

David A. Nembhard

Professor, Department of Engineering
Harvey Mudd College, Claremont CA

Professor and Director of Applied Science Programs
Claremont McKenna College, Claremont CA

EDUCATION

Ph.D., Industrial and Operations Engineering (1994) The University of Michigan, Ann Arbor, Michigan, Dissertation: "Heuristic Path Selection in Graphs with Non-Order Preserving Reward Structure," Committee: C. C. White III chair, S. M. Pollock, K. G. Murty, and M. R. Young.

M.S., Industrial and Operations Engineering (1993) The University of Michigan, Ann Arbor, Michigan, Thesis: "Non-Order Preserving Search with Imperfect Information," C. C. White III, chair

M.S.E., Systems Engineering (1990) Case Western Reserve University, Cleveland, Ohio, Thesis: "Route Selection for the Transportation of Hazardous Materials," Benjamin Hobbs, chair.

B.S., Systems and Control Engineering (1987) Option in Systems Engineering, Case Western Reserve University, Cleveland, Ohio

PRIOR APPOINTMENTS

Professor of Business Analytics & Professor, Industrial and Systems Engineering,
University of Iowa, Iowa City, Iowa (2020-2023)

Professor, Mechanical Industrial, and Manufacturing Engineering.
Oregon State University, Corvallis, Oregon (2016-2020)

Graduate Programs Director, Industrial and Manufacturing Eng.
Pennsylvania State University, University Park, Pennsylvania (2014-2016)

Professeur Invité (Invited Professor), Laboratoire Génie Industriel (Industrial Engineering)
École Centrale Paris, Châtenay-Malabry, France (2006-2007)

Associate Professor, Industrial and Manufacturing Engineering
Pennsylvania State University, University Park, Pennsylvania (2004-2016)

Associate Professor, Industrial Engineering
University of Wisconsin-Madison, Madison, Wisconsin (2003-2004)

Assistant Professor, Industrial Engineering
University of Wisconsin-Madison, Madison, Wisconsin (1998-2003)

Assistant Professor, MBA and Operations Management Programs,
Auburn University, Auburn, Alabama (1994 - 1998)

Honors and Awards

The Bastian Award, Penn State University, "Decision Analysis Enhancement of Small Business Operations" 2005

Harold and Inge Marcus Career Professorship, The Pennsylvania State University, College of Engineering, 2004-2006

IEEE Engineering Management Society, 2000 Transactions Publication Award, "An Individual-Based Description of Learning Within an Organization," 2000

The Great Lakes Center for Truck and Transit Research Scholar Award, The Great Lakes Center for Truck and Transit Research, "Routing Vehicles Transporting Hazardous Materials," December 1994.

Great Lakes Center for Truck and Transit Research Scholar, 1993 - 1994.

Rackham Merit Fellowship, University of Michigan, 1991 - 1994.

National Achievement Scholarship, Case Western Reserve University, 1983 – 1987.

Professional Societies

Institute for Operations Research and the Management Sciences (INFORMS), Member

American Society for Quality (ASQ), Member

Institute of Industrial and Systems Engineers (IISE), Senior Member

Institute of Electrical and Electronics Engineers (IEEE), Technology and Engineering Management Society (TEMS) Member.

Refereed Journal Articles (*graduate student mentee) *h-index=29, i10=46, j-index =11*

1. **Nembhard, D. A.** and Young, M. R. "Parametric Empirical Bayes Estimates of Truck Accident Rates," *Journal of Transportation Engineering*, 121(4), 359-363, 1995. doi:10.1061/(ASCE)0733-947X(1995)121:4(359)
2. **Nembhard, D. A.** and White, III, C. C. "Applications of Non-Order Preserving Path Selection to HAZMAT Routing" *Transportation Science*, 31(3), 262-271, 1997. doi:10.1287/trsc.31.3.262
3. Uzumeri, M. V. and **Nembhard, D. A.** "A Population of Learners: A New Way to Measure Organizational Learning," *Journal of Operations Management*, 16(5), 515-528, 1998. doi:10.1016/S0272-6963(97)00017-X
4. **Nembhard, D. A.** and White, III, C. C. "A Heuristic Search Approach for Solving Multiobjective Non-Order Preserving Path Selection Problems," *IEEE Transactions on Systems Man and Cybernetics*, 29(5), 450-459, 1999. doi:10.1109/3468.784172
5. **Nembhard, D. A.** and Uzumeri, M. V. "An Individual-Based Description of Learning within an Organization," *IEEE Transactions on Engineering Management*, 47(3), 370-378, 2000.

doi:10.1109/17.865905

6. **Nembhard, D. A.**, and Uzumeri, M. V. "Experiential Learning and Forgetting for Manual and Cognitive Tasks," *International Journal of Industrial Ergonomics*, 25(4), 315-326, 2000. doi:10.1016/S0169-8141(99)00021-9
7. **Nembhard, D. A.** "The Effects of Task Complexity and Experience on Learning and Forgetting: A Field Study," *Human Factors*, 42(2), 272-286, 2000. doi: 10.1518/001872000779656516
8. **Nembhard, D. A.** and Nembhard, H. B. "A Demerits Control Chart for Autocorrelated Data," *Quality Engineering*, 13(2), 179-190, 2000. doi:10.1080/08982110108918640
9. Nembhard, H. B. and **Nembhard, D. A.** "The Use of Bayesian Forecasting to Make Process Adjustments During Transitions," *European Journal of Operational Research*, 130(2), 437-448, 2001. doi:10.1016/S0377-2217(00)00057-6
10. **Nembhard, D. A.** "Heuristic Approach for Assigning Workers to Tasks Based on Individual Learning Rates," *International Journal of Production Research*, 39(9), 1955-1968, 2001. doi:10.1080/00207540110036696
11. **Nembhard, D. A.**, and Osothsilp*, N. "An Empirical Comparison of Forgetting Models," *IEEE Transactions on Engineering Management*, 48(3), 283-291, 2001. doi:10.1109/17.946527
12. Shafer, S. M., **Nembhard, D. A.**, and Uzumeri, M. V. "The Effects of Worker Learning, Forgetting, and Heterogeneity on Assembly Line Productivity" *Management Science*, 47(12), 1639-1653, 2001. doi:10.1287/mnsc.47.12.1639.10236
13. **Nembhard, D. A.** and Osothsilp*, N. "Task Complexity Effects on Between-Individual Learning/Forgetting Variability," *International Journal of Industrial Ergonomics*, 29(5), 297-306, 2002. doi:10.1016/S0169-8141(01)00070-1
14. Ramirez*, Y. V. and **Nembhard, D. A.** "Measuring Knowledge Worker Productivity: A Taxonomy," *Journal of Intellectual Capital*, 5(4), 602-628, 2004. doi:10.1108/14691930410567040
15. **Nembhard, D. A.**, and Osothsilp*, N. "Authors' Reply to "A Note on 'An Empirical Comparison of Forgetting Models'" *IEEE Transactions on Engineering Management*, 51(2), 235-235, 2004. doi:10.1109/TEM.2004.826348
16. Lin* J-H., Radwin, R. G. and **Nembhard, D. A.** "Ergonomics Applications of a Mechanical Model of the Human Operator in Power Hand Tool Operation," *Journal of Occupational and Environmental Hygiene*, 2, 111-119, 2005. doi:10.1080/15459620590913155
17. **Nembhard, D. A.**, and Osothsilp*, N. "Learning and Forgetting Based Worker Selection for Tasks of Varying Complexity," *Journal of the Operational Research Society*, 56(5), 576-587, 2005. doi:10.1057/palgrave.jors.2601842
18. **Nembhard, D. A.**, Nembhard, H. B., and Qin*, R. "A Real Options Model for Workforce Cross Training," *The Engineering Economist*, 50, 95-116, 2005. doi:10.1080/00137910590949850

