

# Ibrahim Dahlstrom-Hakki

58 Solar Way  
Greenfield, MA 01301

Phone: (413) 772-9743  
email: idahlstromhakki@gmail.com

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## Education

- Ph.D. in Cognitive Psychology, University of Massachusetts Amherst, 2008
    - Dissertation: “Investigating the Role of Stimulus and Goal Driven Factors in the Guidance of Eye Movements.”
  - Graduate Certificate of Cognitive Science, University of Massachusetts Amherst, 2008
  - M.S. in Cognitive Psychology, University of Massachusetts Amherst, 2004
  - B.A. in Psychology/Minor in Mathematics, University of Oklahoma, 1998
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## Experience

Senior Research Scientist, EdGE/ND in STEM at TERC, 2018 – current

- Lead grant funded research efforts aimed at improving educational outcomes for struggling learners in STEM.
- Pursue grant funding from national funding agencies and private foundations
- Manage research teams
- Develop and monitor project budgets

Adjunct Professor, Landmark College 2018 – 2019

- Teach courses in Landmark College’s post baccalaureate online certificate program for educators
- Mentor students who learn differently

Director, Landmark College Institute for Research and Training (LCIRT), 2016 – 2018

Associate Professor, 2014 – 2018

Senior Academic Researcher, 2014 – 2016

Research and Education Specialist, 2010 – 2014

- Supervised and managed a team of Researchers and Education Specialists.
- Sought and created strategic alliance and collaborative opportunities between Landmark College and external partners.
- Managed LCIRT’s professional development and consulting services.
- Oversaw Landmark College’s Annual Summer Institute and its Fall LD Symposium.
- Developed, sought grant funding for, and conducted research on new approaches and technologies to improve the STEM education of students with learning disabilities.
- Delivered on-site and online seminars, trainings, and workshops to educators on topics such as Universal Design, teaching with technology, and teaching STEM to students with learning disabilities.
- Represented Landmark College at conferences, alliance meetings, events, and other academic settings. Establish new and strengthen existing ties between Landmark College and other academic institutions.
- Taught undergraduate Statistics and courses in Landmark College’s professional certificate programs in ‘Universal Design: Technology Integration’ and ‘Executive Function and LD: Integrating Strategies, Study Skills, and Technology’.
- Consulted with schools and colleges on ways to more effectively teach and supports students with disabilities.

Term Faculty, SIT World Learning, 2013 – 2014

- Taught graduate level ‘Statistics for Researchers and Practitioners’. An introductory graduate level course focused on practical application and interpretation of common statistical tools.

Visiting Assistant Professor, Mount Holyoke College, 2011

- Taught undergraduate ‘Cognitive Psychology’. The class covered topics within cognitive psychology including: Perception, Attention, Memory, Language, and Learning.

Adjunct Faculty, Holyoke Community College, 2010-2011

- Taught undergraduate 'Cognitive Psychology' and 'Introduction to Psychology'.

Online Faculty, University of Phoenix, 2008-2010

- Taught graduate level 'Research Methods'.

Research/Teaching Assistant, University of Massachusetts Amherst, 2000-2008

- Taught undergraduate 'Research Methods'. The class involved the development, design, analysis, and writing of research projects.
  - Worked as a member of the Statistical Education Research Group (SERG) to help develop probabilistic reasoning skills in middle school students. The NSF funded project involved developing and testing software and curricula to expand the TinkerPlots software package to include a probability teaching component.
  - Worked as a member of the Eye-Tracking lab to develop, run, and analyze research to investigate the role of eye movements in visual perception and spatial reasoning.
  - Worked with the Human Factors lab in the department of Mechanical and Industrial Engineering to develop an interactive driving simulator designed to improve driving skills in novice drivers.
  - Worked with the Human Factors lab on research to inform the development of an interactive tutor designed to help improve spatial reasoning skills in prospective engineering students.
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## **Funded Grants**

Principal Investigator, NSF Innovative Technology Experiences for Students and Teachers (ITEST) grant DRL-2241380, 2023-2026

- A research grant entitled, "NeuroVivid: Developing and Testing a Maker Experience to Build Interest in Careers in Brain-Computer Interfaces Among Neurodivergent Youth" (\$1,297,760)

