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SMARTER Teamwork: System for Management, Assessment, Research, Training, Education, and Remediation for Teamwork

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Recommended Citation

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SMARTER Teamwork: System for Management, Assessment, Research, Training, Education, and Remediation for Teamwork

Dr. Matthew W. Ohland, Purdue University, West Lafayette

Dr. Matthew W. Ohland is professor of engineering education at Purdue University. He has degrees from Swarthmore College, Rensselaer Polytechnic Institute, and the University of Florida. His research on the longitudinal study of engineering students, team assignment, peer evaluation, and active and collaborative teaching methods has been supported by more than \$12.4 million from the National Science Foundation and the Sloan Foundation and his team received the William Elgin Wickenden Award for the Best Paper in the Journal of Engineering Education in 2008 and 2011. Ohland is past chair of ASEE's Educational Research and Methods division and a member of the Board of Governors of the IEEE Education Society. He was the 2002-2006 president of Tau Beta Pi.

Dr. Misty L. Loughry, Georgia Southern University

Dr. Misty L. Loughry is a professor of Management at Georgia Southern University. She earned her Ph.D. in Management from the University of Florida. Her research interests include organizational control, especially peer control, and teamwork, including peer evaluation of team-member contributions.

Richard A. Layton, Rose-Hulman Institute of Technology

Dr. Richard Layton is an associate professor of Mechanical Engineering at Rose-Hulman Institute of Technology with a Ph.D. from the University of Washington. His professional work includes student teaming, persistence, migration, and retention of engineering undergraduates, and consulting in data visualization and graph design. He is also a singer and songwriter.

rebecca lyons

Mr. Daniel Michael Ferguson, Purdue University, West Lafayette

Daniel M. Ferguson is a graduate student in the Engineering Education Program at Purdue University and the recipient of three NSF awards for research in engineering education. Prior to coming to Purdue, he was assistant professor of Entrepreneurship at Ohio Northern University. Before assuming that position, he was associate director of the Inter-professional Studies Program and senior lecturer at Illinois Institute of Technology, involved in research in service learning, assessment processes and interventions aimed at improving learning objective attainment. Prior to his University assignments, he was the founder and CEO of the EDI Group, Ltd. and the EDI Group Canada, Ltd, independent professional services companies specializing in B2B electronic commerce and electronic data interchange. The EDI Group companies conducted syndicated market research, offered educational seminars and conferences and published The Journal of Electronic Commerce. He was also a Vice President at the First National Bank of Chicago, where he founded and managed the bank's market leading professional Cash Management Consulting Group, initiated the bank's non-credit service product management organization and profit center profitability programs, and was instrumental in the breakthrough EDI/EFT payment system implemented by General Motors. Mr. Ferguson is a graduate of the University of Notre Dame and Stanford University.

Kyle Heyne

Mr. Tripp Driskell, Institute of Simulation and Training

Dr. David Jonathan Woehr, University of North Carolina Charlotte

Mr. Hal R Pomeranz

Dr. Eduardo Salas, University of Central Florida

Andrew Caleb Loignon, UNC - Charlotte

Mr. Loignon is a doctoral student in the Organizational Science program at the University of North Carolina-Charlotte. His research interests include teams and work groups, downsizing, employee selection, and measurement.