19. **Nembhard, D. A.**, and Prichanont*, K. "Cross Training in Serial Production with Process Characteristics and Operational Factors," *IEEE Transactions on Engineering Management*, 54(3), 565-575, 2007. doi:10.1109/TEM.2007.900793
20. **Nembhard, D. A.**, and Shafer, S. M. "The Effects of Workforce Heterogeneity on Productivity in an Experiential Learning Environment," *International Journal of Production Research*, 46(14), 3909-3929, 2008. doi:10.1080/00207540600596981
21. **Nembhard, D. A.**, Yip*, K., and Shtub, A. "Comparing Competitive and Cooperative Strategies for Learning Project Management," *Journal of Engineering Education*, 98(2), 181-192, 2009. doi:10.1002/j.2168-9830.2009.tb01016.x
22. Schultz, K., Schoenherr, T., and **Nembhard, D. A.** "An Example and a Proposal Concerning the Correlation of Worker Processing Times in Parallel Tasks," *Management Science*, 56(1), 176-191, 2010. doi:10.1287/mnsc.1090.1080
23. Kim*, S., and **Nembhard, D. A.** "Cross-Trained Staffing Levels with Heterogeneous Learning/Forgetting," *IEEE transactions on Engineering Management*, 57(4), 560-574, 2010. doi:10.1109/TEM.2010.2048905
24. Qin*, R., and **Nembhard, D. A.** "Workforce Agility for Stochastically Diffused Conditions - A Real Options Approach," *International Journal of Production Economics*, 125, 324-334, 2010. doi:10.1016/j.ijpe.2010.01.006
25. **Nembhard, D. A.**, Yip*, K., Stifter, C. "Association Rule Mining in Developmental Psychology," *International Journal of Applied Industrial Engineering*, (1)1, 23-37, 2012. doi:10.4018/ijaie.2012010103
26. Qin*, R., and **Nembhard, D. A.**, "Demand Modeling of Stochastic Product Diffusion of the Life Cycle," *International Journal of Production Economics*, 137(2), 201-210, 2012. doi:10.1016/j.ijpe.2012.01.027
27. **Nembhard, D. A.**, and Bentefouet*, F. "Parallel System Scheduling with General Worker Learning and Forgetting," *International Journal of Production Economics*, 139 533-542, 2012. doi:10.1016/j.ijpe.2012.05.024
28. Kim*, S. and **Nembhard, D. A.** "Rule Mining for Scheduling Cross Training with a Heterogeneous Workforce," *International Journal of Production Research*, 51(8), 2281-2300, 2013. doi:10.1080/00207543.2012.716169
29. Bentefouet*, F., **Nembhard, D. A.** "Optimal Flow-Line Conditions with Worker Variability," *International Journal of Production Economics*, 141, 675-684, 2013. doi:10.1016/j.ijpe.2012.10.008
30. Chonde*, S., Ashour, O., **Nembhard, D. A.** Kremer G. E. O., "Model Comparison in emergency Severity Index Level Prediction," *Expert Systems with Applications*, 40(17), 6901-6909, 2013. doi:10.1016/j.eswa.2013.06.026

31. Xiao*, M., **Nembhard, D. A.**, and Dai, C. J. "A Survey of Knowledge Work Productivity Metrics," *International Journal of Productivity Management and Assessment Technologies*, 1(2), 1-18, 2013. doi:10.4018/ijpmat.2012040101
32. **Nembhard, D. A.** "Cross Training Efficiency and Flexibility with Process Change," *International Journal of Operations and Production Management*, 34(11), 1417-1439, 2014. doi:10.1108/IJOPM-06-2012-0197
33. Macht*, G., **Nembhard, D. A.**, J-H. Kim, and Rothrock, L. "Structural Models of Extraversion, Communication and Team Performance," *International Journal of Industrial Ergonomics*, 44, 82-91, 2014. doi:10.1016/j.ergon.2013.10.007
34. **Nembhard, D. A.**, Bentefouet*, F. "Selection Policies for a Multifunctional Workforce," *International Journal of Production Research*, 52(16), 4785-4802, 2014. doi:10.1080/00207543.2014.887231
35. **Nembhard, D. A.**, and Bentefouet*, F. "Selection, Grouping, And Assignment Policies with Learning-By-Doing and Knowledge Transfer," *Computers and Industrial Engineering*, 79, 175-187, 2015. doi:10.1016/j.cie.2014.11.006
36. Xiao*, M. and **Nembhard, D. A.**, "Utility-Based Knowledge Worker Productivity Assessment", *International Journal of Productivity Management and Assessment Technologies*, 2(2), 28-46 April-June, 2014. doi:10.4018/ijpmat.2014040103
37. Yip*, K. and **Nembhard, D. A.** "Mining Approximate Sequential Patterns with Gaps," *International Journal of Data Mining, Modeling and Management*, 7(2), 108-129, 2015. doi: 10.1504/IJDM.2015.069249
38. Qin*, R., **Nembhard, D. A.** and W. L. Barnes. "Workforce Flexibility in Operations Management," *Surveys in Operations Research and Management Science*, 20(1) 19-22, 2015. doi:10.1016/j.sorms.2015.04.001
39. Macht*, G. and **Nembhard, D. A.** "Measures and Models of Personality and their Effects on Communication and Team Performance," *International Journal of Industrial Ergonomics*, 49, 78-89, 2015. doi:10.1016/j.ergon.2015.05.006
40. Qin*, R. and **Nembhard, D. A.** "Workforce Agility in Operations Management," *Surveys in Operations Research and Management Science*, 20, 55-69, 2015. dx.doi.org/10.1016/j.sorms.2015.11.001
41. **Nembhard, D. A.** and J. Olivella, "Calibrating Cross-Training to Meet Demand Mix Variation and Employee Absence," *European Journal of Operational Research*, 248(2), 462-472, 2016. doi:10.1016/j.ejor.2015.07.036
42. Kim*, J-E., **Nembhard, D. A.**, and J-H Kim, "The Effects of Task Complexity and Group Size on Deadline Reactivity," *Int. J. Industrial Ergonomics*, 56, 106-114, 2016. dx.doi.org/10.1016/j.ergon.2016.09.011