Co-Principal Investigator, NSF Research on Emerging Technologies for Teaching and Learning (RETTL) grant IIS-2202291, 2022-2025

- A research grant entitled, "Using Augmented Reality to Enhance Attention in STEM Learning for Students with Executive Function Disabilities." (\$849,947)

Co-Principal Investigator, NSF Advancing Informal STEM Learning (AISL) grant DRL-2005447, 2020-2023

- A research grant entitled, "Broadening Participation in Informal STEM Learning for Autistic Learners and Others through Virtual Reality." (\$2,287,932)

Principal Investigator, NSF Research on Education And Learning (REAL) grant DRL-1420198, 2014-2018

- A research grant entitled, "Social Presence During Instructor Mediated Synchronous Versus Asynchronous On-Line Course Discussions: A Study of Undergraduate Students with Disabilities Learning Statistics." (\$486,970)

Principal Investigator, NSF Data-Intensive Research to Improve Teaching and Learning grant DRL-1417456, 2014-2019

- A collaborative research grant between MIT, TERC Inc., and Landmark College entitled, "Revealing the Invisible: Data-Intensive Research Using Cognitive, Psychological, and Physiological Measures to Optimize STEM Learning." (\$270,363 institutional award; \$1,163,711 total award)

Principal Investigator, NSF Research Experiences for Undergraduates (REU) supplement No. 1550422, 2015-2018

- A supplemental funding award to support two undergraduate research assistants working on the grant entitled, "Social Presence During Instructor Mediated Synchronous Versus Asynchronous On-Line Course Discussions: A Study of Undergraduate Students with Disabilities Learning Statistics." (\$6,500)

Project Lead, Arthur Vining Davis Foundation (AVDF) Private Higher Education grant, 2017

- A grant entitled, "Innovations in STEM Teaching and Learning for Students with Learning Difficulties," aimed at expanding the college's capacity to provide research experience for undergraduate students with disabilities. (\$100,000)

Co-Project Lead, Hedco Foundation grant, 2018

- A grant aimed at funding the creation of a cognitive neuroscience lab on the Landmark College campus in Putney, VT. (\$50,000)

Principal Investigator, NSF Research in Disabilities Education (RDE) grant HRD-1128948, 2011-2014

- A demonstration grant entitled, "Investigating the Effectiveness of TinkerPlots in Helping Students with Learning Disabilities Understand Statistical Concepts." (\$82,744)

Principal Investigator, Landmark College V Grant, 2014

- An exploration grant entitled, "The LandMakers Project" aimed at exploring the pedagogical uses of 3D printers in supporting the learning needs of students with LD. (\$3,347)

Principal Investigator, NSF AccessComputing Minigrant 2011-04, 2011-2012

- A minigrant entitled, "Electronic Tablets & Computer Programming Workshop" awarded as part of the Alliance for Access to Computing Careers (AccessComputing), funded by the National Science Foundation as part of the Broadening Participation in Computing (BPC) program of the Directorate for Computer and Information Sciences and Engineering (CISE) (grant #CNS-0540615, CNS-0837508 and CNS-1042260). (\$6,020)

