

Robert P. Dolan

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EDUCATION

Massachusetts Institute of Technology
Ph.D. Brain & Cognitive Sciences, 1992

Cornell University
B.S. Biology, 1984

RESEARCH & PROFESSIONAL EXPERIENCE

Diverse Learners Consulting, Leverett, MA
Founder & Principal

Jul 2013 – present

Providing education technology consultation in digital learning and assessment conceptualization, design, research, implementation, and evaluation. Particular passion and expertise in adaptive learning, UX and instructional design, Universal Design for Learning, accessibility, and advanced analytics to support inclusive, equitable, and effective solutions for all learners, including those with disabilities and who have been traditionally underserved. Business development consulting efforts focus on research-based product road-mapping and continuous improvement planning and implementation.

Landmark College, Putney, VT
Adjunct Professor

Spring 2016 – present

Course design and instruction within the college's professional learning program, *Learning Differences and Neurodiversity: Specialization in Executive Function*, for educators, instructional designers, curriculum developers, and educational software developers. Providing core instruction in Universal Design for Learning, and deploying innovative online teaching approaches that walk-the-talk of effective, accessible digital learning.

CAST, Wakefield MA
Senior Innovation Scientist

Apr 2018 – August 2022

Leading education technology innovation at the intersection of instruction and assessment, with emphasis on bringing research to practice and establishing widespread, scalable solutions through strategic partnerships. Focus on providing students with accessible, flexible, and effective learning environments, and teachers with tools to support data-driven instructional decision-making. Principle investigator and senior leadership of multiple research projects and centers funded by the U.S. Dept. of Education and the National Science Foundation.

Pearson, Research & Innovation Network, Austin, TX
Senior Research Scientist

Nov 2007 – Jul 2013

Research, design, development, and evaluation of innovative, technology-based formative and summative assessment and instruction systems for use in K-20 education. Focused on application of advanced cognitive and performance assessment techniques, adaptive learning, and educational data mining, with an emphasis on usability and accessibility.

CAST, Wakefield MA
Senior Research Scientist

Jun 2000 – Nov 2007

Led K-12 educational technology research initiatives to develop novel STEM learning environments that use adaptive and flexible methods to accommodate learner differences. Established research and development program on accessible, computer-based testing. Advancing use of state-of-the-art measurement techniques such as eye tracking to understand students' use of educational materials. Researching and developing ontology-based systems to support automated generation of individualized learning materials.

Analogic Corporation, Peabody MA**Sep 1997 – Jun 2000****Principal Engineer**

Led creation of web-based telemedicine systems that integrated with healthcare enterprise and deployed leading-edge web, database, graphical user interface, and image processing technologies. Established new engineering practices, including software configuration management, integrated defect tracking, scheduling, and document-driven design practices. Worked closely with OEM customers and served actively on medical informatics industry committees.

EPIX Medical, Inc., Cambridge MA**Jun 1994 – Aug 1997****Director of Research, Image Analysis**

Established and directed medical imaging lab for start-up pharmaceutical company. Co-designed and implemented Phase I and II clinical trials for a diagnostic imaging agent for detecting arterial disease. Led software development program for advanced 3D image processing, analysis, and display, including automated tissue segmentation algorithms using scene-based and object-based recognition schemes. Developed internal web-based image distribution system.

Total Solutions, Cambridge MA**Jan 1984 - Sep 1997****Founder & Principal**

Contract programming, application development, user interface design, and technical writing for scientific research market. Specialized in real-time data collection, analysis, and control, as well as image processing and animation. Projects included human vision research, automated morphometry, and medical image processing and display. Created successful commercial software package for morphometric analysis and reconstruction (Lucida™).

Harvard Medical School, Beth Israel Hospital, Dept. of Radiology Research, Boston MA**Dec 1993 – Jun 1994****Postdoctoral Researcher**

Research on state-of-the-art MRI acquisition and display techniques. Designed and implemented real-time, ultra-high resolution MRI pulse sequences on clinical scanners for measurement of various cardiovascular parameters. Designed and implemented novel display technologies (e.g. animation, stereography, holography) and evaluated effect on diagnostic interpretation of clinical and modeled medical image data.

Centre d'Etudes Nucleaires de Saclay, France**Oct 1992 - Oct 1993****Research Scientist**

Modeling and evaluation of Parkinson's and Huntington's diseases following striatal lesions and neuronal transplantation using behavioral assessment and PET and MRI imaging. Conducted limb and gross motor movement analyses used in modeling of basal ganglia function and in assessment of neural grafting techniques. Designed and built video-based motion tracking system for freely moving subjects, used to monitor pathological events following induction of striatal lesions in non-human primates and following transplantation in human patients and non-human primate subjects.