43. **Nembhard, D. A.**, and Xiao*, M. "The Relation of Knowledge Intensity to Productivity Assessment Preferences and Cultural Differences," *International Journal of Productivity Management and Assessment Technologies*, 5(1) 1-19, 2017.
dx.doi.org/10.4018/IJPMAT.2017010101
44. Olivella, J. and **Nembhard, D. A.**, "Cross Training Policies for Team Cost and Robustness," *Computers and Industrial Engineering*, 111, 79-88, 2017.
doi.org/10.1016/j.cie.2017.07.006
45. Kim*, J-E., and **Nembhard, D. A.**, "Parametric Empirical Bayes Estimation of Individual Time-Pressure Reactivity," *International Journal of Production Research*, 56(7). 2452-2463, 2018.
doi.org/10.1080/00207543.2017.1380321
46. **Nembhard, D. A.**, Sun*, Y. "A Symbolic Genetic Programming Approach for Identifying Models of Learning-by-Doing," *Computers and Industrial Engineering*, 131, 524-533, 2019.
doi.org/10.1016/j.cie.2018.08.020
47. Mendez-Vazquez*, Y. and **Nembhard, D. A.**, "Worker Grouping-Assignment: Task Heterogeneity, System Dimensionality, And Knowledge Transfer" *Computers and Industrial Engineering*, 127, 1101-1114, 2019. doi.org/10.1016/j.cie.2018.11.050
48. Kim*, J-E., and **Nembhard, D. A.**, "Eye Movement as a Mediator of the Relationships Among Time Pressure, Feedback, And Learning Performance," *Int. J. Industrial Ergonomics*, 70 116-123, 2019. doi.org/10.1016/j.ergon.2018.12.006
49. Kim*, J-E., and **Nembhard, D. A.**, "The Impact of Procrastination on Engineering Students' Academic Performance," *Int. J. of Engineering Education*, 35(4), 1-10, 2019.
50. Macht*, G. **Nembhard, D. A.**, And Leicht, R.M. "Operationalizing Emotional Intelligence for Team Performance," *Int. J. Industrial Ergonomics*, 71 57-63, 2019.
doi.org/10.1016/j.ergon.2019.02.007
51. Sun*, Y., & **Nembhard, D. A.**" Modeling online learning performance with biometrics: Current study and future directions," *Oregon State University Ecampus Research*, 2022
52. Sun*, Y., **Nembhard, D. A.**, "Information Representations and the Mediating Role of Emotions on E-learning Outcomes," *International Journal of Human-Computer Interaction*, 2022, 1-12.
doi.org/10.1080/10447318.2022.2096187
53. Dalilian*, F. Nembhard, D.A., "Biometrically Measured Affect for Screen-Based Drone Pilot Skill Acquisition" *International Journal of Human-Computer Interaction*, 2023.
[/doi.org/10.1080/10447318.2023.2208991](https://doi.org/10.1080/10447318.2023.2208991)
54. Bektur*, G, **Nembhard, D. A.**, "Multi- Objective Variable Neighborhood Search Based Algorithm for Multi- Period Home Health Care Assignment, Scheduling and Routing Problem with Team Formation" *International Journal of Industrial Engineering: Theory, Applications and Practice*. 2023. <https://doi.org/10.23055/Ijietap.2023.30.5.8737>

55. Sun*, Y., **Nembhard, D. A.**, "Instructional Design for Learning Performance and the Mediating Effects of Cognitive Load," *SSRN*, 2023. <http://dx.doi.org/10.2139/ssrn.4399436>
56. Sun*, Y., **Nembhard, D.** (2024) "Knowledge Representation Learning with EEG-Based Engagement and Cognitive Load as Mediators of Performance," *Behaviour & Information Technology*, 2024, <https://doi.org/10.1080/0144929X.2024.2438776>
57. Dalilian*, F., & **Nembhard, D.** (2024). Cognitive and Behavioral Markers for Human Detection Error in AI-assisted Bridge Inspection, *Applied Ergonomics, Special Issue E/HF for a Sustainable, Resilient Human-Centered Future*, 121, 104346. <https://doi.org/10.1016/j.apergo.2024.104346>
58. Sun*, Y., **Nembhard, D. A.** "The Effect of Highlighting on Cognitive Load and Visual Attention in Multimedia Learning," *International Journal of Human-Computer Interaction*, Accepted for publication, 2025.

Book

1. Workforce Cross Training, **Nembhard, D. A.** (editor), CRC-Taylor & Francis, 2007. ISBN:0-8493-3632-5

Book Chapters

1. **Nembhard, D. A.** "Mining Human Performance Data," in *Handbook of Data Mining*, Nong, Ye, editor, Lawrence Erlbaum Associates, pp. 463-479, 2003.
2. **Nembhard, D. A.** "Cross Training in Production Systems with Human Learning and Forgetting, in *Handbook of Industrial and Systems Engineering*, A. Badiru, Editor, CRC Press, pp. 1-13, 2006.
3. Rothrock, L., and **Nembhard, D. A.**, "Team-In-The-Loop Simulations: Advances In The Study Of Collaboration And Conflict," in *International Encyclopedia of Ergonomics and Human Factors*, 2nd Edition, W. Karwowski, editor, CRC Taylor & Francis, pp. 2400-2407, 2006.
4. **Nembhard, D. A.** and Prichanont*, K. "Factors Affecting Cross-Training Performance in Serial Production Systems," in *Workforce Cross Training*, D. A. Nembhard, Editor, CRC Taylor & Francis, pp. 87-110, 2007.
5. **Nembhard, D. A.** and Norman, B. A. "Cross Training in Production Systems with Human Learning and Forgetting," in *Workforce Cross Training*, D. A. Nembhard, editor, CRC Taylor & Francis, pp.111-130, 2007.
6. Qin*, R. and **Nembhard, D. A.** "Valuing Workforce Cross Training Flexibility," in *Workforce Cross Training*, D. A. Nembhard, ed., CRC Taylor & Francis, pp.131-152, 2007.
7. **Nembhard, D. A.**, Nembhard, H.B. and Qin, R. "A Real Options Model for Workforce Cross Training," in *Real Options Models*, H. B. Nembhard, ed., CRC Taylor & Francis, pp.151-168, 2009.

8. **Nembhard, D. A.** "Cross Training in Production Systems with Human Learning and Forgetting, in *Handbook of Industrial and Systems Engineering, second edition*, A. Badiru, Editor, CRC Press, 2013.
9. Kim, J-H, G.A. Macht, L. Rothrock, and **Nembhard, D. A.** "Developing Metacognitive Models for Team-Based Dynamic Environment Using Fuzzy Cognitive Mapping," in *Engineering Psychology and Cognitive Ergonomics, Understanding Human Cognition Lecture Notes in Computer Science*, V. 8019, pp. 325-334, 2013.
10. **Nembhard, D. A.**, Yip, K. K., & Stifter, C. A. "Association rule mining in developmental psychology." In *Data Mining: Concepts, Methodologies, Tools, and Applications* IGI Global. Chapter 90, (pp. 1737-1751), 2013.

Articles published in refereed proceedings

1. **Nembhard, D. A.** "Heuristic Path Selection in OR-Graphs with Application to HAZMAT Routing," *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, San Antonio, TX. 1536-1540, 1994.
2. **Nembhard, D. A.** and H. B. Nembhard, "Dynamic Simulation for Time Series Modeling," *Proceedings of the 1996 Winter Simulation Conference*, San Diego, eds. J. M. Charnes, D. M. Morrice, D. T. Brunner, and J. J. Swain, pp. 1407-1412, 1996.
3. Qin*, R., and **Nembhard, D.A.** "Cross Training for Efficient and Flexible Service System Portfolios," *2005 International Conference on Service Systems and Services Management* (IEEE Systems, Man and Cybernetics Society), Chongqing, China, pp.955-960, 2005.
4. Yan, J. and **Nembhard, D.A.**, "Association Rules Discovery in Workforce Schedule Database. *Proceedings of the 2006 International Conference on Machine Learning; Models, Technologies & Applications, MLMTA 2006*, Las Vegas, Nevada, USA, June 26-29, 2006.
5. Yip*, K. K., and **Nembhard, D. A.**, "Combined AND/OR Association Rules," *2008 International Conference on Data Mining*, Las Vegas, Nevada, USA, pp.1-5, 2008.
6. Yip*, K. K., and **Nembhard, D. A.**, "MWASP- Multiple Width Approximate Sequential Patterns," *2009 International Conference on Data Mining*, Las Vegas, Nevada, USA, pp.1-6, 2009.
7. **Nembhard, D.A.**, J. Olivella, "Determining work team cross-training goals to cope with a certain level of production mix variation and employee absences." *EURO XXIV*, Lisbon 2010.
8. Macht*, G.A., Leicht, R. M, and **Nembhard, D.A.**, "Emotional Intelligence Subcategories Predict Team Performance in an Engineering Curriculum, *Engineering Project Organization Conference*, 2012.
9. Kim, J-H., Macht*, G.A., Rothrock, L. and **Nembhard, D. A.** "Developing Metacognitive Models for Team-based Dynamic Environment Using Fuzzy Cognitive Mapping, *HCI 2013*.
10. Lum, H. C., R. L. Greatbatch*, G. E. Waldfofle, **D. A. Nembhard**, "The Relationship of Eye Movement, Workload, and Attention on Learning in a Computer-Based Training Program,"