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## Academic Publications

- Dahlstrom-Hakki, I., Rowe, E., Asbell-Clarke, J., & Almeda, M. (2024). Exploring the Viability of Using Eye Tracking to Detect Neurodivergent Learners' Implicit Learning in a Physics Game. *Computer-Based Learning in Context*, 6(1), 24–40.
- Asbell-Clarke, J., Dahlstrom-Hakki, I., Voiklis, J., Attaway, B., Barchas-Lichtenstein, J., Edwards, T., Bardar, E., Robillard, T., Paulson, K., Grover, S., Israel, M., Ke, F., Weintrop, D. (2024). Including neurodiversity in computational thinking. *Frontiers in Education*, 9:1358492. Available from: <https://www.frontiersin.org/articles/10.3389/feduc.2024.1358492/full>  
DOI:10.3389/feduc.2024.1358492
- Ke, F., Liu, R., Sokolij, Z., Dahlstrom-Hakki, I., Israel, M. (2024). Using eye-tracking in education: review of empirical research and technology. *Education Tech Research Dev*.  
<https://doi.org/10.1007/s11423-024-10342-4>
- Dahlstrom-Hakki, I., Alstad, Z., Asbell-Clarke, J., & Edwards, T. (2024). The impact of visual and auditory distractions on the performance of neurodiverse students in virtual reality (VR) environments. *Virtual Reality*, 28(29). <https://doi.org/10.1007/s10055-023-00933-6>
- Moon, J., Ke, F., Sokolij, Z., & Dahlstrom-Hakki, I. (2022). Multimodal Data Fusion to Track Students' Distress during Educational Gameplay. *Journal of Learning Analytics*, 1-13.  
<https://doi.org/10.18608/jla.2022.7631>
- Dahlstrom-Hakki, I., & Wallace, M. L. (2022). Teaching Statistics to Struggling Students: Lessons Learned from Students with LD, ADHD, and Autism. *Journal of Statistics and Data Science Education*, 1-20. <https://doi.org/10.1080/26939169.2022.2082601>
- Israel M., Liu T., Moon J., Ke F., Dahlstrom-Hakki I. (2021) Methodological Considerations for Understanding Students' Problem Solving Processes and Affective Trajectories During Game-Based Learning: A Data Fusion Approach. In: Fang X. (eds) HCI in Games: Serious and Immersive Games. HCII 2021. *Lecture Notes in Computer Science*, vol 12790. Springer, Cham.  
[https://doi.org/10.1007/978-3-030-77414-1\\_15](https://doi.org/10.1007/978-3-030-77414-1_15)
- Ke F., Liu R., Sokolij Z., Dahlstrom-Hakki I., Israel M. (2021) Using Eye Tracking for Research on Learning and Computational Thinking. In: Fang X. (eds) HCI in Games: Serious and Immersive

- Dahlstrom-Hakki, I., Alstad, Z., & Banerjee, M. (2020). Comparing synchronous and asynchronous online discussions for students with disabilities: The impact of social presence. *Computers & Education*, 150. doi.org/10.1016/j.compedu.2020.103842
- Dahlstrom-Hakki, I., & Alstad, Z. (2019). Challenges in Assessing the Conceptual Understanding of Students with Disabilities in Statistics. *Learning Disabilities Quarterly*, 42(3), 175-185. doi.org/10.1177/0731948718817222
- Dahlstrom-Hakki, I., Asbell-Clarke, J., & Rowe, E. (2019). Showing is Knowing: The Potential and Challenges of Using Neurocognitive Measures of Implicit Learning in the Classroom. *Mind, Brain, and Education*, 13(1), 30-40. doi.org/10.1111/mbe.12177
- Sibuma, B., & Dahlstrom-Hakki, I. (2019). Cyberlearning Special Issue: Exploring the Potential of Technologies to Bridge Understanding Across Neuroscience, Cyberlearning, and Education. *Mind, Brain, and Education*, 13(1), 2-3. doi:10.1111/mbe.12192
- DuPaul, G., Dahlstrom-Hakki, I., Gormley, M., Fu, Q., Pinho, T., & Banerjee, M. (2017). College students with ADHD and LD: Effects of support services on academic performance. *Learning Disabilities Research & Practice*, 32(4), 246-256. doi:10.1111/ldrp.12143
- Dahlstrom-Hakki, I., Pollatsek, A., Fisher, D. L., Miller, B., & Rayner, K. (2008). Eye movements and individual differences in mental rotation. In K. Rayner, D. Shen, X. Bai, & G. Yan (Eds.), *Cognitive and cultural influences on eye movements* (pp. 209-231). Tianjin: Tianjin People's Publishing House. US: Psychology Press (2009).
- Dahlstrom-Hakki, I. (2008). Investigating the role of stimulus and goal driven factors in the guidance of eye movements. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. AAT 3315490).
- Dahlstrom-Hakki, I., & Pollatsek, A. (2006). Limits on integrating motion information across saccades. *Perception & Psychophysics*, 68(1), 43-53.
- Dahlstrom-Hakki, I. (2004). Investigating Change Blindness in Three-dimensional Dynamic Stimuli (Master's Thesis, University of Massachusetts at Amherst).