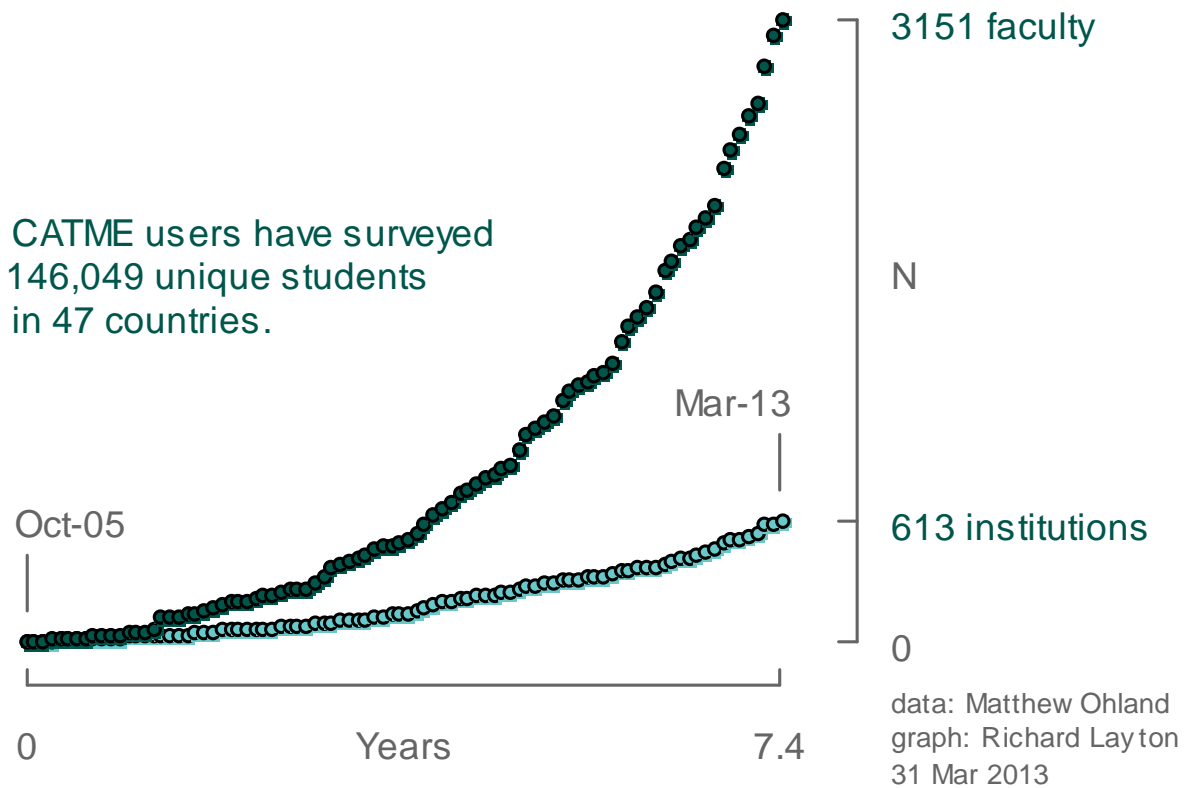
Dr. Shirley C Sonesh, UCF

Dr. Sonesh is a post-doctoral research associate at the Institute for Simulation and Training (IST) at the University of Central Florida (UCF). Before joining the teams and training lab at IST, she conducted research on expatriate assignments and the resulting socialization, career capital gains, and knowledge transfer that occur in the international context. Currently, Shirley is continuing to pursue expatriate research in addition to working on teamwork and training research in the medical domain. In specific, Dr. Sonesh is working on investigating clinical decision making and developing training for rapid response teams in the obstetrics unit to improve team decision making, team coordination, and ultimately patient safety. Other research interests include reducing medication error in EMS contexts, the use of adaptive team tutoring, responses to organizational change, coaching, and augmented reality for medical training; this work is funded by ARL, SHRM, NSF, FFMJUA, among others.