Proceedings of the Human Factors and Ergonomics Society Annual Meeting September 2016, 60(1), 1477-1481. <https://doi.org/10.1177/1541931213601339>

11. Mendez-Vazquez*, Y. M., and **Nembhard, D. A.** "Worker Grouping and Assignment for Serial and Parallel Manufacturing Systems Considering Workers' Heterogeneity and Task Complexity" Proceedings of the 2017 Winter Simulation Conference, W.K.V. Chan, A. D'ambrogio, G. Zacharewicz, N. Mustafee, G. Wainer, and E. Page, Eds., 4348-4359
12. Lopez*, B, Christian, and **Nembhard, D.A.** "Cooperative Workforce Planning Heuristic with Worker Learning and Forgetting and Demand Constraints," *Proceedings of the 2017 Industrial and Systems Engineering Conference*. 2017.
13. Mendez-Vazquez*, Y. M., and **Nembhard, D. A.** Simulation-Aided Assessment of Team Performance: The Effects of Transient Underachievement and Knowledge Transfer, *Proceedings of the 2020 Winter Simulation Conference*.

* student co-authors under supervision

Papers refereed by abstract

1. Nembhard, H. B., **Nembhard, D. A.**, and Gurses, A. "Real Options Modeling for Valuing Worker Flexibility," *Proceedings of the 2002 Industrial Engineering Research Conference*, pp.1-7, 2002.
2. Chonde*, S., **Nembhard, D.A.**, Kremer, G.E.O, and Ashour, O. "Neural Networks, Bayesian Networks, and Logistic Regression for ESI Prediction," ISERC Conference Proceedings, San Juan, 2013.
3. Macht*, G., Kremer, G.E.O, and **Nembhard, D.A.** "Alternative Methodology for TRIZ Implementation," ISERC Conference Proceedings, San Juan, 2013.
4. Macht*, G., Leicht, R.M., and **Nembhard, D.A.** "Emotional Intelligence, Communication and Team Performance," ISERC Conference Proceedings, San Juan, 2013.
5. Kim, J-E. and **Nembhard, D.A.** "Modeling academic performance and procrastination: A structural equation approach," *Proceedings of the 2017 Industrial and Systems Engineering Conference, Pittsburgh, 2017*.

Papers presented at technical and professional meetings

*(Presenter listed first, * indicates student under supervision)*

1. **Nembhard, D. A.** "Optimal Multi-Destination HAZMAT Routing Under Risk Aversion," Invited Session on Markov Decision Processes, ORSA/TIMS Phoenix Joint National Meeting, November 1993.
2. **Nembhard, D. A.** "Generalized Heuristic Search in OR-Graphs Requiring Arc-Cost Determination with HAZMAT Routing Application," Contributed Session, ORSA/TIMS Detroit Joint National Meeting, October 1994.
3. **Nembhard, D. A.** "Routing Vehicles Transporting Hazardous Materials," *The Great Lakes Center for Truck and Transit Research Scholar Seminar*, December 1994.

4. **Nembhard, D. A.** "A Bayesian Approach to Controlling Dynamic Systems," Contributed Session, INFORMS, New Orleans, November 1995.
5. **Nembhard, D. A.** "Applications of Learning Curve Analysis to Agile Manufacturing," sponsored session, INFORMS, San Diego, CA, May 1997.
6. **Nembhard, D. A.** "Effects of Learning and Forgetting in Production Processes," QSR sponsored session, INFORMS, Cincinnati, May 1999.
7. **Nembhard, D. A.**, Mehrotra*, V., Osothsilp*, N., and Sharma*, V. "Worker Learning and Forgetting in Manufacturing Industries," Center for Human Performance in Complex Systems 1999 Workshop, Poster Session, University of Wisconsin-Madison, 1999.
8. **Nembhard, D. A.**, and Nembhard, H. B. "A Demerits Control Chart for Autocorrelated Data," QSR sponsored session, INFORMS, Philadelphia, November 1999.
9. Yeh*, V., and **Nembhard, D. A.** "Productivity and Quality of Working Life: Human Factor Associated System Variation," Contributed Session, INFORMS, Philadelphia, November 1999.
10. **Nembhard, D. A.** "An Empirical Comparative Study of Models for Measuring Intermittent Forgetting," INFORMS National Meeting, Salt Lake City, March 2000.
11. **Nembhard, D. A.** "A Heuristic Approach for Assigning Workers to Tasks Based on Individual Learning and Forgetting Rates," INFORMS-KORMS International Meeting, Seoul, Korea, June 2000.
12. **Nembhard, D. A.** "Worker Assignment in an Environment of Change," INFORMS National Meeting, MSOM sponsored session, San Antonio, November 2000.
13. **Nembhard, D. A.**, and Leopairote*, K. "The Impact of Worker Heterogeneity on Assembly Line Productivity with Empirical Learning and Forgetting," INFORMS National Meeting, San Antonio, November 2000.
14. **Nembhard, D. A.**, and Norman, B. A. "Workforce Scheduling Considering Learning and Forgetting Effects" Invited Session on Scheduling Theory and Applications, INFORMS National Meeting, Miami, November 2001.
15. Leopairote*, K., and **Nembhard, D. A.** "Worker Assignment with Individual Learning and Forgetting Effects in a Cellular Manufacturing System," Invited Session on Operations Management, INFORMS National Meeting, Miami, November 2001.
16. Osothsilp*, N., and **Nembhard, D. A.** "Worker-Task Assignment with Learning, Forgetting and Task Heterogeneity," Invited Session on Operations Management, INFORMS National Meeting, Miami, November 2001.