## Professional Service

- Chair, Board of Trustees, Four Rivers Charter Public School, 2024 – Current
- Member, Division D Executive Committee, AERA, 2024 – Current
- Chair, Division D Equity & Inclusion Committee, AERA, 2024 – Current
- Advisor, REVISE, NSF AISL Resource Center, 2023 – Current
- Advisor, Making Mentors Project, NSF ITEST grant, 2023 – Current
- Member, Board of Trustees, Four Rivers Charter Public School, 2023 – Current
- Associate Editor, Mind, Brain, & Education Journal, IMBES, 2022 – Current
- Member, Division D Equity & Inclusion Committee, AERA, 2022 – Current
- Member, Board of Directors, TERC, 2021 – 2024
- Member, Retirement Committee, TERC, 2021 – Current
- Member, Institutional Review Board, TERC, 2019 – 2024
- Chair, CSTL Executive Committee, TERC, 2020 – 2024
- Chair, Research Paper Track, RESPECT, 2023
- Member, CSTL General Fund Committee, TERC, 2019 - 2022
- Session Reviewer, Computer Human Interaction (CHI) Conference, 2018
- Member, Center for Neurodiversity Steering Committee, Landmark College, 2017 – 2018
- Guest Editor, Special issue of the Mind, Brain, and Education Journal on Cyberlearning, 2017 – 2019
- Program Committee, NSF ECR PI Meeting, 2017
- Session Reviewer, for SIG-Inclusion and Accommodation in Educational Assessment for the 2018 Annual Meeting of the American Educational Research Association (AERA), 2017
- Associate Paper Chair, ACM SIGCHI Interaction Design & Children (IDC) Conference, 2017
- Member, Center for Neurodiversity, Landmark College, 2017 – 2018
- Member, Pedagogy Committee, Landmark College, 2017 – 2018

- Member, Strategic Planning Committee, Landmark College, 2016 – 2017
- Advisor, Scholarship of Teaching and Learning committee, Landmark College, 2015
- Member, Technology Taskforce, Landmark College, 2013 – 2016
- Member, Research Advisory Panel, Landmark College, 2013 – 2018
- Member, Information Technology Steering Committee, Landmark College, 2013
- Professional Development Taskforce Member, Autism Spectrum Disorder Advisory Committee, Landmark College, 2012 – 2015
- Member, Professional Certificate Program Steering Committee, Landmark College, 2012 – 2018
- Presenter, Professional Development Brown Bag Series, Landmark College, 2012 – 2016
- Presenter, New Faculty and Staff Training Series, Landmark College, 2012 – 2016

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### **Federal Grants Panels, Labs, and Partnerships**

- National Science Foundation, Directorate for Education & Human Resources, Review Panel Member, January 2025
  - National Science Foundation, Directorate for Education & Human Resources, Adhoc Reviewer, October 2024
  - National Science Foundation, Directorate for Education & Human Resources, Adhoc Reviewer, September 2024
  - National Science Foundation, Directorate for STEM Education, Adhoc Reviewer, July 2024
  - National Science Foundation, Directorate for Education & Human Resources, Review Panel Member, December 2023
  - National Science Foundation, Directorate for Education & Human Resources, Adhoc Reviewer, November 2023
  - National Science Foundation, Directorate for Education & Human Resources, Adhoc Reviewer, March 2023
  - National Science Foundation, Directorate for Education & Human Resources, Adhoc Reviewer, January 2023
  - National Science Foundation, Directorate for Computer & Information Science & Engineering, Review Panel Member, January 2022
  - National Science Foundation, Directorate for Research on Learning, Review Panel Member, March 2019
  - National Science Foundation, Directorate for Education & Human Resources, Review Panel Member, October 2018
  - National Science Foundation, Directorate for Education & Human Resources, Adhoc Reviewer, May 2018
  - National Science Foundation, Division of Undergraduate Education, Adhoc Reviewer, October 2017
  - National Science Foundation, Instructional Research Group, invited participant in the STEM Education, Learning Disabilities, and the Science of Dyslexia conference, September 2017
  - National Science Foundation, SRI International, invited participant in the Summit on Emerging Technologies in STEM Learning: A Research Agenda for Improving Success for Students with Learning Disabilities (LD) or with Autism Spectrum Disorder (ASD), November 2016
  - National Science Foundation, Center for Innovative Research in CyberLearning (CIRCL), CyberInnovation Lab participants, May 2016
  - National Science Foundation, The University of Central Florida's iCAN Project, Project Advisor, September 2015 – 2017
  - National Science Foundation, Division of Human Resource Development Project Review Panel Member, December 2013
  - National Science Foundation, An Ideas Lab to Foster Transformative Approaches to Teaching and Learning, Ideas Lab Participant and Full Proposal Invited, October 2013
  - National Science Foundation, Office of Experimental Program to Stimulate Competitive Research (EPSCoR) Project Review Panel Member, September 2012
  - National Science Foundation, The Western Massachusetts Mathematics Partnership (WMMP), Member & PLC advisor, September 2011 – current
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## Academic Presentations