M.I.T., Dept. of Brain & Cognitive Sciences**Aug 1986 – Aug 1992****Doctoral Thesis Research**

Conducted research on parallel information processing in the visual system. Studied the role of parallel channel organization in information processing in the monkey and human visual systems, concentrating on the ON and OFF channels. Research involved blockage and adaptation of individual channels through pharmacological and psychophysical means and study of the visual effects, assessed through visual psychophysics and electrophysiology.

Harvard Medical School, Mass. General Hospital, Dept. of Radiology, Boston MA**Jan 1991 – Mar 1992****Research Associate**

Conducted research evaluating medical image rendering techniques. Designed project to evaluate the effectiveness of various medical image rendering techniques in conveying visual information. Three-dimensional, time-based cardiac images were acquired through a fast-scan MRI, and were displayed to trained diagnosticians and untrained subjects as 2-D, 2-D multi-slice, and 3-D animation sequences.

Cornell University, Depts. of Psychology, Mathematics & Engineering**Jan 1983 – Aug 1986****Systems Programmer**

Designed, implemented, and supported interactive graphic software systems for use in morphometric analysis and reconstruction. Designed a programmable real-time simulation environment, with emphasis on development of interactive language parsing software, including a custom graphics kernel for representations of fractal geometries.

MAJOR RESEARCH PROJECTS

- U.S. Dept. of Education, Institute of Education Sciences, Special Education STEM Program
Principal Investigator, *MARCS: Math and Reading Acquisition Co-Adaptive System*, 2021-2022.
- U.S. Dept. of Education, Office of Special Education Programs
Principal Investigator, *National Center on Accessible Educational Materials for Learning (AEM Center)*, 2021-2022.
- U.S. Dept. of Education, Office of Special Education Programs
Principal Investigator, *Center on Inclusive Technology & Education Systems (CITES)*, 2021-2022.
- U.S. Dept. of Education, Institute of Education Sciences, Assessment for Accountability Program
Co-principal Investigator, *Principled Science Assessment Designs for Students with Disabilities*, 2007-2010.
- U.S. Dept. of Education, Institute of Education Sciences, Special Education Math and Science Program
Principal Investigator, *The Universally Designed Science Notebook: An Intervention to Support Science Learning for Students with Disabilities*, 2007-2010.
- LD Access Foundation
Principle Investigator, *Improving Large-Scale Assessment for Students with Learning Disabilities through Technology and Universal Design for Learning*, 2002-2007.
- National Science Foundation, Div. of Information & Intelligent Systems, Advanced Learning Technologies Program
Principal Investigator, *Dynamic Generation of Individualized Digital Learning Materials for Learners with Disabilities through Automatic Analysis of Pedagogical Intent Semantics and Learner Requirements*, 2004-2006.
- National Institute on Child Health and Human Development, R03 Award
Principal Investigator, *Eye Movements During Reading of Feature-Enriched Text*, 2003-2005.
- U.S. Dept. of Education, Office of Special Education Programs, Directed Research Program
Co-principal Investigator, *Universal Design of Assessment: Applications of Technology*, 2002-2005.

MAJOR RESEARCH CONTRACTS

- National Science Foundation, SBIR Program: *Integrating Cognitive and Self-Regulatory Strategies to Improve Secondary Mathematics Outcomes* (MindPrint Learning), 2022-2023.
- U.S. Dept. of Education, Competitive Grants for State Assessments: *Collaborative for the Alternate Assessment of English Learners with Significant Cognitive Disabilities*, 2019-2022.
- National Science Foundation, DRK-12 Program: *Accelerating Higher Order Thinking and STEM Content Learning Among Students with Learning Disabilities*, 2018-2022.
- U.S. Dept. of Education, Office of Special Education Programs: *Center on Inclusive Software for Learning*, 2018-2022.
- U.S. Dept. of Education, Competitive Grants for State Assessments: *Innovations in Science Map, Assessment, and Report Technologies*, 2016-2020.
- U.S. Dept. of Education, Enhanced Assessment Grant: *Reaching 'Students in the Gap' through Web-based Task Module Assessments*, 2005-2006.
- U.S. Dept. of Education, Enhanced Assessment Grant: *New England Compact: A Four-State Consortium to Enhance the Quality of State Assessment Systems*, 2003-2005.
- U.S. Dept. of Education, Enhanced Assessment Grant: *Alternate Assessment Collaborative*, 2003-2005.

RELEVANT TEACHING EXPERIENCE

- Landmark College (2016-present)
- University of Massachusetts Amherst, College of Information and Computer Science (2015)
- Harvard University, Graduate School of Education (2006-2007)

ADVANCED TRAINING

- Pittsburgh Science of Learning Center Summer School (LearnLab), July 2010.
- MIT Professional Education, *Tackling the Challenges of Big Data*, March 2014.