HIGHLIGHTS OF THE PAST YEAR

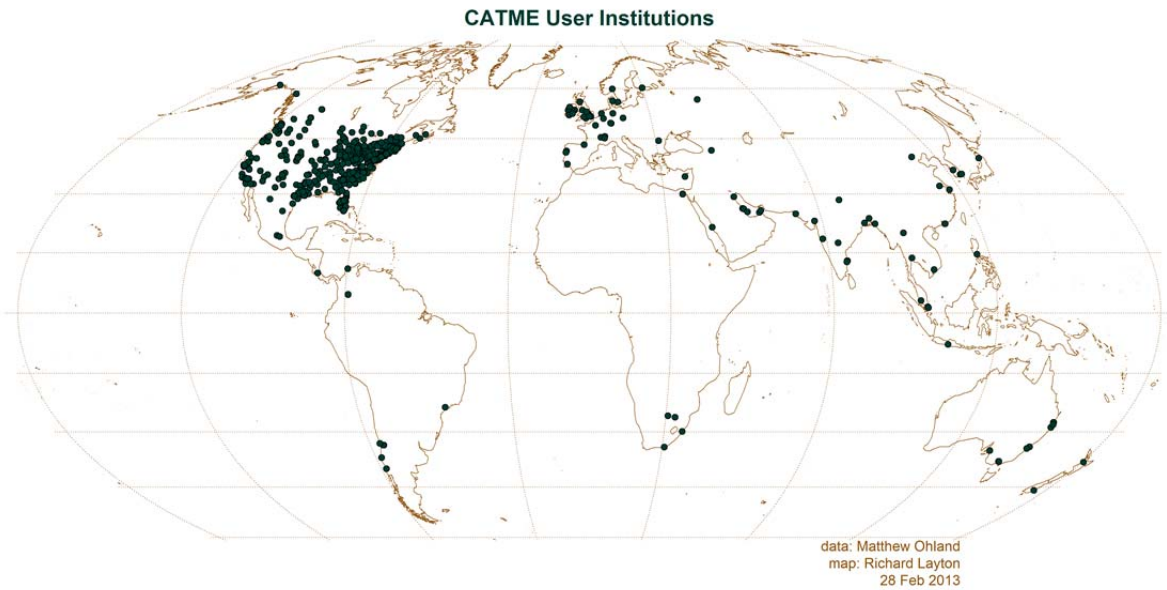
- Continued substantial growth of the CATME and Team-Maker user base
- Development and integration of training vignettes, including selection of video clips using video-based modeling and video vignettes. Permission for using the video clips has been granted.
- Deployment of a new Wordpress website
- Development of training modules for faculty and students
- Additional publications were written and accepted.
- Multiple workshops conducted promoting the CATME system, with more scheduled.
- System improvements implemented, including a major improvement in functionality and an upgrade critical to the sustainability of the system.

GROWTH OF THE CATME PEER REVIEW AND TEAM-MAKER SYSTEMS




THE WORLD-WIDE USE OF THE CATME: SMARTER TEAMWORK SYSTEM

The CATME Team Tools were designed by researchers in the United States, but the system is used in many other countries. These include: Australia, Bahrain, Bangladesh, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cyprus, Denmark, Ecuador, Egypt, Finland, France, Germany, Hong Kong, India, Indonesia, Ireland, Japan, Kuwait, Lebanon, Malaysia, Mexico, Mongolia, the Netherlands, New Zealand, Norway, Pakistan, Philippines, Portugal, Qatar, Romania, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Switzerland, Thailand, Turkey, the United Arab Emirates, the United Kingdom, and Vietnam.



DEVELOPMENT OF A NEW WEBSITE

A new website was deployed in December to coincide with the release of a major validation study published in the Academy of Management Learning and Education journal. Although some parts of the website are still under development, our current web presence is a major upgrade from our previous site.



CATME

SMARTER Teamwork

Email Address:

Password:

[Login](#) [Forget your password?](#)

WHAT CATME CAN DO FOR YOU

Instructors use the CATME system because they care about their students' success. The CATME tools help students succeed in their class-related team experiences and develop one of the skills that employers value most: the ability to work effectively in teams.

CATME provides tools for:

- Assigning students to teams:
CATME Team-Maker
- Self and peer evaluations and rating team processes:
CATME Peer Evaluation
- Training students to rate teamwork:
CATME Rater Calibration
- Training students to work in teams:
CATME Teamwork Training
- Making meetings more effective:
CATME Meeting Support

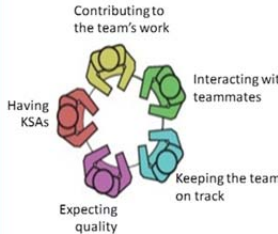
CATME helps instructors to:

- Gather information from students and provide feedback to students.
- Understand their student teams' processes, team-members' contributions, and students' perspectives on their team experience.
- Be aware of problems that are occurring on their students' teams
- Hold students accountable for contributing to their teams.
- Use best practices when managing student team experiences.

MISSION

CATME SMARTER Teamwork prepares students to function effectively in teams and supports faculty as they manage their students' team experiences.