- Dahlstrom-Hakki, I. & Robillard, T. (April, 2025). *Co-Designing a BCI Maker Experience with and for Neurodivergent Youth*. Paper presented at the 2025 annual meeting of the American Educational Research Association (AERA), Denver, CO.
- Dahlstrom-Hakki, I. (April, 2025). *Co-Design as a Means of Creating Inclusive and Effective Technology-Enhanced Learning Experiences*. Session chair at the 2025 annual meeting of the American Educational Research Association (AERA), Denver, CO.
- Dahlstrom-Hakki, I. (April, 2025). *Politics and Policy: Navigating the Challenges, Opportunities, and Implementation of DEI Initiatives and AI in the Future of Educational Research*. Session chair at the 2025 annual meeting of the American Educational Research Association (AERA), Denver, CO.
- Dahlstrom-Hakki, I. (July, 2024). *The Use of Sensor Data to Support Neurodivergent and Underserved Learners in Real World Contexts*. Session Chair and presenter at the 2024 International Mind, Brain and Education Society (IMBES) conference, Leuven, Belgium.
- Dahlstrom-Hakki, I. (May, 2024). *NeuroVivid: A BCI Camp Designed With and For Neurodivergent Youth*. Tech demo presented at the 2024 NSF ITEST PI meeting, Alexandria, VA.
- Alstad, Z. & Dahlstrom-Hakki, I. (March, 2024). *Co-Designing Augmented Reality Interventions to Support Executive Function for Neurodiverse STEM Students*. Practitioner report presented at the 14<sup>th</sup> International Learning Analytics & Knowledge Conference (LAK24), Kyoto, Japan.
- Edwards, T., O'Brien, S., Kilgallon, E., Lougen, D., Belton, G., Bruzzese, N., & Dahlstrom-Hakki, I. (December, 2023). *Youth Panel: Neurodivergent Learners' Perspectives on Co-Design, Their Roles, and Its Importance*. Panel presented at the 2023 AISL convening, Alexandria, VA.
- Dahlstrom-Hakki, I. (November, 2023). *NeuroVivid: A BCI Maker Experience for Neurodivergent Youth*. Poster and tech demo presented at the 2023 CIRCLS convening, Alexandria, VA.
- Dahlstrom-Hakki, I., & Alstad, Z. (October, 2023). *Exploring the Use of LLMs in Educational Spaces*. Talk presented at TERC's 2023 Board of Trustees Retreat, Cambridge, MA.
- Edwards, T., Attaway, b., Dahlstrom-Hakki, I., & Barchas-Lichtenstein, J. (October, 2023). *Nothing About Us Without Us: How to Co-design with and for Neurodivergent Learners*. Talk presented at the 2023 Annual Conference of the International Society for the Design and Development of Education (ISDDE), Boston, MA.