PROFESSIONAL ACTIVITIES & ADVISORY BOARDS

Institute of Education Sciences Learning Acceleration Challenges Judge (2022-present)
 Utah State Board of Education Technical Advisory Committee (2022-present)
 UDL-IRN Assessment & Measurement SIG Co-Chair (2021-present)
 UDL Rising to Equity Stakeholder Council (2021-present)
 Instructional Topics in Educational Measurement Series (ITEMS) Advisory Board, NCME (2020-present)
 Careers In Play Advisory Board, UMD (2019-2022)
 Conrad Challenge (Conrad Foundation) Judge (2016-2018)
 Customizing Math Curricula with Intelligent Tutoring and Universal Design Advisory Board, U. Mass Amherst (2008-2012)
 Principled Science Assessment Designs for Students with Disabilities Advisory Board, CAST & U.C. Berkeley (2008-2011)
 Universal Design of Inquiry-Based Science Curricula Advisory Board, CAST, EDC & Univ. of MI (2007-2011)
 Journal of Technology, Learning, and Assessment, Editorial Board (2005-2010)
 National Accessible Reading Assessment Projects (NARAP) Technical Advisory Board, ETS (2004-2010)
 Maine Educational Assessment Online Testing Advisory Committee, ME Dept. of Education (2003-2006)
 National Assistive Technology Research Institute Advisory Board, Univ. of KY-Lexington (2002-2004)
 Commonwealth Accountability Testing System Online Advisory Committee, KY Dept. of Education (2001-2004)
 NCLB/IDEA Assessment Advisory Panel, U.S. Department of Education (2003)
 National File Format Technical Panel, U.S. Department of Education (2002-2003)

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science
 International Educational Data Mining Society
 National Council on Measurement in Education
 Sigma Xi
 Union of Concerned Scientists

PUBLICATIONS

Dolan, R. P., Gilbert, S., Ducharme, K., Wojcik, C., & Posey, A. (2022). *Innovations in Science Map, Assessment, and Report Technologies (I-SMART): Teacher Dashboard Usability and Utility Study* (Research Report). CAST, Inc.
<http://doi.org/10.13140/RG.2.2.11945.06244>

Dolan, R. P., & Ducharme, K. (2022). Adaptivity in the Wild: Individualizing Reading Supports in Open Learning Scenarios. In D. Guralnick, M. E. Auer, & A. Poce (Eds.), *Innovations in Learning and Technology for the Workplace and Higher Education* (pp. 352–363). Springer International Publishing. https://doi.org/10.1007/978-3-030-90677-1_34

Smith, D. W., Lampley, S. A., Dolan, R. P., Williams, G., Schleppenbach, D., & Blair, M. (2020). Effect of 3D manipulatives on students with visual impairments who are learning chemistry constructs: A pilot study. *Journal of Visual Impairment & Blindness*, 114(5). <https://doi.org/10.1177/0145482X20953266>

Dolan, R. P., Wojcik, C., Ducharme, K., Starr, E., & Blackorby, J. (2020). *Innovations in Science Map, Assessment, and Report Technologies (I-SMART) Goal 3: Teacher dashboard design* (Research Report). CAST, Inc.
<https://doi.org/10.13140/RG.2.2.30665.06244>

Dolan, R. P., & Burling, K. S. (2018). Computer-based testing in higher education. In C. Secolsky (Ed.), *Handbook on Measurement, Assessment, and Evaluation in Higher Education* (2nd ed.; pp. 370-384). Routledge.
<https://doi.org/10.4324/9780203142189.ch22>

Dolan, R. P., Burling, K., Harms, M., Strain-Seymour, E., Way, W., & Rose, D. H. (2013) *A Universal Design for Learning-based Framework for Designing Accessible Technology-Enhanced Assessments* (Research Report). Pearson.
<https://doi.org/10.13140/RG.2.2.16823.85922>

Dolan, R. P., & Burling, K. S. (2012). Computer-based Testing in Higher Education. In C. Secolsky (Ed.), *Handbook on Measurement, Assessment, and Evaluation in Higher Education* (pp. 321-335). Routledge.

Dolan, R. P. (2012). Adaptive Learning: Formative Assessment for the Digital Age. *Pearson Research Newsletter*, 5(3), 3-4.
http://images.pearsonassessments.com/images/tmrs/2012_v5n3_newsletter_r4_lores.pdf

Dolan, R. P. (2012). *Formative Assessment by Teachers—and Computers?* (Research Brief). Pearson.

Dolan, R. P. (2012). *Accessibility: Providing Opportunities for Diverse Learners* (Research Brief). Pearson.