17. **Nembhard, D. A.**, "The Future of Learning Curve Research," Invited Panel, Production and Operations Management Society, San Francisco, California, April 2002.
18. **Nembhard, D. A.**, and Norman, B. A. "Worker-Task Assignment in Cellular Manufacturing with Individual Learning and Forgetting" IE Research Conference, Orlando, May 2002.
19. **Nembhard, D. A.**, and Norman, B. A. "Workforce Training and Development Considering Learning and Forgetting Effects," Invited Session on Manufacturing Systems, INFORMS National Meeting, San Jose, California, November 2002.
20. Norman, B. A., and **Nembhard, D. A.** "Workforce Deployment in Manufacturing Cells Considering Worker Skills and Learning and Forgetting Effects," Invited Session on Manufacturing Systems, INFORMS National Meeting, San Jose, California, November 2002.
21. **Nembhard, D. A.** "Worker Productivity with Individual Differences," Invited Seminar, Purdue University, Department of Industrial Engineering, July 2003.
22. Leopairote*, K. and **Nembhard, D. A.** "An Investigation of Worker Heterogeneity and Group Composition in Serial Production Systems," Invited Session, INFORMS National Meeting, Atlanta, Georgia, October, 2003.
23. **Nembhard, D. A.**, and Norman, B. A. "Cross Training and Worker Efficiency," Invited Session, INFORMS National Meeting, Atlanta, Georgia, October, 2003.
24. **Nembhard, D. A.** "System Performance and Cross training with Individual Differences," Invited seminar, Penn State University, Department of Industrial and Manufacturing Engineering, October 2003.
25. **Nembhard, D. A.** "Mining Human Productivity Data," Invited Conference, Mathematical Methods for Learning Workshop, Como, Italy, Sponsored by the NSF-DMII program, June 2004.
26. Thomas*, B. G., and **Nembhard, D. A.** "Preference Based Search Approach for Scheduling Workers with Learning and Forgetting," MSOM sponsored session, INFORMS National Meeting, Denver, October 2004.
27. **Nembhard, D. A.**, and Yan*, J. "Worker Multi-functionality with Process and Operational Factors," MSOM sponsored session, INFORMS National Meeting, Denver, October 2004.
28. **Nembhard, D.A.** "Workforce Engineering for Improving Production Operations," INSEAD, Fontainebleau, France, October, 2005.
29. Norman, B. A., **Nembhard, D. A.**, and Vidic, N. "Bucket brigades when productivity is changing," Invited Session, INFORMS, San Francisco, November 2005.

30. **Nembhard, D. A.**, and Qin, R. "Mitigating Short Product Life Cycle Issues with Workforce Flexibility," Invited Session, INFORMS, San Francisco, November 2005.
31. Kim*, S., and **Nembhard, D. A.** "Workforce Cross-Training Decision with Minimizing Number of Workers Under Various Factors in Parallel Systems" INFORMS, Pittsburgh, November 2006.
32. Yan*, J., and **Nembhard, D.A.** "Discovering Assignment Rules in Workforce Schedules Using Data Mining," The 2006 International Conference on Data Mining (DMIN06), Las Vegas, June 26-29, 2006.
33. Yan*, J., and **Nembhard, D.A.** "Association Rules Discovery in Workforce Schedule Database," The 2006 International Conference on Machine Learning; Models, Technologies & Applications (MLMTA'06), Las Vegas, June 2006
34. **Nembhard, D.A.** "Workforce Engineering and The Learning Effect," INFORMS, Seattle, November 2007.
35. Kim*, S., and **Nembhard, D. A.** "Workforce Cross-training Decision with Minimizing the Number of Workers" INFORMS, Seattle, November 2007.
36. Kim*, S., and **Nembhard, D. A.** "Minimizing Cross Trained Staffing Levels in Parallel systems with Heterogeneous Learning/Forgetting," INFORMS Washington DC, October 2008.
37. Medina*, L., and **Nembhard, D. A.** "Workforce Implications in Warehouses and Distribution Centers," INFORMS, San Diego, October 2009.
38. **Nembhard, D. A.** "Human Factors in Operations Research," Human Factors and Ergonomics Society-National Ergonomics Month Lecture Series, October 15, 2009.
39. **Nembhard, D. A.** "Integrating Human Factors and Operations Research," Operations Research Colloquium, Penn State University, April, 2011.
40. Macht*, G., and **Nembhard D. A.** "Develop a Team Selection Protocol from a human in the loop simulation," INFORMS Charlotte, November 2011.
41. Bentefouet*, F. and **Nembhard, D. A.** "Optimal Worker Task Schedule with Independent Jobs and Independent Stations, and Learning," INFORMS Charlotte, November 2011.
42. **Nembhard, D. A.** and Qin*, R. "Acquisition and Valuation of Workforce Agility for Stochastically Diffused Conditions," INFORMS Charlotte, November 2011.
43. **Nembhard, D. A.**, and Macht*, G. "Development of a Human Based Metric Selection Protocol" INFORMS Phoenix, 2012.

44. Olivella, J. and **Nembhard, D. A.** "Cross Training of Team Members to Deal with Demand Mix Variation and Absenteeism" INFORMS Phoenix, 2012.
45. **Nembhard, D. A.**, and Doerr, K. H. "Deadline reactivity and work Performance with Work-sharing," INFORMS Minneapolis, 2013.
46. **Nembhard, D.A.** and Doerr, K. H., "Modeling and Measuring Deadline Rush Effects," INFORMS San Francisco, November 2014
47. **Nembhard, D.A.** and Kim, J-E, "Deadline reactivity modeling for human performance," *INORMS*, November 2015.
48. Lum, H. C., R. L. Greatbatch, G. E. Waldfogle, **D. A. Nembhard**, "The Relationship of Eye Movement, Workload, and Attention on Learning in a Computer-Based Training Program," Human Factors and Ergonomics Society Annual Meeting September 2016.
49. Kim, J-E. and **Nembhard, D.A.** "Modeling academic performance and procrastination: A structural equation approach," *2017 Industrial and Systems Engineering Conference, Pittsburgh, 2017*.
50. Lopez, C.E. and **Nembhard, D.A.**, Cooperative Workforce Planning Heuristic with Worker Learning and Forgetting, and Demand Constraints," *2017 Industrial and Systems Engineering Conference, Pittsburgh, 2017*.
51. Bektur, G. and **Nembhard, D.A.**, "Home Health Care Assignment, Scheduling and Routing Problems: An Application for a State Hospital" *20th annual International Logistics and Supply Chain Conference*, October 21, 2022.

Funded Research Projects

1. Capital Vial, "Extrusion Quality Measurement and Control," **D. A. Nembhard (PI)**, \$18,000, Jan 1997 - April 1998.
2. The University of Wisconsin-Madison, Graduate School Research Committee Grant, "Identifying System Variation in Multivariate Data," **D. A. Nembhard (PI)**, \$14,600, July 1999 – June 2000.
3. Chrysler Electronics, "Worker Learning and Forgetting on Radio Inspection Lines," (**D. A. Nembhard (co-PI)**, with M.V. Uzumeri, PI), \$45,000, May 1996 - April 1997.
4. Sun Microsystems, Academic Grant, "On-Line Analog Data Mining in Manufacturing," **D. A. Nembhard (PI)**, \$26,480, 1999.
5. The University of Wisconsin-Madison, Graduate School Research Committee Grant, "Worker Allocation Decisions in Organizations Based on Individual Learning and Forgetting," **D. A. Nembhard (PI)**, \$21,000, July 2000-June 2001.
6. The National Science Foundation (NSF), Decision Risk and Management Science (DRMS) Program, "Worker Allocation Decisions in Organizations Based on Individual Learning and