- Asbell-Clarke, J., Barchas-Lichtenstein, J., Dahlstrom-Hakki, I., Edwards, T., & Ke, F. (October, 2022). *INFACIT: Including Neurodiversity in Foundational and Applied Computational Thinking*. Talk presented at the 2022 Education Innovation and Research (EIR) Project Directors and Evaluators Technical Assistance Meeting: A Path to Innovation.
- Dahlstrom-Hakki, I. (July, 2022). *Neuro/Cognitive Research to Inform Neurodiverse Education*. Symposium Chair and Discussant at the 2022 International Mind, Brain and Education Society (IMBES) conference, Montreal, QC.
- Dahlstrom-Hakki, I., Edwards, T., & Alstad, Z. (June, 2022). *Environmental Brightness, Clutter, and Hue Game Preferences Among Neurodiverse Versus Neurotypical Players*. Poster Presented at the 2022 Games+Learning+Society (GLS) Conference, Irvine, CA.
- Edwards, T., Larsen, J., Dahlstrom-Hakki, I., Alstad, Z., Belton, G., Hagberg, I., Hoder, K., Scheff, B., & Soltero, D. S. (June, 2022). *Co-Designing a STEM-based VR Game For and With Neurodiverse Learners*. Poster Presented at the 2022 Games+Learning+Society (GLS) Conference, Irvine, CA.
- Edwards, T., Asbell-Clarke, J., Barder, E., Dahlstrom-Hakki, I., & Robillard, T. (June, 2022). *Scaffolding Zoombinis: Adding Executive Function Surrounds to the Popular, Classic Games*. Poster Presented at the 2022 Games+Learning+Society (GLS) Conference, Irvine, CA.
- Dahlstrom-Hakki, I. (April, 2022). *Emerging Technologies for Supporting Neurodiverse Learners*. Symposium Chair and Discussant at the 2022 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Almeda, M., Asbell-Clarke, J., Robillard, T., Bardar, E., Edwards, T., & Dahlstrom-Hakki, I. (April, 2022). *Include Neurodiversity in Foundational and Applied Computational Thinking*. Paper presented at the 2022 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Alstad, Z., Edwards, T., & Dahlstrom-Hakki, I. (April, 2022). *Exploring Neurodiverse Perspectives on the Design of Virtual-Reality Environments*. Paper presented at the 2022 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Moon, J., Ke, F., Sokolij, Z., & Dahlstrom-Hakki, I. (April, 2022). *Multimodal Data Fusion to Detect Students' Cognitive-Affective States During Educational Game Play*. Poster presented at the 2022 annual meeting of the American Educational Research Association (AERA), San Diego, CA.