- McClarty, K. L., Orr, A., Frey, P., Dolan, R. P., Vassileva, V., & McVay, A. (2012) *A Literature Review of Gaming in Education* (Research Report). Pearson.
http://images.pearsonassessments.com/images/tmrs/tmrs/Lit_Review_of_Gaming_in_Education.pdf
- Dolan, R. P., Goodman, J., Strain-Seymour, E., Adams, J., & Sethuraman, S. (2011). *Cognitive Lab Evaluation of Innovative Items in Mathematics and English Language Arts Assessment of Elementary, Middle, and High School Students* (Research Report). Pearson. <https://doi.org/10.13140/RG.2.2.21857.02407>
- Dolan, R. P., Burling, K. S., Harms, M., Beck, R., Hanna, E., Jude, J., et al. (2010). *Universal Design for Computer-Based Testing Guidelines (Rev B)*. Pearson. <https://doi.org/10.13140/RG.2.2.31923.35361>
- Burling, K. S., Dolan, R. P., Frank, J., Full, D., LaMarche, W. E., Nichols, P., et al. (2010). *Recommendations Related to the Operational Implementation of Performance Assessments Within Ohio's K-12 Assessment System* (White paper). Pearson. https://images.pearsonassessments.com/images/tmrs/tmrs_rg/Ohio_PerformanceAssess.pdf
- Dolan, R. P., Strain-Seymour, E., Deokar, A., & Ostler, W. (2010). *Next-Generation Assessment Interoperability Standards* (White Paper). Pearson. <https://doi.org/10.13140/RG.2.2.35278.79681>
- Strain-Seymour, E., Way, W. D., & Dolan, R. P. (2009). *Strategies and Processes for Developing Innovative Items in Large-Scale Assessments* (Research Report). Pearson Education.
<https://images.pearsonassessments.com/images/tmrs/StrategiesandProcessesforDevelopingInnovativeItems.pdf>
- Way, W. D., Dolan, R. P., & Nichols, P. (2009). Psychometric Challenges and Opportunities in Implementing Formative Assessment. In H. L. Andrade & G. J. Cizek (Eds.), *Handbook of Formative Assessment* (pp. 297-315). Routledge.
- Dolan, R. P., & Hall, T. E. (2007). Developing accessible tests with universal design and digital technologies: Ensuring we standardize the right things. In L. L. Cook & C. C. Cahalan (Eds.), *Large-scale Assessment and Accommodations: What Works* (pp. 95-111). Council for Exceptional Children.
- Dolan, R. P., Murray, E., & Burling, K. (2007). *Providing Students with Choice: An Exploratory Study on the Application of Universal Design Principles to Large-Scale Assessment of Students with Learning Disabilities and English-language Learners* (pp. 1–111). CAST. <https://doi.org/10.13140/RG.2.2.17728.25608>
- Rose, D. H., & Dolan, R. P. (2006). Implications of Universal Design for Learning for Classroom Assessment. In D. H. Rose & A. Meyer (Eds.), *A Practical Reader in Universal Design for Learning* (pp. 73-83). Harvard Education Press.
- Fleming, J., Kearns, J., Dethloff, A., Lewis, P., & Dolan, R. (2006). Technology Skills Checklist for Online Assessment. *Special Education Technology Practice*, 8(1).
- Dolan, R. P., Murray, E. A., & Strangman, N. (2006). *Mathematics Instruction and Assessment for Middle School Students in the Margins: Students with Learning Disabilities, Students with Mild Mental Retardation, and Students Who are English Language Learners*. CAST, Inc. <https://doi.org/10.13140/RG.2.2.14621.84965>
- Dolan, R. P., Hall, T.E., Banerjee, M., & Chun, E.J. (2005). Applying Principles of Universal Design to Test Delivery: Effect of Computer-based Read-aloud on Testing of High School Students with Learning Disabilities. *Journal of Technology, Learning & Assessment*, 3(7), 4-32.
- Dolan, R. P., & Hall, T.E. (2001). Universal Design for Learning: Implications for large-scale assessment. *International Dyslexia Society Perspectives*, 27(4), 22-25.
- Dolan, R. P., & Rose, D. (2000). Accurate assessment through Universal Design for Learning. *Journal of Special Education Technology*, 15(4), 47-51. <https://doi.org/10.1177/016264340001500407>
- Prasad, P.V., Cannillo, J., Chavez, D.R., Pinchasin, E.S., Dolan, R. P., Walovitch, R., & Edelman, R.R. (1999). First-pass renal perfusion imaging using MS-325, an albumin-targeted MRI contrast agent. *Investigative Radiology*, 34(9), 566-571.
- Grist, T.M., Korosec, F.R., Peters, D.C., Witte, S., Walovitch, R.C., Dolan, R. P., Bridson, W.E., Yucel, E.K., & Mistretta, C.A. (1998). Steady-state and dynamic MR angiography with MS-325: initial experience in humans. *Radiology*, 207(2), 539-544.
- Li, D., Dolan, R. P., Walovitch, R.C., & Lauffer, R.B. (1998). Three-dimensional MRI of coronary arteries using an intravascular contrast agent. *Magnetic Resonance in Medicine*, 39(6), 1014-1018.
- Lauffer, R.B., Parmelee, D.J., Dunham, S.U., Ouellet, H.S., Dolan, R. P., Witte, S., McMurry, T.J., & Walovitch, R.C. (1998). MS-325: albumin-targeted contrast agent for MR angiography. *Radiology*, 207(2), 529-538.
- Prasad, P.V., Cannillo, J., Chavez, D.R., Li, W., Pinchasin, E.S., Dolan, R. P., Walovitch, R., & Edelman, R.R. (1998). Contrast-enhanced MR angiography and first-pass renal perfusion imaging using MS-325, an intravascular contrast agent. *Academic Radiology*, 5 Suppl 1, S219-222; discussion S226-217.
- Guyot, M.C., Hantraye, P., Dolan, R., Palfi, S., Maziere, M., & Brouillet, E. (1997). Quantifiable bradykinesia, gait abnormalities and Huntington's disease- like striatal lesions in rats chronically treated with 3-nitropropionic acid. *Neuroscience*, 79(1), 45-56.

