh R. P., **Savelski M. J.**, and C. S. Slater, “Integrating Drug Delivery throughout the Chemical Engineering Curriculum”, *Proceedings of the ASEE Annual Conference*, Session 1526 2002.
25. Hesketh R. P., Farrell S., Hollar K., **Savelski M. J.**, and Slater C. S., “A Program to Help University Professors Teach Green Engineering Subjects in their Courses”, *Proceedings of the ASEE Annual Conference*, Session 3251, 2002.
26. Hollar K., Farrell S., and **Savelski M. J.**, “Guilt-free Chocolate: Introducing Freshmen to Chemical Engineering”, *Proceedings of the ASEE Annual Conference*, Session 1313, 2002.
27. Jahan K., Cinaglia M., Everett J., Farrell S., Head L., Hesketh R. P., Hollar K., Ordonez R., **Savelski M. J.**, “Research Experiences for Undergraduates in Pollution Prevention”, *Proceedings of the ASEE Annual Conference*, Session 1526, 2002.
28. Hesketh R. P., Farrell S., Dahm K., Newland R., **Savelski M. J.** and Slater C. S., “Real Chemical Reactions Vertically Integrated Throughout the Curriculum”, *Proceedings of the ASEE Annual Conference*, Session 1526 2002.

29. **Savelski M. J.**, Hesketh R. P., Farrell S., and Slater C. S., “Non-traditional Laboratory Experiments: Olive Oil Manufacturing and Testing”, *Proceedings of the ASEE Annual Conference*, Session 1526, 2002.
30. Farrell F., Jahan K., Hesketh R. P., Newell J. A., and **Savelski M. J.**, “Introducing Engineering Students to Chemical Product Design”, *Proceedings of the International Conference on Engineering Education (ICEE)*, paper no. O227, 2002.
31. Dericks B., **Savelski M. J.**, Koppol A., Bagajewicz M., “Modeling the feasibility of zero liquid discharge solutions in the process industry”, *Proceedings of the 33rd Mid-Atlantic Industrial and Hazardous Waste Conference*, Riverdale, NY, June 2001.
32. Farrell S., Hesketh R. P., **Savelski M. J.**, Hollar K., Dahm K., and Slater C. S., “Industrial Membrane Projects in the Chemical Engineering Curriculum”, Session 218: *Membranes in the Chemical Engineering Curriculum Topical Conference Proceedings*, 2001.
33. Matricardi M., Hesketh R. P., Farrell S., and **Savelski M. J.**, “Effect of Operating Conditions on Static/Dynamic Extraction of Peanut Oil Using Supercritical Carbon Dioxide”, Prepared for Presentation at the 2001 Annual Meeting, Reno, NV. Session T5018 - *Supercritical Fluids for Foods and Pharmaceuticals Topical Conference Proceedings*, 2001.
34. Hesketh R. P., Dorland D., Slater C. S., Farrell S., **Savelski M. J.**, Hollar K., Dahm K., and Newell J. A., “Applying Green Engineering Throughout the Curriculum”, *Proceedings of the ASEE Annual Conference*, Session 3651, 2001.
35. **Savelski M. J.** and Bagajewicz M., "Water Usage in industrial sites: Reuse, decentralizalized treatment and the possibility of zero liquid discharge", *Proceeding of the 5th Annual Green Chemistry and Engineering Conference, ACS/EPA*, Washington DC, 2001.
36. Dericks B., **Savelski M. J.**, Bagajewicz M., “Feasibility of Zero Liquid Discharge Solutions in the Process Industry”, *Proceedings of the 4th Conference in Process Integration, Modeling and Optimization for Energy Saving and Pollution Reduction*. Florence, ITALY, May 2001.
37. **Savelski M. J.** and Bagajewicz M., "Integration of Industrial Water Management into the Engineering Classroom", *Proceedings of the ASEE Annual Conference*, St. Louis, MO, June 2000.
38. **Savelski M. J.**, Bagajewicz, M. “ A New Algorithmic Design Procedure for the Design of Water Utilization Systems in Refineries and Process Plants”, *Proceedings of the 2nd Conference of Process Integration, Modeling and Optimization for Energy Savings and Pollution Reduction*, Budapest, Hungary, May 1999.