MODEL OF TEAMWORK



Contributing to the team's work

Interacting with teammates

Keeping the team on track

Expecting quality

Having KSAs

DEVELOPMENT OF TRAINING MATERIAL

Team members at UCF are continuing to work on the training modules for CATME, which include training for educators and students on teamwork issues.

TEAMWORK TRAINING:

The educator training begins with the introductory module. This module explains what constitutes good training and how we are going to follow the information, demonstration, practice, and feedback framework throughout all of the educator and student training modules. It also lists the modules that are planned. All training will be accessed via a web browser. A draft has been developed and is under review by the team.

TECHNICAL TRAINING:

The technical training will consist of a series of mini training videos that demonstrate how to perform each teamwork task. Researchers at UCF are identifying tasks that are available to each user and organizing these tasks hierarchically based on their dependencies. These training clips will be very short and available on demand. The implementation will use *Captivate* so trainees can see exactly what links to click and how to navigate through the system.

PUBLICATIONS

Peer-Reviewed Journals

1. Ohland, M.W., Loughry, M.L., Woehr, D.J., Finelli, C.J., Bullard, L.G., Felder, R.M., Layton, R.A., Pomeranz, H.R., & Schmucker, D.G. (in press). [The Comprehensive Assessment of Team Member Effectiveness: Development of a Behaviorally Anchored Rating Scale for Self and Peer Evaluation](#). *Academy of Management Learning & Education*, 11 (4), 609-630.
2. Layton, R. A., Loughry, M. L., Ohland, M. W., & Ricco, G. D. (2010). [Design and validation of a web-based system for assigning members to teams using instructor-specified criteria](#). *Advances in Engineering Education*, 2 (1), 1-28.
3. Verleger, M., Diefes-Dux, H., Ohland, M. W., Besterfield-Sacre, M., & Brophy, S. (2010). [Challenges to Informed Peer Review Matching Algorithms](#). *Journal of Engineering Education*, 99(4), 397 – 408.
4. Rentsch, J.R., Delise, L.A., Salas, E., & Letsky, M.P. (2010). [Facilitating knowledge building in teams: Can a new team training strategy help?](#) *Small Group Research*, 41(5), 1-19.
5. Zhang, B., & Ohland, M. W. (2009). [How to assign individualized scores on a group project: An empirical evaluation](#). *Applied Measurement in Education*, 22(3), 290-308.

6. Loughry, M.L., M.W. Ohland, and D.D. Moore. [Development of a Theory-Based Assessment of Team Member Effectiveness](#). *Educational and Psychological Measurement*, 6 2007; vol. 67: pp. 505 – 524.
7. Ohland, M. W., Layton, R. A., Loughry, M. L., & Yuhasz, A. G. (2005). [Effects of behavioral anchors on peer evaluation reliability](#). *Journal of Engineering Education*, 94(3), 319-326.
8. Kaufman, D. B., Felder, R. M., and Fuller, H. (2000). [Accounting for Individual Effort in Cooperative Learning Teams](#). *Journal of Engineering Education*, 89(2), 133–140.