- Lin, W., Abendschein, D.R., Celik, A., Dolan, R. P., Lauffer, R.B., Walovitch, R.C., & Haacke, E.M. (1997). Intravascular contrast agent improves magnetic resonance angiography of carotid arteries in minipigs. *Journal of Magnetic Resonance Imaging*, 7(6), 963-971.
- Thangaraj, V., Dolan, R. P., Berdichevsky, D., Levin, Z., Schlaug, G., & Darby, D. (1997). Volume rendering allows interactive visualization of activation. *Neuroimage*, 5(4), S392.
- Dolan, R. P., Prasad, P. V., Wielopolski, P. A., Li, W., Walovitch, R. C., Edelman, R. R., & Lauffer, R. B. (1996). Myocardial first pass imaging with MS-325, a new intravascular magnetic resonance contrast agent. *Journal of the American College of Cardiology*, 27(2, Supplement 1), 270. [https://doi.org/10.1016/S0735-1097\(96\)81970-X](https://doi.org/10.1016/S0735-1097(96)81970-X)
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- Lauffer, R.B., Parmelee, D.J., Ouellet, H.S., Dolan, R. P., Sajiki, H., Scott, D.M., Bernard, P.J., Buchanan, E.M., Ong, K.Y., Tyéklar, Z., Midelfort, K.S., McMurry, T.J., & Walovitch, R.C. (1996). MS-325, a small-molecule vascular imaging agent for magnetic resonance imaging. *Academic Radiology*, 3(2), 356-358.
- Palfi, S., Ferrante, R.J., Brouillet, E., Beal, M.F., Dolan, R., Guyot, M.C., Peschanski, M., & Hantraye, P. (1996). Chronic 3-nitropropionic acid treatment in baboons replicates the cognitive and motor deficits of Huntington's disease. *Journal of Neuroscience*, 16(9), 3019-3025.
- Brouillet, E., Hantraye, P., Ferrante, R.J., Dolan, R., Leroy-Willig, A., Kowall, N.W., & Beal, M.F. (1995). Chronic mitochondrial energy impairment produces selective striatal degeneration and abnormal choreiform movements in primates. *Proceedings of the National Academy of Science USA*, 92(15), 7105-7109.
- Dolan, R. P., & Schiller, P.H. (1994). Effects of ON channel blockade with 2-amino-4-phosphonobutyrate (APB) on brightness and contrast perception in monkeys. *Visual Neuroscience*, 11(1), 23-32.
- Schiller, P.H., & Dolan, R. P. (1994). Visual aftereffects and the consequences of visual system lesions on their perception in the rhesus monkey. *Visual Neuroscience*, 11(4), 643-665.
- Kurylo, D.D., Corkin, S., Dolan, R. P., Rizzo, J.F., 3rd, Parker, S.W., & Growdon, J.H. (1994). Broad-band visual capacities are not selectively impaired in Alzheimer's disease. *Neurobiology of Aging*, 15(3), 305-311.
- Dolan, R. P., & Schiller, P.H. (1989). Evidence for only depolarizing rod bipolar cells in the primate retina. *Visual Neuroscience*, 2(5), 421-424.
- Brouillet, E., Hantraye, P., Dolan, R., Leroy-Willig, A., Bottlaender, M., Isacson, O., Mazière, M., Ferrante, R. J., Beal, M. F. (1993). Chronic administration of 3-nitropropionic acid induced selective striatal degeneration and abnormal choreiform movements in monkeys. *Soc Neurosci Abstr*, 19, 409.
- Sengelaub, D.R., Dolan, R. P., & Finlay, B.L. (1986). Cell generation, death, and retinal growth in the development of the hamster retinal ganglion cell layer. *Journal of Comparative Neurology*, 246(4), 527-543.