CONFERENCE PRESENTATIONS

1. **Savelski M.J.**, Carole W.A., Slater C.S., Moroz T., Furiato A., and Lynch K., “Use of Life Cycle Assessment in Evaluating Solvent Recovery Alternatives in Pharmaceutical Manufacture”, *The 8th International Conference on EcoBalance*, paper 02-02, Tokyo, Japan, Dec. 2008.
2. Slater C.S., **Savelski M.J.**, and Lefebvre B.G., “Using the Rowan Engineering Clinic Model to Advance Sustainable Design in Pharmaceutical Industry”, *Engineering Education in Sustainable Development 2008 Conference*, paper KFU_2_2_1, Graz, Austria, Sept. 2008.
3. **Savelski M.J.**, Slater C.S., Hounsell G., Pilipauskas D., and Urbanski F., “A Collaborative Partnership to Develop Strategies for Waste Minimization and Solvent Recovery for the Celecoxib Process”, *12th ACS Green Chemistry and Engineering Conference*, Washington, DC, June 2008.
4. Slater C.S., **Savelski M.J.**, Lefebvre B., Farrell S., and Hesketh R., “Using the Rowan University Engineering Clinic Model to Implement Green Engineering Partnerships with the Pharmaceutical Industry,” *12th ACS Green Chemistry and Engineering Conference*, Washington DC, June 2008.
5. Furiato A., Lynch K., Moroz T., **Savelski M.J.**, and Slater C.S.. “Green Engineering Design for the Recovery of Solvents in API Manufacturing,” *12th ACS Green Chemistry and Engineering Conference*, Washington DC, June 2008.
6. Lefebvre B.G., **Savelski M.J.**, and Slater C. S., “Implementing Green Engineering Partnerships between the University and Pharmaceutical Industry”, *2008 ASEE Annual Conference*, paper 422, Pittsburgh, PA, June 2008.
7. **Savelski M.J.**, “Alternative Fuels: Economical Feasibility Study on bioX and synthetic fuels”, *Globalization, Energy, and Environment International Conference*, session F, paper 2, Warsaw, Poland, May 2008.
8. Slater C.S. and **Savelski M.J.**, “Partnerships between Academia and the Pharmaceutical Industry to Advance Green Engineering,” *EPA Green Quality through Green Chemistry and Green Engineering in the Pharmaceutical Industry Meeting*, New York, NY, January 2008.
9. Slater C.S., **Savelski M.J.**, Taylor S., Kiang S., LaPorte T., and Spangler L., “Pervaporation as a Green Drying Process for Solvent Recovery in Pharmaceutical Production,” Paper 223f, *AIChE Annual Meeting*, Salt Lake City, UT, November 2007.
10. **Savelski M.J.**, Slater C.S., Lefebvre B.G., and Hesketh R.P., “Developing Green Engineering Partnerships between University and Pharmaceutical Industry,” Paper 170a, *AIChE Annual Meeting*, Salt Lake City, UT, November 2007.
11. Moroz T. McGinness C., Schiavi D., **Savelski M.J.**, and Slater C.S., “Dehydration Separation of Tetrahydrofuran-water Mixtures by Pervaporation with Commercially Available Membranes,” Paper 330s, *AIChE Annual Meeting*, Salt Lake City, UT, November 2007. *Separations Division Best Paper Award - “Honorable Mention”
12. Scodari L.A., Sujo D., Slater C.S., Dahm K., **Savelski M. J.**, “Retrofit of Sour Water Networks in Oil Refineries: A Case-Study,” *AIChE Annual Meeting*, Salt Lake City, UT, November 2007.

