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Professional Preparation

2004-2005 Postdoctoral Fellow, University of Delaware, Newark, DE
2003 Ph.D., Chemical Engineering, University of Illinois at Urbana-Champaign
2001 M.S., Chemical Engineering, University of Illinois at Urbana-Champaign
1999 B.S., Chemical Engineering, University of Illinois at Chicago (with honors)

Appointments

2015- University of Toledo, Associate Professor of Chemical Engineering (tenured)
2011-2015 Colorado School of Mines, Associate Professor of Chemical Engineering (tenured)
2005-2011 Colorado School of Mines, Assistant Professor of Chemical Engineering
2004-2005 University of Delaware, Postdoctoral Fellow
1999-2003 University of Illinois at Urbana-Champaign, Research Assistant
1997-1999 Argonne National Laboratory, Engineering Assistant and Engineering Intern

Products (out of 66 peer reviewed publications)

Five products closely related to proposed work

Liberatore, M.W. "Active learning and just-in-time teaching of a material and energy balances course", *Chemical Engineering Education*, 47 (2013): 154-160.

M.W. Liberatore, D.W.M. Marr, A.M. Herring, and J.D. Way. "Student created homework problems based on YouTube videos", *Chemical Engineering Education*, 47 (2013): 122-132.

M.W. Liberatore, C.R. Vestal, A.M. Herring. "YouTube Fridays: Student led development of engineering estimate problems", *Advances in Engineering Education*, 3 (2012): 1-16.

M.W. Liberatore. "Improved student achievement using personalized online homework for Material and Energy Balances", *Chemical Engineering Education*, 45 (2011): 184-190.

M.W. Liberatore "YouTube Fridays: Engaging the Net Generation in five minutes a week", *Chemical Engineering Education*, 44 (2010): 215-221.

Five other products

M.W. Liberatore, C.R. Vestal, A.M. Herring. "Advances from AEE: Online in Reverse.", *ASEE Prism*, November 2012. Invited highlight of *Advances in Engineering Education* publication. Available online at: http://www.prism-magazine.org/nov12/tt_02.cfm

M.W. Liberatore. "Two minutes of reflection improves teaching", *Chemical Engineering Education* (Teaching Tip), 46 (2012): 271 (Fall 2012).

N.B. Wyatt, C.M. Gunther, M.W. Liberatore "Increasing Viscosity in Entangled Polyelectrolyte Solutions by the Addition of Salt", *Polymer*, 52 (2011): 2437-2444. DOI: 10.1016/j.polymer.2011.03.053

C.M. Roche, C.J. Dibble, J.S. Knutsen, J.J. Stickel, M.W. Liberatore. “Material and rheological properties of biomass slurries during enzymatic hydrolysis at high-solids loadings” *Biotechnology and Bioengineering*, 104 (2009): 290-300.DOI:10.1002/bit.22381

H. Dave, F. Gao, J.-H. Lee, M. Liberatore, C.-C. Ho, C. Co. “Self-Assembly in Sugar-Oil Complex Glasses” *Nature Materials*, 6 (2007): 287-290.

Synergistic Activities

1. Principal investigator or co-principal investigator on numerous projects totaling over \$10M (with \$4M as PI) in funding from NSF, DOE, Army, and others.
2. Site Director, Research Experiences for Undergraduates with polymer science and engineering theme (2012-2014). Research advisor to 40 undergraduate researchers and 3 K12 teachers, including numerous women, minority students, and U.S. military veterans.
3. Awarded 2015 Alumni Teaching Award from the Colorado School of Mines, 2014 Innovation in Chemical Engineering Education Award from the AIChE Education Division, 2014 Rudolf Hering Medal from ASCE for the outstanding paper in the area of environmental engineering (with J. Silva and J. McCray), 2013 Raymond Fahien award for outstanding teaching effectiveness and educational scholarship from ASEE Chemical Engineering Division, 2011 Alfred E. Jenni Faculty Fellowship for institution-wide contributions in teaching effectiveness and educational scholarship and 2011-2012 Faculty of the Year, Chemical and Biological Engineering Department as voted by graduating seniors. Invited participant, National Academy of Engineering’s 2011 Frontiers of Engineering Education

Collaborators & Other Affiliations

a) Collaborators and co-editors (15)

David Boldridge (Cabot Microelectronics)	Dan Knauss (Colorado School of Mines)
Stephen Boyes (Colorado School of Mines)	Yakov Lapitsky (University of Toledo)
Nanette Boyle (Colorado School of Mines)	C. Mark Maupin (Colorado School of Mines)
E. Bryan Coughlin (UMass-Amherst)	John McCray (Colorado School of Mines)
Charlene Czerniak (University of Toledo)	Keith Neeves (Colorado School of Mines)
John Dorgan (Colorado School of Mines)	Jonathan Stickel (NREL)
Andrew Herring (Colorado School of Mines)	Amadeu Sum (Colorado School of Mines)
Carolyn Koh (Colorado School of Mines)	Kim Williams (Colorado School of Mines)

b) Graduate Advisors and Postdoctoral Sponsors (4)

Anthony J. McHugh	Chemical Engineering, Lehigh University (M.S. and Ph.D. advisor)
Thomas J. Hanratty	Chemical Engineering, University of Illinois (Ph.D. advisor)
Eric W. Kaler	President, University of Minnesota (Postdoctoral advisor)
Norman J. Wagner	Chemical Engineering, University of Delaware (Postdoctoral advisor)

c) Thesis Advisor and Postgraduate-Scholar Sponsor (Past 5 years, 16 total)

Thesis Advisor: Y. Liu (PhD), T. Pandey (PhD), M. Iqbal (PhD); Past: A. Krasovsky (MS); B. Claire (PhD), M. Vandiver (PhD), B. Akeredolu (MS), E. Webb (PhD), N. Crawford (PhD), N. Wyatt (PhD), P. Rensing (PhD); A. Bazyleva (Postdoc), C. Zhang (MS), M. Nolte (MS), J. Knutsen (Postdoc), K. Li (Postdoc)