- Forgetting," unsolicited, **D. A. Nembhard (PI)**, \$109,000, SES-9986385, February 2000 - January 2001.
7. Space and Naval Warfare Systems Command (SPAWAR) of the Department of Defense (DOD), "Analysis of Operator Alertness for Human-Machine System Performance," solicited, **D. A. Nembhard (PI)**, \$31,000, March 2000 - July 2000.
 8. The University of Wisconsin-Madison, Graduate School Research Committee Grant, "An Individual-Based Measurement Approach for Improvement of Health Care Outcomes," **D. A. Nembhard (PI)**, \$23,766, July 2001-June 2002.
 9. Ericsson Canada, "Team Composition and Learning for Software Design Engineers," **D. A. Nembhard (PI)**, \$32,000, 2003-2004.
 10. The University of Wisconsin-Madison, Graduate School Research Committee Grant, "Worker Cross Training and Assignment Considering Learning and Forgetting Effects," **D. A. Nembhard (PI)**, \$16,350, July 2002-June 2003.
 11. The National Science Foundation (NSF), SES-Decision, Risk and Management Science (DRMS) DMII- Manufacturing Enterprise Systems (MES), and SES-Innovation and Organizational Change (IOC) Programs, "Worker Cross Training and Assignment Considering Learning and Forgetting Effects," unsolicited, **D. A. Nembhard (PI)**, B. Norman (co-PI), \$350,000, SES-0217666, August 2002 - December 2003.
 12. The National Science Foundation (NSF), SES-Decision, Risk and Management Science (DRMS) Programs, "Cross Training, Assignment and Scheduling with Learning and Forgetting Effects," **D. A. Nembhard (PI)**, B. Norman (co-PI), \$179,000, SES-0435948, January 2004 - July 2005.
 13. The National Science Foundation (NSF), SES - Decision, Risk and Management Science (DRMS) Program, REU: Collaborative Research: Worker Cross Training and Assignment Considering Learning and Forgetting Effects," unsolicited, **D. A. Nembhard (PI)**, \$11,750, August 2002 - July 2005.
 14. The Pennsylvania State University, Department of Industrial and Manufacturing Eng., PSU/Technion Exchange Program and Partnership, "Project Management Learning Based Simulation," **D. A. Nembhard** and A. Shtub, \$7,500, February 1, 2005 - January 31, 2006.
 15. The National Science Foundation (NSF), Dynamics of Human Behavior, DHB: Multilevel ARMA and Dynamic Models for Longitudinal Data and the Study of Human Interactions," M. Rovine (PI), **D. A. Nembhard (co-PI)**, E. Loken (co-PI), C. Stifter (co-PI), \$749,441, DMI-0527449 Feb 2006 - Jan 2010.
 16. The Pennsylvania State University, Center for Service Enterprise Engineering, Research Award, "A Newsvendor Approach for Workforce Planning Decision Support during the PLC," **D. A. Nembhard (PI)**, \$80,000, September 2007- November, 2007.
 17. The Pennsylvania State University, Department of Industrial and Manufacturing Eng., PSU/Technion Exchange Program and Partnership, "Technology for Training Experts", **D. A. Nembhard** and A. Shtub, \$7,500, February 1, 2008 - January 31, 2009.

18. The Pennsylvania State University, Department of Industrial and Manufacturing Eng., PSU/Technion Exchange and Partnership, "The Learning of Strategic Decision Making," **D. A. Nembhard** and A. Shtub, \$3,000, February, 2011- January, 2012.
19. The National Science Foundation (NSF), "Recursive Estimation of Time-Varying Parameters in Dynamic Factor Models for Nonstationary Psychological Time Series," P. Molenaar (PI), **D. A. Nembhard (co-PI)**, E. Loken (Investigator), M. Rovine (Investigator), \$250,000, SES-0852147 Aug 2009 - July 2012.
20. The Pennsylvania State University, College of Engineering Multi-Campus REU, "Team Cognition and Information," **D. A. Nembhard**, \$1,500, May 2015- August 2015.
21. The Leonhard Center, Penn State University, "Engineering Project Management in A Flipped Classroom," **D. A. Nembhard (PI)**, C. Tucker, (co-PI), \$45,056, September 2015-August 2017. This project is to develop a course and research protocols for measuring and analyzing the efficacy of a flipped classroom model.
21. Women's Giving Circle, Oregon State University Foundation "MIME 101/ SHOP 101" \$9600, Nordica MacCarty (PI), **D.A. Nembhard (co-PI)**, and Nancy Squires (co-PI), 2018-2019
22. Oregon State University, Scaled Learning Innovation Grant, "Technology and Creativity for Enhancing COE Orientation Courses," **D.A. Nembhard (PI)**, Nordica McCarty, Jennifer Parham-Mocello, \$91,580.
23. E-Campus Fellowship, "Investigating the effect of adaptive online learning systems on learning performance with Electroencephalography (EEG) and Eye-tracking." \$20,000, **D.A. Nembhard (PI)**
24. The National Science Foundation (NSF), FW-HTF-RM: Collaborative Research: Assistive Intelligence for Cooperative Robot and Inspector Survey of Infrastructure Systems (AI-CRISIS) **D. A. Nembhard (PI)**, \$345,000, ECCS-2128561, Sept. 2020 - Aug. 2025.

Dissemination of Research in Non-Technical Media

1. "'Work memory' affects scheduling success," IIE Solutions, December 2001.
2. "Workplace Cross Training," Interview on Wisconsin Public Radio, November 12-14, 2001.
3. "Employee 'work memory' affects rotation scheduling," Wisconsin Week, Nov. 7, 2001.
4. "Jacks of all Trades" Chicago Tribune, March 21, 2006.
5. "Companies Want Jacks of All Trades," Baltimore Sun, March 27, 2006.
6. "Making sure employees work hard: The most common measures of productivity used today can end up hurting your business. These 6 metrics are guaranteed to work," Business 2.0, November

1, 2006.

Funded Teaching Award

The Pennsylvania State University, Harold and Inge Marcus Dept. of Industrial and Manufacturing Engineering, Bastian Award for Curriculum Enhancement, "Decision Analysis Enhancement of Small Business Operations," \$10,000, January 1, 2005- December 31, 2005.

Ph.D. Student Advisor and Committee Chair

1. Napassavong Osothsilp, "Worker-Task Assignment Based on Individual Learning, Forgetting, and Task Complexity," Ph.D. 2001. (University of Wisconsin-Madison)
2. Karndee Leopaivate, "Policies for Multi-Skilled Worker Selection, Assignment, and Scheduling," Ph.D. 2003. (University of Wisconsin-Madison)
3. Yuri Ramirez, "Knowledge Worker Productivity Measurement and Improvement," Ph.D. 2006. (co-advisor Vicki Bier, Univ. of Wisconsin-Madison)
4. Bex George Thomas, "A Multivariate Model for Workforce Planning," Ph.D. 2006. (co-advisor, L. Shi, Univ. of Wisconsin-Madison)
5. Ruwen Qin, "A Real Options Framework for Workforce Flexibility Decision Making," Ph.D. 2007. The Pennsylvania State University.
6. Sungsu Kim, "Worker Flexibility in Manufacturing Performance" Ph.D. 2010, The Pennsylvania State University
7. Jaehyon Paik, "A Novel Training Paradigm for Knowledge and Skills Acquisition," Ph.D., 2011, co-advisor with F. Ritter, Pennsylvania State University.
8. Frank Bentefouet, "Workforce Scheduling in the Context of Human Performance Variability: A Task Approach", Ph.D., 2013, The Pennsylvania State University
9. Gretchen Macht, "Modeling Psychometrics for Team Performance: Personality & Emotional Intelligence," Ph.D., 2014, The Pennsylvania State University
10. Kelly Yip, "Pattern Detection in Sequential Data" Ph.D. 2015, The Pennsylvania State University.
11. Ji-Eun Kim, "Predictive Modeling of the Deadline Rush Effect," Ph.D. 2017, The Pennsylvania State University.
12. Yaileen Mendez Vasquez, Ph.D. 2019 "Behavioral Complexity in Quality Engineering Systems," Oregon State University
13. Yuzhi Sun, Ph.D. 2022, "EEG metrics related to Project Management Learning Outcomes" Oregon State University

14. Fatimeh Dalilian, Ph.D. 2024 "Biometric measures of Driver behavior in the presence of Roadside design features," University of Iowa.