13. Taylor S., Kiang S., LaPorte T., Spangler L., Slater C. S., **Savelski M. J.**, and Hesketh R., “Developing Partnerships to Advance Green Manufacturing Strategies in the Pharmaceutical Industry”, Paper 37, *11th ACS Green Chemistry and Engineering Conference*, Washington, DC, June 2007.
14. Slater C. S., **Savelski M.J.**, Barnes S., Hekl J., McGinness C., and Walsh D., “Analysis of Tetrahydrofuran Dehydration using Pervaporation Membrane Technology”, Paper 110, *11th ACS Green Chemistry and Engineering Conference*, Washington, DC, June 2007.
15. Scodari, L.A., Sujo, D., Slater, C.S., Dahm, K., and **Savelski, M.J.**, “Retrofit of Sour Water Networks in Oil Refineries: A Case-Study,” *AICHE Regional Meeting*, Lewisburg, PA, May 2007.
16. Scodari L.A., Sujo-Nava D., Moroz T., Furiato A., **Savelski M.J.**, Slater C.S., and Dahm K. “Water Characterization at Valero Paulsboro Refinery”. *AICHE Annual Meeting*, San Francisco, CA, November 2006.
17. Slater C.S., Farrell S., Hesketh R.P., **Savelski M.J.**, Lefebvre B.G., Dahm K.D., Gephardt Z.O., “Academic-Industrial-Government Collaboration through the Engineering Clinic Program at Rowan University,” paper 538d, *AICHE Annual Meeting*, San Francisco, CA, November 2006.
18. Slater C.S., **Savelski M.J.**, and Hesketh R.P., “Measurement and Reduction of Organic Solvents in Pharmaceutical Manufacture,” paper 500f, *AICHE Annual Meeting*, San Francisco, CA, November 2006.
19. **Savelski M. J.**, Slater C. S., and Hesketh R.P. “Green Use and Reduction of Organic Solvents in the Pharmaceutical Industry” *XXII Inter-American Congress of Chemical Engineering*, Buenos Aires, Argentina, October 2006.
20. **Savelski M. J.**, Slater C. S., and Hesketh R.P. “A Synergistic Interaction between Industry, Academia, and Government with a Focus on Green Engineering Undergraduate Education” *3rd WSEAS/IASME International Conference on Engineering Education*, Vouliagmeni, Athens, Greece, July 2006.
21. Jahan K. and **Savelski M. J.** “Research Experiences for Undergraduates (REU) in Pollution Prevention and Sustainability” *3rd WSEAS/IASME International Conference on Engineering Education*, Vouliagmeni, Athens, Greece, July 2006.
22. Sujo, D., Hesketh, R.P., **Savelski, M.J.**, and Slater, C.S., “Current Issues on Water Use and Reuse in Chemical Processes”, *10th ACS Green Chemistry and Engineering Conference*, Washington, DC, June 2006.
23. Slater C.S., **Savelski M.J.**, Hesketh R., and Frey E., The Selection and Reduction of Organic Solvents in the Pharmaceutical Industry”, *10th ACS Green Chemistry and Engineering Conference*, paper 17, Washington, DC, June 2006.
24. Slater C.S., Hesketh R.P., **Savelski M.J.**, Flynn A.M., Henry J., and Abraham M., “Web-based Course Modules to Incorporate Green Engineering Concepts into the Chemical Engineering Curriculum, *10th ACS Green Chemistry and Engineering Conference*, paper 106, Washington, DC, June 2006.
25. Slater C. S., **Savelski M. J.**, and Hesketh R.P. “Green Engineering Design Through Project-Based Industrial Partnerships” *2006 ASEE Annual Conference*, paper 279, Chicago, IL, June 2006.

26. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S. “Experiments in Drug Delivery for Undergraduate Engineering Students” *2006 ASEE Annual Conference*, paper 432, Chicago, IL, June 2006.
27. Slater C. S., **Savelski M. J.**, and Hesketh R.P. “Academic - Industrial Partnerships to Advance Pollution Prevention” *2006 ASEE Annual Conference*, paper 261, Chicago, IL, June 2006.
28. Fichana D., Frey E., Slater C. S., **Savelski M. J.**, and Hesketh R. P. “Sustainability Analysis Applied to Active Pharmaceutical Ingredient Manufacture”, *AICHE Spring Meeting*, Orlando, FL, April 2006.
29. Jahan K., **Savelski M. J.**, and Hesketh R. P. “Sustainability in Engineering Education at Rowan University”, *AICHE Spring Meeting*, Orlando, FL, April 2006.
30. Slater C. S., Farrell S., Hesketh R.P., Lefebvre B. G., **Savelski M. J.**, “Continuous Opportunities for Teaching Membrane Technology into the Curriculum” *AICHE Annual Meeting*, paper 237a, Cincinnati, OH, November 2005.
31. Lefebvre B. G., **Savelski M. J.**, Hecht G.B., “Production of Ethanol Using Enhanced Ethanol-Resistant Mutants of E. Coli Fbr5”, *AICHE Annual Meeting*, paper 303b, Cincinnati, OH, November 2005.
32. **Savelski M. J.**, Slater C. S., Farrell S., Hesketh R. P., and Newell J., “A synergistic Interaction between Industry and Academia with a Focus on Engineering Undergraduate Education”, 4th ASEE/AaeE Global Colloquium on Engineering Education, Sydney, AU, September 2005.
33. Bock, C., Chadwick, C., Ginn, J., Kashdan, Z., Lefebvre, B.G., Mosto, P., **Savelski, M.J.**, and Hecht, G.B. 2005. Unusual toxicological properties associated with ethanol-tolerant derivatives of E. coli FBR5. 105th General Meeting of the American Society for Microbiology, Atlanta, GA, June 2005.
34. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Funding for Educational Scholarship: Rowan’s Experience with the NSF CCLI Program”, *2005 ASEE Annual Conference*, Session 1513, Portland, OR, June 2005.
35. Jahan K. and **Savelski M. J.**, “Undergraduate Research in Pollution Prevention and Sustainability”, *2005 ASEE Annual Conference*, Session 1451, Portland, OR, June 2005.
36. **Savelski M. J.**, Hecht G., Mosto P., and Lefebvre B. G., “Bug Power: Fueling our Future with Microorganisms” *2005 ASEE Annual Conference*, Session 1526, Portland, OR, June 2005.
37. **Savelski M. J.**, Jahan K., Marchese A., Farrell S., von Lockette P., Tang G., Orlins J., Riddell W., Mehta Y., Richmond C., Yang C., Sukumaran B., Mosto P., and Miller D., “Research Experience for Undergraduates in Pollution Prevention and Sustainability”, 3rd *ASEE International Colloquium on Engineering Education*, Tsinghua University, Beijing, China, September 2004.
38. **Savelski M. J.**, “A New Chemical Engineering Senior Elective course: Principles of Food Engineering”, *Proceedings of the 16th International Congress of Chemical and Process Engineering*, Session B4, paper B4.5, Prague, Czech Republic, August 2004.
39. **Savelski M. J.**, Dahm K., Farrell S., Hesketh R. P., Farrell S., Hesketh R. P., Savelski M. J., and Slater C. S., “Process Simulators in the ChE Curriculum”, *Proceedings of the 16th*

International Congress of Chemical and Process Engineering, Session B4, paper B4.7, Prague, Czech Republic, August 2004.

40. Farrell S., **Savelski M. J.**, Hesketh R. P., Slater C. S., and Kauser J., “Beer, Water, and coffee: hands-on introduction to product design”, *Proceedings of the 16th International Congress of Chemical and Process Engineering*, Session B4, paper B4.1, Prague, Czech Republic, August 2004.
41. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “A model for collaboration between academia and industry”, *Proceedings of the 16th International Congress of Chemical and Process Engineering*, Session B4, Prague, Czech Republic, August 2004.
42. Farrell S., **Savelski M. J.**, Hesketh R. P., and Slater C. S., “Non-Traditional Laboratory Experiments: Olive Oil Manufacturing and Testing”, *Proceedings of the 16th International Congress of Chemical and Process Engineering*, Session P1, paper P1.171, Prague, Czech Republic, August 2004.
43. **Savelski M. J.** and Farrell S., “Guilt-free Chocolate: Introducing Freshmen to Chemical Engineering”, *Proceedings of the 16th International Congress of Chemical and Process Engineering*, Session P1, paper P1.172, Prague, Czech Republic, August 2004.
44. Mosto P., **Savelski M. J.**, Hecht G. B., and Farrell S., “Future of Chemical Engineering: Integrating Biology into the ChE Curriculum”, *Proceedings of the 16th International Congress of Chemical and Process Engineering*, Session P1, paper P1.173, Prague, Czech Republic, August 2004.
45. Slater C. S., Farrell S., Hesketh R. P., and **Savelski M. J.**, “The Novel Use of Green Engineering Concepts in Teaching Separations”, *Proceedings of the 2004 ASEE Annual Conference*, Session 1793, Salt Lake City, UT, June 2004.
46. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Drug Delivery Experiments for Chemical Engineers”, *Proceedings of the 2004 ASEE Annual Conference*, Session 1526, Salt Lake City, UT, June 2004.
47. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., “Industry and Academia: A Synergistic Interaction that Enhances Undergraduate Education”, *Proceedings of the 2004 ASEE Annual Conference*, Session 1413, Salt Lake City, UT, June 2004.
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56. **Savelski M. J.**, “A New Chemical Engineering Senior Elective Course: Principles of Food Engineering”, *ASEE Annual Meeting*, Session 1313, 2003.
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64. **Savelski M. J.**, Farrell S., Kumar J. and Sirchio B., “Simultaneous Process Water and Energy Optimization in Food Manufacturing”, *AIChE Spring Meeting*, Paper 106d, New Orleans, LA, April 2003.
65. **Savelski M. J.**, Hesketh R. P., Farrell S., Gifford M., "On the Mass Transfer Modeling in the Extraction of Peanut Oil Using SCF CO₂", *AIChE Annual Meeting*, paper 296e, Indianapolis, IN, Nov. 2002.
66. **Savelski M. J.**, Farrell S. and Hollar K., "Guilt-Free Chocolate", *AIChE Annual Meeting*, paper 166l, Indianapolis, IN, Nov. 2002.
67. **Savelski M. J.**, Hesketh R. and Dahm K., "Micromixing Experiments in the Undergraduate Curriculum", *AIChE Annual Meeting*, paper 162h, Indianapolis, IN, Nov. 2002.
68. **Savelski M. J.**, Hesketh R. P., Farrell S. and Slater C. S., "Non-Traditional Laboratory Experiments: Olive Oil Manufacturing and Testing", *AIChE Annual Meeting*, paper 162f, Indianapolis, IN, Nov. 2002.