SELECT PRESENTATIONS

- Dolan, R. P. (2022, July). *Engaging Learners and Families in Technology Planning*. Panel discussion at the 8th Annual CAST UDL Symposium, Virtual.
- Dolan, R. P. (2022, June). *Unpacking and Updating Universal Design Guidelines on Assessment*. Panel discussion at the Council of Chief State School Officers National Conference on Student Assessment, Atlanta, GA.
- Karvonen, M. & Dolan, R. P. (2022, June). *Universally Designed and Multi-dimensional Science Assessments*. Presentation at the Council of Chief State School Officers National Conference on Student Assessment, Atlanta, GA.
- Dolan, R. P., Moore, E. J. & Bryck, R. (2022, June). *Walking the Talk of Inclusive Learning: Leveraging UDL to Teach UDL*. EDUCAUSE Learning Initiative Annual Meeting, Virtual.
- Dolan, R. P. (2022, February). *Providing Effective Learning Opportunities for All Students through Inclusive Technology Systems*. Presentation at the Digital Learning Annual Conference, Atlanta, GA.
- Dolan, R. P. (2022, February). *Perceivable, Operable, Understandable & Robust: Ensuring Students Can Access Learning Materials*. Presentation at the Digital Learning Annual Conference, Virtual.
- Dolan, R. P. & Hall, T. E. (2022, January). *Commercialization, Copyright, and Intellectual Property Rights to Digital Interventions and Assessments Developed with IES Grants*. Panel presentation at the 2022 IES Principal Investigators Meeting, Virtual.
- Wilcauskas, S. & Dolan, R. P. (2022, January). *Technology Leadership Can Support Teaching and Learning for All Students*. Presentation at the Council for Exceptional Children Annual Convention, Orlando, FL.
- Dolan, R. P. & Ducharme, K. (2021, October). *Evaluating Usability and Utility of a Teacher Dashboard to Support Instructional Decision-Making*. Presentation at the 2021 NCME Classroom Assessment Conference, Virtual.