Ph.D. Student Committees

1. Vivian Yeh, Ph.D. 2000, "Job and Organizational Determinants of Employees' Practices of Total Quality Management in the Public Sector," The Univ. of Wisconsin-Madison, Advisor: F. Sainfort
2. Ming-Shu Kao, Ph.D. 2000 "A Unified Framework for Statistical Process Control of a Dynamic-Stochastic System in Manufacturing Transitions," Univ. of Wisconsin-Madison, Advisor: H. Nembhard
3. Lisa Zidek, Ph.D. 2001, "A First Look at Home Health Aide Stress," Univ. of Wisconsin-Madison, Advisor: P. Brennan
4. Jim Lin, Ph.D. 2001, "Applications of a Mechanical Model of the Human Operator in Power Hand Tool Operation," Univ. of Wisconsin-Madison, Advisor: R. Radwin
5. Adsada Sae-Ngow, Ph.D. 2001, "Effects of the stress management program on occupational stress of industrial workers," Univ. of Wisconsin-Madison, Advisor: P. Carayon
6. Adam Resnick, Ph.D. 2002, Univ. of Wisconsin-Madison, Advisor: L. Shi, J. Rappold
7. Josey Chu, Ph.D. 2002, "A system Engineering Framework: Integrating the Balance Model to Knowledge Management Across Organizations," Univ. of Wisconsin-Madison, Advisor: M. Smith
8. Min Wang, Ph.D. 2003, "Building Blocks for Cost-Effective Preventive Maintenance Programs Based on Approximately Optimal Surveillance Testing Policies," Univ. of Wisconsin-Madison, Advisor: V. Bier
9. Young-Ho Rhee, Ph.D. 2003, "Employees' Perception of Organizational Characteristics, Stress, and Technology Acceptance," Univ. of Wisconsin-Madison, Advisor: M. Smith
10. Kuang-Yi Wen, Ph.D. 2003, "Measuring Needs Of Caregivers Of Cancer Patients Across The Advanced Cancer Trajectory: Comparison Of Three Priority Setting Methodologies," Univ. Of Wisconsin-Madison, Advisor: D. Gustafson
11. Sungsoon Park, Ph.D. 2005, Towards Interdisciplinary Perspective Of Electronic Negotiation Support Systems," Penn State Univ., Advisor: L. Rothrock
12. Hari Thiruvengada, Ph.D. 2005, "Developing a Formalism for Gibson's Affordances Using Colored Petri Nets," PSU, Advisor: L. Rothrock
13. Reetabrata Mookherjee, Ph.D. 2006, "A Computable Theory Of Dynamic Games And Its Applications," PSU, Advisor: T. Freisz
14. Atul Rangarajan, Ph.D. 2007, "Newsvendor Inventory Decisions Under Risk: Analytical And

- Evolutionary Agent Models," PSU, Advisor: R. Ravindran
15. Satama Sirivunnabood, Ph.D. 2008, "Network Reconfiguration For Supply Chain Risk Mitigation," PSU, Advisor: S. Kumara
 16. Jong Wook Kim, Ph.D. 2008, "Procedural Skills: From Learning To Forgetting," PSU, Advisor: R. Koubek
 17. Chi-Chun Pan, Ph.D.2008, "Automatic Extraction And Geo-Spatial Visualization Of FEMA National Situation Updates," PSU, Advisor: S. Kumara
 18. Natasa Vidic, Ph.D. 2008, "Developing Methods To Solve The Workforce Assignment Problem Considering Worker Heterogeneity And Learning And Forgetting," University of Pittsburgh, Advisor: B. Norman
 19. Seung Ki Moon, Ph.D. 2008, "A Strategic Module-Based Platform Design Method For Developing Customized Families Of Products And Services," PSU, Advisor: T. Simpson
 20. Ming-I Lin, Ph.D. 2009, "The Development of a Physiological based sampling Pump for Exposure Assessment," PSU, Advisor: A. Freivalds
 21. Vinay S. Kumar, Ph.D. 2009, "Systems Based Optimization Approaches To Analyze and Improve Metabolic Networks," PSU, Advisor: S. Kumara
 22. Gen-Han Wu, Ph.D. 2009, "Fleet Planning in the Car Rental Business," PSU, Advisor: T. Cavalier
 23. Maria Velazquez, Ph.D. 2010 "Understanding the Effects of Positive and Negative Affect in Perceived Usability," PSU, Advisor: G. Kremer
 24. David Sudit, Ph.D. 2012 "Hard and Soft Sensor Information Fusion using Cognitive Injection Process for Decision Making," PSU, Advisor: S. Kumara
 25. Kelly Sprehn, Ph.D. 2013 "Individual Differences and the Effect of Information Format on Decision Making," PSU, Advisor: G. Kremer
 26. Jung Hyup Kim, Ph.D., 2013, "Developing a Meta Cognitive Training Framework in Complex Dynamic Systems using a Self-Regulated Fuzzy Index," PSU, Advisor: L. Rothrock
 27. Sunghee Choi, Ph.D. 2015, "Blood Supply Chain Operational Efficiency Improvement By Agent Based Simulation," PSU, Advisor: S. Kumara
 28. Inki Kim, Ph.D. 2015, "Preemptive Interventions to Increase Patient Safety by using Behavior Based Feedback," PSU, Advisor: A. Freivalds
 29. Jay Cho, Ph.D. 2017 "Using a Desk Compatible Recumbent Bike to Promote Physical Activity in the Office," PSU, Advisor: A. Freivalds

30. Angela Garza, 2012-2017, "A Multi-Agent System for Manpower Modeling," PSU, Advisor: S. Kumara
31. Benjamin Noah, Ph.D. 2016, "Modeling Mental Workload for supervisory control using Eye-tracking," Penn State, Advisor: L. Rothrock
32. Yuchen Li, Ph.D. 2016, "Assembly Line Rebalancing with Non-Constant Task Time Attribute" Rutgers, The State University of New Jersey, Advisor: Tom Boucher
33. Kiseok Sung, 2015-2017, "Biomechanical Analysis of Thumb Flexion Through Cadaveric Experiment," Penn State, Advisor: A. Freivalds
34. Karina Roundtree, Ph.D. 2020, "Achieving Transparency in Human-Collective Systems," Oregon State University, Advisor: Julie Adams
35. Shefaa Baik, Ph.D. 2021, "Operations Research Models for Blood Supply Chain Network Design for Disaster Planning," Oregon State University, Advisor: H. Vergara
15. Kiana Kia "Vibration and Motion effects on task performance" Oregon State University, co-advisor with Jay Kim, 2017-2022.
16. Asieh Varyani, "Biometric measures of Surgeons in an Operating Room, with measurable distractions," co-advisor with Joe Agor, Oregon State U. 2018-2020.