69. Farrell S., Hesketh R. P., **Savelski M. J.**, Hollar K., Slater C. S., and Specht R., "Chemical Engineering Inspiration", *AIChE Annual Meeting*, paper 161a, Indianapolis, IN, Nov. 2002.
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72. **Savelski M. J.** and Hesketh R.P., "Process Simulators: Reality Check required!" *AIChE Annual Meeting*, paper 155c, Indianapolis, IN, Nov. 2002.
73. Farrell S., Hesketh R. P., **Savelski M. J.**, and Slater C. S., "Chemical Engineering Aspects of Drug Formulation and Delivery", *AIChE Annual Meeting*, paper 162d, Indianapolis, IN, Nov. 2002.
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81. Hesketh R., Slater C. S., Farrell S., **Savelski M. J.**, Dahm K. and Newland R., "Real Chemical Reactions Vertically Integrated Throughout the Curriculum", *ASEE Annual Meeting*, session 1526, Montreal, Canada, June 2002.
82. **Savelski M. J.**, "Non-Traditional Laboratory Experiments: Olive Oil Manufacturing and Testing", *ASEE Annual Meeting*, session 1526, Montreal, Canada, June 2002.
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97. Dericks B., **Savelski M. J.**, Koppol A., Bagajewicz M., "Modeling the feasibility of zero liquid discharge solutions in the process industry", *33rd Mid-Atlantic Industrial and Hazardous Waste Conference*, Riverdale, NY, June 2001.

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100. Kline L. and **Savelski M. J.** "Addressing Uncertainty in Water Allocation Planning Problems", *AIChE Annual Meeting*, paper 233l, Los Angeles, CA, Nov. 2000.
101. Bagajewicz M., Rivas M., and **Savelski M. J.**, "A Robust Method to Obtain Optimal and Sub-Optimal Design and Retrofit Solutions of Water Utilization Systems with Multiple Contaminants in Process Plants", *7th International Symposium on Process Systems Engineering (PSE 2000)*, July 2000.
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103. **Savelski M. J.** and Bagajewicz M., "Watersave: A New Approach to the Design of Water/Wastewater Utilization Systems in Refineries", *6th International Petroleum Environmental Conference*, Houston, TX, 1999.
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105. Bagajewicz M., H. Rodera and **Savelski M. J.**, "On the Effect of Heat Integration in the Design of Water Utilization Systems in Refineries and Process Plants", *AIChE Annual Meeting*, Dallas, TX, 1999.
106. Bagajewicz M., **Savelski M. J.** and Rodera H. "Retrofit Of Water Utilization Systems in Refineries and Process Plants", *AIChE Annual Meeting*. Dallas, TX, 1999.
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109. **Savelski M. J.** and Bagajewicz M., "A New Algorithmic Design Procedure for the Design of Water Utilization Systems in Refineries and Process Plants", *2nd Conference on Process Integration, Modeling and Optimization for Energy Saving and Pollution Reduction (PRES'99)*. Lecture Session, paper 148. Budapest, Hungary, June 1999.
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111. Rodera H., **Savelski M. J.**, Bagajewicz M., Hess F. and Seidel T., "Energy Retrofit with Simultaneous Optimization for a Crude Fractionation Unit". *AIChE Spring Meeting*. Houston, TX, March 1999.