- Dolan, R. P. & Ducharme, K. (2021, August). *Providing Students Agency During Formative Assessment Design and Implementation*. Presentation at the 7th Annual CAST UDL Symposium, Virtual.
- Gropen, J., Dolan, R. P. & Weinstein, N. (2021, August). *Assessing Cognitive and SEL Skills to Design for Equity*. Presentation at the 7th Annual CAST UDL Symposium, Virtual.
- Dolan, R. P. (2021, June). *Universal Design for Learning (UDL) and Accessibility: Strategies and Mandates for Providing Effective Virtual Learning Opportunities for All Students*. Presentation at the Digital Learning Annual Conference, Austin, TX.
- Dolan, R. P., Gilbert, S., Ducharme, K., Wojcik, C., & Posey, A. (2021, June). *Evaluating Usability and Utility of a Teacher Dashboard to Support Instructional Decision-Making*. Paper presented at the NCME Annual Meeting, Virtual.
- Dolan, R. P. (2021, May). *Accessibility and Universal Design for Learning: A Tale of Two Approaches*. Workshop at the Northeast Open Educational Resources Summit, Amherst, MA.
- Dolan, R. P., Ducharme, K., Posey, A., & Gilbert, S. (2021, April). *Why Should I Care? Co-Designing Engaging Classroom Assessment With Students*. Presentation at the UDL-IRN Summit, Virtual.
- Dolan, R. P., & Gilbert, S. (2020, December). *Swimming, Not Drowning in Data: Effective Teacher Dashboard Design for Formative Assessment*. Presentation at the International Society for Technology in Education Conference, Virtual.
- Ducharme, K., Goldowsky, B., & Dolan, R. P. (2020, December). *Project CISL: Flexible, Accessible and Adaptive Digital Learning*. Presentation at the International Society for Technology in Education Conference, Virtual.
- Dolan, R. P. (2020, September). *Applying Universal Design Principles to the Accessible Test Development Process*. Paper presented at the NCME Annual Meeting, Virtual.
- Dolan, R. P., Ducharme, K., & Posey, A. (2020, August). *Why Should I Care? Designing Classroom Assessments That Engage Students*. Presentation at the 6th Annual CAST UDL Symposium, Virtual.
- Dolan, R. P., & Ducharme, K. (2020, June). *Supporting Diverse Students and Teachers in Effective Classroom Assessment Through UDL*. Presentation at the UDL-IRN Summit, Virtual.
- Morrison, K. S., Zacamy, J. L., Blackorby, J., Bulgren, J., Jaciw, A. P., Dolan, R., Yu, J., & Thayer, S. (2020, April). *Combining Strategic Instruction Model Routines With Technology to Improve Academic Outcomes for Students With Disabilities*. Paper accepted for presentation at the AERA Annual Meeting, San Francisco, CA.
- Dolan, R. P. (2020, February). *Keeping (On) Track: Supporting Students' Varying Executive Function Skills during Online and Blended Learning*. Presentation at the Digital Learning Annual Conference, Austin, TX.
- Dolan, R. P., & Bryck, R. (2019, November). *Helping Students Keep (On) Track*. Presentation at the UDL in Higher Education Conference (Goodwin College), Hartford, CT.
- Dolan, R. P. (2019, October). *Helping Students Keep (On) Track: Supporting Executive Function During Online and Blended Learning*. Presentation at the UDL in Higher Education Digicon, Virtual.
- Dolan, R. P. (2019, June). *Promoting resilience through Universal Design for Learning*. Presentation at the New England Faculty Development Consortium Conference, Putney, VT.
- Dolan, R. P., & Dee, J. (2019, May). *Opening Up OERs: Collaborative design of UDL-based solutions for diverse learners*. Presentation at the Northeast Open Educational Resources Summit, Amherst, MA.
- Dolan, R. P., Starr, E., Wojcik, C., Ducharme, K., & Blackorby, J. (2019, April). *Design Features Supporting Teachers' Use of a Dashboard for Diagnostic Assessment Results*. Paper presented at the NCME Annual Meeting, Toronto, ON.
- Starr, E., Dolan, R. P., Wojcik, C., Ducharme, K., & Blackorby, J. (2019, April). *Teacher-Centric Design Process for a Dashboard to Support Formative Assessment*. Paper presented at the AERA Annual Meeting, Toronto, ON.
- Blackorby, J., Dolan, R. P., Wojcik, C., Karvonen, M., & Romine, R. S. (2019, March). *UDL Applied in Assessments*. Presentation at the UDL Implementation and Research Network Summit, Orlando, FL.
- Dolan, R. P. (2018, November). *Walking the Talk: Leveraging UDL to Teach UDL to eLearning Educators*. Presentation at the Goodwin College UDL in Higher Education Conference, Hartford, CT.
- Dolan, R. P. (2013, June). *Is there a role for formalized tools in formative assessment*. Presentation at the Council of Chief State School Officers National Conference on Student Assessment, Washington, D.C..
- Wylie, C., & Dolan, R. P. (2013, April). *The role of formalized tools in formative assessment*. Paper presented at the AERA Annual Meeting, San Diego, CA.
- Dolan, R. P., & Powers, S. (2012, June). *Effects of text and visual element integration schemes on online reading behaviors of typical and struggling readers*. Poster presented at the Eleventh Annual International Conference on Intelligent Tutoring Systems, Chania, Greece.
- Behrens, J. T., & Dolan, R. P. (2012, June). *Five aspirations for educational data mining*. Invited keynote address at the International Educational Data Mining Society, Chania, Greece.