Peer-Reviewed Conference

1. Ohland, M. W., Bullard, L. G., Felder R. M., Finelli, C. J., Layton, R. A., Loughry, M. L., Pomeranz, H. R., Schmucker, D. G., & Woehr, D. J. (2010). [Comprehensive Assessment of Team Member Effectiveness: A Behaviorally Anchored Rating Scale](#). Paper presented at the *Annual Meeting of the Academy of Management* (Cross Divisional Paper session), Montreal, Canada. August 9, 2010.
2. Meyers, K., Ohland, M., Silliman, S., McWilliams, L., & Kijewski-Correa, T. (2008). [Comparison of Two Peer Evaluation Instruments for Project Teams](#). *Proceedings of the American Society of Engineering Education Annual Conference*, Pittsburgh, PA, June 22 – 25, 2008.
3. Loughry, M. L., Ohland, M. W, & Moore, D. D. (2006). Behaviorally Anchored Peer Evaluation of Team Member Effectiveness. [Proceedings of the Annual Meeting of the Southern Management Association](#), Clearwater, FL. October 24 – 28, 2006.
4. Loughry, M. L., Ohland, M. W, & Moore, D. D. (2005). Development of a Theory-Based Assessment of Team Member Effectiveness. [Proceedings of the Annual Meeting of the Southern Management Association](#), Charleston, SC. November 9 – 12, 2005.
5. Ohland, M.W., and C.J. Finelli, C. J. (2001). [Peer evaluation in a mandatory cooperative education environment](#). *Proceedings of the American Society for Engineering Education*, Albuquerque, NM, June 24 – 27, 2001.
6. Layton, R. A., & Ohland, M. W. (2000). [Peer evaluations in teams of predominantly minority students](#). *Proceedings of the American Society for Engineering Education*, St. Louis, MO, June 18 – 21, 2000.
7. Ohland, M. W., & Layton, R. A. (2000). [Comparing the reliability of two peer evaluation instruments](#). *Proceedings of the American Society for Engineering Education*, St. Louis, MO, June 18 – 21, 2000.

Peer-reviewed symposia

1. Piccolo, R., & Bedwell, W. (Co-chairs) 2012. [Teaching Teamwork: Integrating Innovative Science into the Classroom](#). Symposium presented at the Annual Convention of the American Psychological Association, Orlando, FL. August 2-5, 2012.
 1. Lyons, R., Bedwell, W., & Salas, E. *No More Excuses for Teamwork Ignorance: Free Training Resources*.
 2. Loughry, M. L. *Types of Projects: Implications for Teaching Teamwork*.
 3. Wildman, J. L., & Bedwell, W. *Practicing What We Preach: Teaching Teams Using Validated Team Science*.
2. Loughry, M. L. (Chair) (2011). Presenter symposium [Team-Based Learning and Peer Evaluation in Management Education: Issues, Challenges, and Solutions](#). Presented at the Annual Meeting of the Academy of Management (co-sponsored by the Organizational Behavior and Management Education and Development divisions), San Antonio, TX. August 12-16, 2011. **Winner of the MED Best Symposium in Management Education and Development Award sponsored by McGraw Hill/Irwin for the symposium that offers the most significant contribution to advance management education and development.**
 1. Loughry, M. L. *The Compelling Need to Do Team-Based Learning Well and Why It Is Challenging*.
 2. Ohland, M. W. *Assigning Students to Teams*.
 3. Woehr, D. W. *Self and Peer Evaluations of Team-member Contributions*.
 4. Lamm, E., & Petkova, A. *Teaching and Assessing Team Member Skills*.
 5. Madden T. M., & Collins, M. E. *Peer Evaluation in Management and Marketing Classes at University of Tennessee*.
3. Piccolo, R. (Chair), & Lyons, R. (Co-Chair) (2011). [Applying Science to Improve the Teaching of Teamwork in Classrooms](#). Paper Symposium (Session 96) presented at the Society for Industrial & Organizational Psychology Annual Conference, Chicago, IL. April 14-16, 2011.
 1. Ohland, M. W. *Team formation: Alternative methods for assigning students to teams*.
 2. Loughry, M. L., & Woehr, D. J. *Self/peer evaluations of member contributions: benefits, risks, and unresolved issues*.
 3. Lyons, R., Bedwell, W., Salas, E., & Heyne, K. *Teamwork in the movies: Applying science to instructional design*.

Poster Sessions and Associated Papers

1. Ohland, M.W., Loughry, M. L., Salas, E., Woehr, D. J., Layton, R.A., Pomeranz, H.R., Bedwell, W.L., Lyons, R., Ferguson, D.M., Heyne, K., Driskell, T. (2012). SMARTER Teamwork: System for Management, Assessment, Research, Training, Education, and Remediation for Teamwork. Paper and Poster in NSF Grantees' session. *Proceedings of the 2013 American Society of Engineering Education Annual Conference & Exposition*, Atlanta, GA, June 23 – 26, 2013.