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114. **Savelski M. J.** and Bagajewicz M., "Optimization of Refinery Wastewater Reuse", *1st Regional Meeting on Process Design*, Norman, OK, April 1998.
115. Roderer H, **Savelski M. J.**, Shuncheng J., Bagajewicz M., "Energy Retrofit Opportunities for Crude Fractionation", *AICHE Spring Meeting*, paper No. 56e, New Orleans, LA, March 1998.
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117. **Savelski M. J.** and Bagajewicz M., "Water Utilization Systems in Refineries and Process Plants", *1st Annual Green Chemistry and Engineering Conference. National Academy of Science*, Washington D.C., June 1997.
118. **Savelski M. J.**, Shetty S. A., Kolb W. B. and Cerro R. L., "Steady Movement of a Solid /Liquid / Fluid Contact Line: Flow Patterns, Dynamic Contact Angle and Viscosity Ratio", International Coating Process Science and Technology Symposium, *AICHE Spring Meeting*, paper No. 5b, Atlanta, GA, April 1994.

PROPOSALS FUNDED

- "Rutgers-Rowan- SOPS-Partnership", NSF, \$132,681, 01/01/2008-06/30/2009 – PI.
- "Waste minimization alternatives in the Celecoxib process", Pfizer Inc., \$30,000, 09/01/2007-08/31/2008 – PI.
- "Advancing P2 in Pharmaceutical Manufacturing", EPA Region 2 – Pollution Prevention Grant Program, \$132,967, 06/01/2007 – 05/31/2009–co-PI
- "Using Engineering Clinics to Advance Pollution Prevention in the Chemical Industry", EPA Region 2 – Pollution Prevention Grant Program, \$40,000, 10/01/2005- 02/28/2007–co-PI
- "Green Engineering Approach to Pharmaceutical Development and Manufacturing. EPA Region 2 –Conservation Challenge Grant Program, \$26,813, 10/01/2005- 02/28/2007–co-PI
- "Water Reuse Alternatives for Refineries", Valero Paulsboro Refinery – \$10,000, 01/17/2006 – 05/15/2006 - PI
- "Bug Power: Fueling our Future with Microorganisms", NSF-DUE CCLI 0311264, \$149,853 external, 09/01/2003-08/31/2006. PI.
- "Optimization of Food Manufacturing Processes", Continuation, General Mills, \$60,000 external, 09/01/2003 – 08/31/2004, PI.

- “Green Engineering Design of Controlled Drug Delivery Systems”, SBR, \$4,952, 07/01/2003 – 06/30/2004. PI.
- “Optimization of Food Manufacturing Processes”, General Mills, \$60,000 external, 09/01/2002 – 08/31/2003, PI.
- “Flow and Noise Testing Research”, DFT Inc., \$20,000 external, 09/01/2001 – 08/31/2002, PI.
- “Applied Drug Delivery Throughout the Chemical Engineering Curriculum”, NSF DUE CCLI 0126902, \$194,285 external (\$458,984 total), 04/01/2001 – 03/31/2004. Co-PI.
- “Novel Baking Technology for Snack Cracker Production, Campbell’s Soup Company”, \$30,000 external, 09/01/2001 – 05/01/2002. Co-PI.
- “Research Experiences for Undergraduates in Pollution Prevention”, National Science Foundation, REU, 2001, \$250,000 external (approx.).
- “Real Chemical Reactions Vertically Integrate throughout the Curriculum”, National Science Foundation DUE-CCLI 0088501, \$119,714 external (\$281,802 total), 3/1/01 – 2/29/04. Co-PI.
- “Non-Traditional Laboratory Experiments: Olive Oil Manufacturing and Testing”, National Science Foundation DUE-CCLI 0088878, \$65,286 external (\$170,552 total), 3/1/01 – 2/29/04. PI.
- “Graver Technology Process Testing and Research Project”, Campbell’s Soup Company, \$30,000 external, 9/1/00 – 5/31-00. Co-PI.
- “Chemical Plant Wastewater Reuse and Zero Discharge Cycles”, U. S. Environmental Protection Agency, \$100,000 external, 06/15/00-06/14/02. Co-PI.
- “Green Engineering: Industrial Wastewater Minimization”, Lindback Foundation, \$15,474 external, May 2000 - June 2001. PI.