Post Doctoral Scholars Advised

1. Jihong Yang, Postdoctoral Research Associate, (2005 - 2006), Project Title: "Association Rule Development for Workforce Scheduling"
2. Jordi Olivella Nadal, Visiting Scholar, (2011), Castelldefels School of Technology, Spain, Project Title: "Cross Training Scheduling with Uncertain Demand"
3. Min Xiao, Visiting Research Assistant, (2012). Donghua University, Shanghai, China, Project Title: "Knowledge Worker Performance based on Knowledge Intensity"
4. Su Jiafu, Visiting Research Assistant, (2015 - 2016), Chongqing University of China Project Title: "Knowledge diffusion for customer collaborative production systems,"
5. Yuan Feng, Visiting Research Assistant, (2015 - 2016), Tsinghua University, Beijing China, Project Title: "The Impact of Learning and Forgetting on Cross Trained Workers in manual/automated Production Lines,"
6. Rong Chen, Visiting Faculty Research Assistant (2018-2019), Hefei Normal University, Hefei, China, Project Title: "Team Formation Optimization with Learning and Forgetting,"
7. Gulcin Bektur, Visiting Faculty, Postdoctoral Researcher (2022-2023), The Multi-objective Team Assignment Problem with Knowledge Acquisition.

M.S. Theses Advised

1. Wayne Lanning, MSE, UW-Madison 1999 "Dynamic Workforce Selection for the Domestic Workforce"
2. Rahul Mehendale, MSE, UW-Madison 1999 "Worker Selection in Logistics and Distribution"
3. Hildania Christensen, MSE, UW-Madison 1999 "Criteria for Learning Model Selection"
4. Lori Gagnon, MSE, UW-Madison 2000 "Patient Data and Health Informatics Costs and Benefits"
5. Chen Chen, MSE, UW-Madison 2001 "Modeling Vaginal Birth after C-section Patient Outcomes"
6. Bex Thomas, MSE, UW-Madison 2001 "On-Line Analytical Processing of Performance Data"
7. Kuang-Yi Wen, MSE, UW-Madison 2000 "Logistic Regressing and the Medical Expenditure Panel Survey (MEPS) data"
8. Vikram Sharma, MSE, UW-Madison 2000 "Modeling Knowledge Transfer and Learning in Manufacturing Systems"
9. Kaweesak Boonyapornnad, MSE, UW-Madison 2000 "An Assessment of Experiential Learning Models for Production Systems Research"
10. Vikas Mehrotra, MSE, UW-Madison 2000 "Transformations and Fusion of Human Performance Data"
11. Joshua Kreklow, MEPP, UW-Madison 2003 "Motivators and Success Factors for Knowledge Management Systems"
12. Misty Metschke, MEPP, UW-Madison 2003, "An Engineering Management Approach for Worker Selection in Cross Training systems"
13. Damini Dawar, MSE, UW-Madison 2003 "Computer Programmer Performance Measurement and Team Project Performance"
14. Kavita Krishnamurthy, UW-Madison 2003 "Quality Control of Programming Activities for Mission Critical Applications"
15. Abir Fatthallah, Masters Degree, Ecole Centrale Paris, 2007 "Breast Cancer Screening locational distribution and Equity in Metropolitan Paris"
16. Frank Bentefouet, Masters Degree, Ecole Centrale-Paris, 2007 "Properties of Learning Models of Human Performance"
17. Shrikant Janardhana, M.S., Penn State, 2010 "A Worker Scheduling Heuristic for Assembly Lines"

18. Rohini Prabhakar, M.S., Penn State, 2010, "A new Workforce Scheduling Policy"
19. Siddarth Prakasam, M.S., Penn State, 2011 "Information Visualization for Health Systems"
20. Yu Feng, M.S., Penn State, 2011, "A Pilot Study on Patient Complaints by Regression"
21. Sunghee Choi, M.S., Penn State, 2012, "Radio Frequency Identification (RFID) in Blood Supply Chain Management"
22. Shivanker Singh, M.S., Penn State, 2012, "Throughout Improvement and Rework Reduction for Large Structural Complex Engineered Components"
23. Pragya Bhargava, M.S., Penn State, 2013 "Using Simulation for Improving the Performance of a Manufacturing System Through Dynamic Workforce Scheduling"
24. Rahul Yadav, M.S., Penn State, 2015 "Five Phase Supplier Selection"
25. Ayush Dhurka, M.S. Penn State, 2016, "Data Driven Approach towards Evaluating New Product Features and Estimating New Product Potential in the Machining Cutting Tools Industry"
26. Paul Kloepping, MBA Thesis, 2016. Naval Postgraduate School, "Deadline Tightness and Performance in Operational and Logistics Contexts."
27. Chenmu Wang, M.S. Penn State, 2016 "Use of EEG to Instrument Performance in Cyber-learning"
28. Yuzhi Sun, M.S. Penn State, 2017 "EEG metrics related to Project Management Learning Outcomes"
29. Bhuvanamalini Karaikudi Ramesh, M.S. Oregon State University, 2017. "Healthcare Quality Improvement Projects - From Quality Directors' Perspective."
30. Rime Elatlassi, M.S. Oregon State University, 2018 "Modeling EEG metrics for emotion, and performance"
31. Karina De Los Angeles Suarez Aimacana, M.S., 2019 "The Effects of Knowledge Representation on behavior and learning outcomes in Online Learning"

M.S. Thesis Committee Member

1. Sean Seston, M.S. Oregon State University, M.S. 2019, "Problem Solving Personas of Civil Engineering Practitioners using Eye Tracking Techniques."
2. Simon Kahsai, M.S. Oregon State University, M.S. 2020 "Optimized placement of bio-retention cells and infiltration trenches as a Green Infrastructure"

3. Taiwo Talouwalase, M.S. University of Iowa, M.S. 2021, "A Proposed Model for Assessing the Maturity of a Quality Culture in Manufacturing Organizations"

Undergraduate Research Advisees (Funded REU students)

1. Sarah E. Olmsted, 2003, UW-Madison, "A taxonomy of learning and forgetting models for production systems"
2. Joline A. Neren, 2003, UW-Madison, "On-Line Processing: Optimizing Data Utilization in a Business Setting"
3. Dana Heitner, 2003, UW-Madison, "Knowledge Transfer models"
4. Elizabeth Lenthe, 2005, Penn State, "Performance Improvement based on learning before doing"
5. Richard Greatbatch, 2015, Penn State, "Learning behavior measurement using Eye-tracking"
6. Kyle Mink, 2015, Penn State, "Team Cognition with Information"
7. Ozan Can Eren, 2018, Oregon State Univ. "Variation of Eye tracking Data for On-line Learning Research"
8. Jacob Konz, 2021-2022, University of Iowa, "Drone Pilot Skill Acquisition and Behavioral Affect"
9. Charlie Killian, 2021, University of Iowa, "Field of View for Drone Pilot Training"
10. Khang-Le Tan, 2022, University of Iowa, "Time-Series Modeling for Eye-Tracking Data"
11. Annie Elliot, 2023-2024, "AI-CRISIS Drone flight simulation testing: Inspection route planning design"
12. Zhian Zhang, 2023-2025, "AI-CRISIS Drone flight simulation testing"
13. Will Sedo, 2024-25, "Drone Flight Training, from the simulator to practical flight"
14. Bleecker Coyne, 2024-25 "Drone Flight Training, from the simulator to practical flight"
15. Bob Zheng, 2024, "Drone Flight Training, from the simulator to practical flight"
16. Ashley Song, 2024-25, "Machine Learning for predicting Errors in Drone Inspection"
17. Bryce Tu Chi, 2024-25, "Machine Learning for predicting Errors in Drone Inspection"