2. Ohland, M.W., “SMARTER Teamwork: System for the Management, Assessment, Research, Training, Education, and Remediation of Teamwork”, poster to be presented at the Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES) program PI conference, including a special session preceding the conference. Sponsored by the American Association for the Advancement of Science (AAAS), Education and Human Resources Programs (EHR), and the Division of Undergraduate Education (DUE) of the National Science Foundation (NSF), January 23-25, 2013, Washington, DC.
3. Ohland, M.W., Loughry, M. L., Salas, E., Woehr, D. J., Layton, R.A., Pomeranz, H.R., Bedwell, W.L., Lyons, R., Ferguson, D.M., Heyne, K., Driskell, T. (2012). [SMARTER Teamwork: System for Management, Assessment, Research, Training, Education, and Remediation for Teamwork](#). Paper and Poster in NSF Grantees’ session. *Proceedings of the 2012 American Society of Engineering Education Annual Conference & Exposition*, San Antonio, TX, June 10 – 13, 2012.
4. Ohland, M.W., Layton, R. A., Ferguson, D. M., Loughry, M. L., Woehr, D. J., & Pomeranz, H. (2011). [SMARTER Teamwork: System for Management, Assessment, Research, Training, Education, and Remediation for Teamwork](#). Paper and Poster in NSF Grantees’ session. *Proceedings of the 2011 American Society of Engineering Education Annual Conference*, Vancouver, BC, Canada. June 26 –29, 2011.
5. Ohland, M. W., Layton, R. A., Loughry, M. L., Pomeranz, H. R., Salas, E., & Woehr, D. J. (2010). [SMARTER Teamwork: System for Management, Assessment, Research, Training, Education, and Remediation for Teamwork](#). Paper and Poster in NSF Grantees’ session. *American Society for Engineering Education 2010 Annual Conference*, Louisville, KY. June 20 – 23, 2010.
6. Layton, R., Loughry, M. Ohland, M., & Pomeranz, H. (2010). *The effective management of student teams using the CATME/Team-Maker system*. Poster presented at the Annual Interdisciplinary Network for Group Research (INGRoup) Conference, Arlington, VA. July 22 – 24, 2010.
7. Loughry, M. L., Ohland, M. W., Layton, R. A., & Pomeranz, H. (2010). [Software supporting peer evaluation and team formation \(with Free, On-line CATME and Team-Maker Software\)](#). Poster presented at the *2010 Virtual SoTL Expo* sponsored by Georgia Southern University’s Center for Excellence in Teaching, Statesboro, GA. March 30, 2010.
8. Layton, R. A., Loughry, M. L., Ohland, M. W., & Pomeranz, H. R. (2007). The Comprehensive Assessment of Team Member Effectiveness and Team-Maker: Tools for Research on Teams. *ASEE/AaeE 4th Global Colloquium*, Istanbul, Turkey, October 1 – 4, 2007.
9. Layton, R. A., Ohland, M. W., & Pomeranz, H. R. (2007). [Software for Student Team Formation and Peer Evaluation: CATME Incorporates Team-Maker](#). Paper and Poster in NSF Grantees’ session. *Proceedings of the 2007 American Society of Engineering Education Annual Conference*, Honolulu, HI, June 24 – 27, 2007.
10. Bullard, L. F., Carter, R. L., Felder, R. M., Finelli, C. J., Layton, R.A., Loughry, M. L., Ohland, M. W., & Schmucker, D. G. (2006). [The Comprehensive Assessment of Team Member Effectiveness: A New Peer Evaluation Instrument](#). Paper and Poster in NSF Grantees’ session. *Proceedings of the 2006 American Society of Engineering Education Annual Conference*, Chicago, IL, June 18 – 21, 2006.