- Forsyth, C. M., Pavlik, P., Graesser, A.C., Cai, Z., Germany, M., Millis, K., Butler, H., Halpern, D., & Dolan, R. P. (2012, June). *Learning gains for core concepts in a serious game on scientific reasoning*. Paper presented at the International Educational Data Mining Society, Chania, Greece.
- Dolan, R. P. (2011, April). *How not to be overly accommodating: Diversity through inherent flexibility*. Paper presented at the National Council on Measurement in Education Annual Meeting, New Orleans, LA.
- Dolan, R. P. (2010, October). *Construct-Irrelevant Variance*. Paper presented at the Reidy Interactive Lecture Series, Cambridge, MA.
- Dolan, R. P. (2010, November). *Cutting-Edge Technology Issues on the High-Stakes Testing Horizon*. Paper presented at the Eighth Annual Testing Agencies Disability Forum, Reston, VA.
- Woolf, B. P., Arroyo, I., Muldner, K., Bureson, W., Cooper, D., Dolan, R. P., & Christopherson, R. M. (2010, June). *The effect of motivational learning companions on low-achieving and learning disability students*. Paper presented at the Tenth Annual International Conference on Intelligent Tutoring Systems, Pittsburgh, PA.
- Burling, K. S., & Dolan, R. P. (2010, April). *Using cognitive interviews to design instructionally relevant simplifications and supports for an interactive computer-based AA-MAS*. Paper presented at the National Council on Measurement in Education Annual Meeting, Denver, CO.
- Dolan, R. P., Way, W. D., & Nichols, P. (2009, April). *Technical quality of technology-based formative assessment systems*. Paper presented at the AERA Annual Meeting, San Diego, CA.
- Dolan, R. P., & Susbury, S. (2009, November). *Accessible design of innovative assessment items through universal design*. Presentation at the NCTI Technology Innovators Conference, Washington, DC.
- Dolan, R.P (2008, June). *Formative assessment to guide instruction within a technology-based universally designed framework*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Orlando, FL.
- Dolan, R. P., Wilder-Smith, C., Rose, D., Price, K, Johnson, M., Goldowsky, B., Brigham, K., & Ganley, P. (2008, March). *Generation of individualized middle school science materials based upon pedagogic intent of content elements*. Paper presented at the AERA Annual Meeting, New York, NY.
- Dolan, R. P. (2007, June). *Applying universal design for learning and technology to science assessment*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Nashville, TN.
- Dolan, R. P., Rose, D. H., Burling, K. S., Harms, M., & Way, W. (2007, June). *Applying Universal Design to Develop effective Computer-Based Assessments*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Nashville, TN.
- Dolan, R. P., Murray, E.A., & Strangman, N. (2007, June). *Middle school math instruction and assessment for students with LD, students with MMR, & ELL students: A review of the literature*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Nashville, TN.
- Dolan, R. P., Rose, D. H., Burling, K. S., Harms, M., & Way, W. (2007, April). *The Universal Design for Computer-Based Testing Framework: A structure for developing guidelines for constructing innovative computer-administered tests*. Paper presented at the National Council on Measurement in Education Annual Meeting, Chicago, IL.
- Dolan, R. P., Murray, E.A., & Burling, K. (2007, April). *Providing students with choice: An exploratory study on the application of universal design principles to large-scale assessment*. Paper presented at the AERA Annual Meeting, Chicago, IL.
- Dolan, R. P., Murray, E.A. Burling, K., Famularo, L., & Russell, M. (2007, April). *Assessment developer perspective: What should the assessment options be for students in the gaps?* Paper presented at the National Council on Measurement in Education Annual Meeting, Chicago, IL.
- Dolan, R. P. (2006, April). *Evaluating use of graphics by struggling readers through eye tracking*. Paper presented at the AERA Annual Meeting, San Francisco, CA.
- Burling, K.S., Beck, R., Jude, J., Murray, E.A., Dolan, R. P., & Harms, M. (2006, April). *Constructing innovative computer-administered tasks and items according to universal design: Illustrative examples with pilot data*. Paper presented at the National Council on Measurement in Education Annual Meeting, San Francisco, CA.
- Harms, M., Burling, K.S., Way, W., Hanna, E., & Dolan, R. P. (2006, April). *Constructing innovative computer-administered tasks and items according to universal design: Guidelines for test developers*. Paper presented at the National Council on Measurement in Education Annual Meeting, San Francisco, CA.
- Dolan, R. P. (2005, June). *Universal Design and Methods for Test Presentation*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, San Antonio, TX.
- Dolan, R. P. (2005, June). *Universal Design, Technology and Large-Scale Assessment: A Comparison of Two States' Approaches*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, San Antonio, TX.
- Dolan, R. P. (2005, June). *Successes, Trials, and Tribulations of Computer-based Testing Accommodations*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, San Antonio, TX.

- Dolan, R. P. (2005, June). *Ensuring Fair and Accessible Assessments Through Flexible, Technology-based Modes of Administration*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, San Antonio, TX.
- Dolan, R. P. (2004, June). *Research on the Presentation Effect of Computer-Based Testing: Text-to-Speech as a Decoding Support*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Boston, MA.
- Dolan, R. P. (2004, June). *Ensuring Comparability and Validity through Flexibility of Presentation and Response*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Boston, MA.
- Dolan, R. P. (2004, June). *Application of Universal Design Principles to Technology-Based Assessment*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Boston, MA.
- Dolan, R. P., & Kearns, J.F. (2003, June). *Universal Design of Assessment: Applications of Technology*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, San Antonio, TX.
- Dolan, R. P. (2003, June). *Universal Design, Universal Design for Learning and Large-Scale Assessment*. Presentation at the Council of State School Officers Conference on Large-Scale Assessment, San Antonio, TX.
- Dolan, R. P. (2003, June). *Utility of Digital Technologies in Creating Universally Designed Large-Scale Assessments*. Presentation at IDEA Partnerships 2nd National Summit, Arlington, VA.
- Dolan, R. P. (2001, June). *Universal Design and Assessment*. Presentation at the Council of Chief State School Officers Conference on Large-Scale Assessment, Houston, TX.
- Dolan, R. P., & Rose, D. (2001, March) *Universal Design and Assessment*. Presentation at Harvard School of Education MCAS Institute, Cambridge, MA.
- Dolan, R. P. (2000, August) *Creating Accessible Curriculum*. Presentation at Rehabilitation Engineering and Assistive Technology of North America Technical Assistance Program meeting, Washington, DC.