- Dahlstrom-Hakki, I., Asbell-Clarke, J., & Almeda, M. (September, 2021). *Scaffolds and Supports for Teaching Computational Thinking to Neurodiverse Learners*. Gallery walk presented at the CIRCLS convening 2021.
- Ke, F., Liu, R., Sokolikj, Z., Dahlstrom-Hakki, I., & Israel, M. (2021, July). *Using Eye Tracking for Research on Learning and Computational Thinking*. In International Conference on Human-Computer Interaction (pp. 216-228). Springer, Cham.
- Israel, M., Liu, T., Moon, J., Ke, F., & Dahlstrom-Hakki, I. (2021, July). *Methodological Considerations for Understanding Students' Problem Solving Processes and Affective Trajectories During Game-Based Learning: A Data Fusion Approach*. In International Conference on Human-Computer Interaction (pp. 201-215). Springer, Cham.
- Dahlstrom-Hakki, I., Edwards, T., Larsen, J., Alstad, Z., Belton, G., Lougen, D., & Santana, D. (2021, May). *Inclusive VR through Inclusive Co-Design with Neurodiverse Learners*. In 2021 7th International Conference of the Immersive Learning Research Network (iLRN) (pp. 1-5). IEEE.
- Dahlstrom-Hakki, I. (April, 2021). *Remote Measures of Attention and Affect: Online Data Collection in the Age of COVID-19*. Chaired symposium presented at the 2021 annual meeting of the American Educational Research Association (AERA), held virtually.
- Dahlstrom-Hakki, I., Ke, F., Liu, R., & Sokolikj, Z. (April, 2021). *The Viability of Using Remote Webcam-Based Eye Tracking to Monitor Attention Allocation in Educational Research*. Paper presented at the 2021 annual meeting of the American Educational Research Association (AERA), held virtually.
- Dahlstrom-Hakki, I. (December, 2019). *Implicit Measures of Learning Using Eye Tracking in a Fast-Action Physics Game*. Talk presented to Umass Amherst's Psychological and Brain Sciences department, Amherst, MA.
- Quandt, L., Dahlstrom-Hakki, I., & Kramer, D. (October, 2019). *Bringing Neuroscience into Cyberlearning Learning*. Expertise Exchange presented at the Cyberlearning 2019 annual PI meeting, Alexandria, VA.
- Dahlstrom-Hakki, I. (August, 2019). *VR and Neurodiverse Learners*. Talk presented at the XR in Assistive Technology event, Boston, MA.
- Dahlstrom-Hakki, I. (April, 2019). *Challenges to Neurodiverse Learners in Online Systems: Language-Based Barriers and Cognitive Access*. Talk presented at the Workshop on Diversity, Accessibility, and Inclusion in Library Systems Access at MIT, Cambridge, MA.
- Dahlstrom-Hakki, I. (February, 2019). *Barriers to STEM Learning: Cognitive Loads in the Classroom*. Talk presented at the AccessINCLUDES: Accessibility and Disability in the INCLUDES National Network Conference, Seattle, WA.
- Asbell-Clarke, J., Rowe, E., Dahlstrom-Hakki, I., Plass, J., & Homer, B. (September, 2018). *Innovative Uses of Game-Based Learning and Data Analytics in Educational Neuroscience*. Symposium panel presented at the 2018 International Mind, Brain and Education Society (IMBES) conference, Los Angeles, CA.
- Asbell-Clarke, J., Dahlstrom-Hakki, I., Rowe, E., & Anderson, E. (August, 2018). *Measuring Implicit Learning through Analysis of Eye Movements*. Tech demo presented at Connected Learning Summit (CLS) 2018, Cambridge, MA.
- Dahlstrom-Hakki, I. (June, 2018). *Concept First Math Remediation: An Alternative to Worksheets, Course Substitutions, and Waivers*. Talk presented at the 2018 Postsecondary Disability Training Institute (PTI), Baltimore, MD.
- Dahlstrom-Hakki, I. (March, 2018). *Teaching Students with Disabilities Online: Language-Based Challenges and Cognitive Access*. Talk presented to Umass Amherst's Psychological and Brain Sciences department, Amherst, MA.
- Dahlstrom-Hakki, I. (February, 2018). *Concept First Math Remediation: Balancing Engagement and Cognitive Load*. Talk presented at the 55<sup>th</sup> Learning Disabilities Association (LDA) Annual International Conference, Atlanta, GA.
- Banerjee, M. & Dahlstrom-Hakki, I. (February, 2018). *Gamification: A New Tool for Teachers to Engage Disengaged Learners*. Talk presented at the New Teacher Center's 20th National Symposium, Burlingame, CA.
- Dahlstrom-Hakki, I. (December, 2017). *Teaching Statistics to Students with SpLD, ADHD, and ASD Online: Investigating the Role of Social Presence in Conceptual Understanding*. Talk presented at the Fall 2017 Oxford Education Research Symposium (OERS), Oxford, England.
- Dahlstrom-Hakki, I., Banerjee, M., & Alstad, Z. (November, 2017). *Teaching Students with LD Online: Key Challenges and Ways to Overcome Them*. Talk presented at the 68<sup>th</sup> International Dyslexia Association (IDA) Annual Reading, Literacy & Learning Conference, Atlanta, GA.