11. Ohland, M.W., Loughry, M. L., Carter, R. L., Bullard, L. F., Felder, R. M., Finelli, C. J., Layton, R. A., & Schmucker, D. G. (2005). Developing a Peer Evaluation Instrument that is Simple, Reliable, and Valid. Presented at the [ASEE/AaeE 4th Global Colloquium](#), Sydney, Australia. September 26 – 29, 2005.
12. Ohland, M.W., Loughry, M. L., Carter, R. L., Bullard, L. F., Felder, R. M., Finelli, C. J., Layton, R. A., & Schmucker, D. G. (2005). [Developing a peer evaluation instrument that is simple, reliable, and valid](#). Paper and Poster in NSF Grantees' session. *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Portland, OR. June 12 – 15, 2005.
13. Ohland, M. W., Loughry, M. L. Carter, R. L., & Yuhasz, A.G. 2004. [Designing a Peer Evaluation Instrument that is Simple, Reliable, and Valid](#). Paper and Poster in NSF Grantees' session. *Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, UT. June 20 – 23, 2004.

Workshops and Invited Presentations

- Ohland, M.W., *Students in Teams*. Science and Engineering Teaching Lunch, hosted by the Center for Teaching and Learning, Stanford University, October 11, 2012.
- Layton, R. A., Ohland, M. W., & Loughry, M. L. (2012). Training students to become better raters: Raising the quality of self and peer evaluations using a new feature of the CATME system. [Workshop](#). *Proceedings of the Frontiers in Education Conference*, Seattle, WA. October 3 – 6, 2012.
- Ohland, M.W., “CATME and Team-Maker software for managing student teams,” Management Distinguished Lecture, UNC Charlotte, September 28, 2012.
- Loughry, M. L., Ohland, M. W., Woehr, D. J., Bedwell, W. L., & Lyons, R. (2012). [Effective Management of Student Teams Using the CATME System: Practice Informed by Research](#). PDW at the *Annual Meeting of the Academy of Management* (co-sponsored by the Management Education and Development and Organizational Behavior divisions), Boston, MA. August 3 – 7, 2012.
- Ohland, M.W. (2012). *Improving Classroom Collaboration*. Physics Education Research Seminar, Purdue University April 27, 2012.
- Ohland, M. W. (2012). *Getting started with team-based learning*. IMPACT Faculty Development Program, Purdue University March 22, 2012.
- Ohland, M. W. (2012). *Getting started with team-based learning*. IMPACT Faculty Development Program, Purdue University March 20, 2012.
- Ohland, Matthew W., and Daniel M. Ferguson, “Improving Management and Monitoring of Student Teams,” Krannert School of Management, Purdue University, January 5, 2012.
- Ohland, Matthew W., “Improving Student Teams without Increasing Instructor Work,” workshop for Chemical Engineering faculty, Purdue University, December 8, 2011.
- Ohland, M. W., & Ferguson, D. M. (2011). *Ensuring the success of student teams*. *Center for Instructional Excellence*, Purdue University, November 2, 2011.
- Ohland, M.W. (2011). Managing student teams: Diagnosing and remediating team issues. King Fahd University of Petroleum and Mining, Dammam, Saudi Arabia, September 6, 2011.

- Ohland, M.W. (2011). Managing student teams: Team formation and peer evaluation. King Fahd University of Petroleum and Mining, Dammam, Saudi Arabia, September 5, 2011.
- Layton, R.A., and M.W. Ohland (2011). Effective management of student teams using the CATME system: Practice informed by research. Workshop at *How to Engineer Engineering Education*, Bucknell University, July 21, 2011.
- Ohland, M W., Gaspar, A. and Cen Li, C. *Building teams and learning communities*. Workshop W55, Pedagogy Track, 2011 CCLI PI Conference, Session B, January 27, 2011.
- Ohland, Matthew W. (2010). *Research into practice: tools for effective management of student teams*. Institute for Operations Research and Management Science (INFORMS) Teaching Effectiveness Colloquium, Austin, TX, November 5, 2010.
- Layton, R. A., Loughry, M. L., Ohland, M. W., & Pomeranz, H. 2010. Research Into Practice: Tools for Effective Management of Student Teams. Workshop presented at *American Society for Engineering Education Annual Conference and Exposition*, Louisville, KY. June 20 – 23, 2010.
- Layton, R. A., Loughry, M. L., Ohland, M. W., & Pomeranz, H. (2010). Effective Management of Student Teams Using the CATME/Team Maker System: Practice Informed by Research. Workshop delivered twice during the conference, plus a poster session. *Capstone Design Conference*, Boulder, CO. June 7 – 9, 2010.
- Ohland, M.W. (2009). *Teams: creating a community of learning through peer accountability*. Invited talk at Clemson University Environmental Engineering and Environmental Science, November 20, 2009.
- Ohland, M. W. (2009). *Tools for Teams*. Invited workshop at Wichita State University, October 30, 2009.
- Layton, R. A., Loughry, M. L., Ohland, M. W., & Pomeranz, H. R. (2009). *Resources for student teams: The Team-Maker and CATME systems (and why they work)*. Workshop delivered twice plus a poster session. [Process Education Conference](#), Gaston College, Belmont, NC. July 9, 2009.
- Pomeranz, H. R.(2009). *Managing student teams scholarship, practice, and the Team-Maker/CATME applications*. Faculty Brown Bag Lunch Series, Oregon State University, February 20, 2009.
- Layton, R. A., Loughry, M. L., Ohland, M. W., & Pomeranz, H. (2008). [Managing Student Teams: Scholarship, Practice, and the Team-Maker/CATME Applications](#). Workshop. *Proceedings of the Frontiers in Education Conference*, Saratoga Springs, NY. October 22 – 25, 2008.
- Ohland, M.W. (2008). *Managing teams*. Project-Centered Learning Symposium 2008 (PCL 2008), Cambridge-MIT Institute Project-Based Symposium, <http://techtv.mit.edu/videos/234-day-2-pcl2008-workshop-managing-teams-b-blair-m-ohland-s-orr> [Ohland presentation starting at time stamp 33:52], March 18, 2008. [invited]
- Layton, R. A., Loughry, M. L., Ohland, M. W., & Pomeranz, H. (2007). [Tools for Team Assignments and Peer Evaluations](#). Workshop. *Proceedings of the Frontiers in Education Conference*, Milwaukee, WI. October 10 – 13, 2007.
- Ohland, Matthew W., Creating Citizen Engineers through Curriculum Development. Invited talk at the University of Wisconsin, Platteville, August 24, 2007.
- Loughry, M. L., Bamberger, P., Mero, N. M., Ohland, M. W., & Stewart, G. L. (2007). [Doing Well in Peer Evaluations of Team-Member Contributions](#). Professional

Development Workshop. *Annual Meeting of the Academy of Management* (MED Division), Philadelphia, PA. August 3 – 8, 2007.

- Bullard, L.F., C.J. Finelli, R.A. Layton, M.L. Loughry, M.W. Ohland, and H.R. Pomeranz, Conducting Peer Evaluations using the Comprehensive Assessment of Team Member Effectiveness. Educational Research & Methods division, workshop at *American Society of Engineering Education Annual Conference*, Chicago, June 18, 2006.
- Ohland, M. W., & Loughry, M. L. (2006). Designing a peer evaluation instrument that is simple, reliable, and valid: The Comprehensive Assessment of Team-Member Effectiveness. *Proceedings of the National STEM Assessment Conference*. Washington, D.C. October 19 – 21, 2006.

OTHER DISSEMINATION

- Team-Maker / CATME flyers distributed at KEEN conference 2012.
- Team-Maker / CATME flyers distributed at multiple Mudd Design Workshops, Claremont, CA, the INGRoup Interdisciplinary Network for Group Research conference in Colorado Springs, CO, in July 2009, and the ASEE 2011 Conference.
- Richard Layton is championing the development of presentation resources so that other members of the team can effectively promote the use of the system. Further, our “power users” – those who use the system frequently and who are very excited about using it – might be able to give presentations on behalf of the team (particularly to smaller groups of faculty at their own institution).
- The CATME LinkedIn user group is growing. System updates, comments, and technical questions form the discussions.

SYSTEM IMPROVEMENTS RELEASED IN AUGUST 2012 and DECEMBER 2012

Two significant developments were released this year—a question editor that enables instructors to add their own supplementary questions to Team-Maker surveys, and a migration of database support from MySQL to Postgres. This last change is needed to ensure the viability of the system in the face of the acquisition of MySQL by Oracle and the uncertainty of open-source support for the software.