- Dahlstrom-Hakki, I., & Altman, M. (September, 2017). *We Know More than We Can Tell: How Game-based Learning Assessments Help Students Demonstrate their Knowledge*. Talk presented at Landmark College's 5<sup>th</sup> Annual Learning Disabilities Innovation Symposium, Cambridge, MA.
- Solomon, G., Aleven, V., Dahlstrom-Hakki, I., Gabrieli, J., Muller, C., & Riegle-Crumb, C. (September, 2017). *What is Fundamental Research?* Panel presented at the 2017 NSF ECR Principal Investigators Convening, Alexandria, VA.
- Dahlstrom-Hakki, I., Muller, C., & Bannan, B. (September, 2017). *UDL, Students with Disabilities, and STEM Learning*. Expertise Exchange presented at the 2017 NSF ECR Principal Investigators Convening, Alexandria, VA.
- Dahlstrom-Hakki, I., Shaoul, C., Keating, A., & Charette, A. (May, 2017). *Do Attention Training Apps Improve Academic Skills for Students with ADHD and/or ASD?* Talk presented at the 2017 Postsecondary Disability Training Institute (PTI), Boston, MA.
- Dahlstrom-Hakki, I., Asbell-Clarke, J., & Shaoul, C. (April, 2017). *Educational Neuroscience*. Roundtable discussion presented at the Cyberlearning 2017 annual PI meeting, Arlington, VA.
- Dahlstrom-Hakki, I., Banerjee, M., Alstad, Z., & Keith, K. (February, 2017). *Teaching Statistical Concepts Online: Effective Discussions for Students with LD*. Poster presented at the 54<sup>th</sup> Learning Disabilities Association (LDA) Annual International Conference, Baltimore, MD.
- Dahlstrom-Hakki, I., & Shaoul, C. (January, 2017). *Neurocognitive Measures: Insights into the Learning Process*. Invited talk presented at TERC Inc., Cambridge, MA.
- Dahlstrom-Hakki, I., & Banerjee, M. (October, 2016). *Effective Online Discussions: Using Social Presence to Convey Statistical Concepts to Students with LD, ADHD, and ASD*. Talk presented at the 67<sup>th</sup> International Dyslexia Association (IDA) Annual Reading, Literacy & Learning Conference, Orlando, FL.
- Asbell-Clarke, J., Dahlstrom-Hakki, I., Plass, J., & Homer, B. (September, 2016). *Revealing the Invisible: Multimodal Analysis of Implicit Game-Based Learning*. Symposium panel presented at the 2016 International Mind, Brain and Education Society (IMBES) conference, Toronto, ON, Canada.
- Dahlstrom-Hakki, I. (June, 2016). *Bio/Neuro/Cognitive Measures to Improve Neurodiverse Learning*. Roundtable discussion presented at the Cyberlearning 2016 annual PI meeting, Arlington, VA.
- Dahlstrom-Hakki, I., Alstad, Z., Asbell-Clarke, J., Rowe, E., & Altman, M. (May, 2016). *Revealing the Invisible: Implicit Measures of the Cognitive Learning Process in Students with ADHD and ASD*. Poster presented at the 2016 Experiential Technology & NeuroGaming Conference, San Francisco, CA.
- Dahlstrom-Hakki, I., & Alstad, Z. (April, 2016). *Comparing and Contrasting Group Research Designs for Students with LD, ADHD, and/or ASD*. Paper presented at the 100<sup>th</sup> annual meeting of the American Educational Research Association (AERA), Washington, DC.
- Dahlstrom-Hakki, I., & Alstad, Z. (February, 2016). *Assessing Conceptual Understanding in Mathematics: Challenges Facing Students with LD*. Talk presented at the 53rd Learning Disabilities Association (LDA) Annual International Conference, Orlando, FL.
- Alstad, Z., & Dahlstrom-Hakki, I. (February, 2016). *Assessing Conceptual Understanding in Mathematics: Challenges Facing Students with LD*. Poster presented at the 53rd Learning Disabilities Association (LDA) Annual International Conference, Orlando, FL.
- Dahlstrom-Hakki, I. (June, 2015). *Sources of Struggle in the Mathematics Classroom*. Workshop presented at the Western Massachusetts Mathematics Partnership's 2015 Summer Institute, Amherst, MA.
- Dahlstrom-Hakki, I. (May, 2015). *Sources of Struggle in Math and Science: Understanding the Role of Disability Specific Cognitive Loads in STEM*. Talk presented at the 31<sup>st</sup> Annual Pacific Rim International Conference on Disability & Diversity, Honolulu, HI.
- Dahlstrom-Hakki, I. (February, 2015). *Math for Students with LD: A New Cognitive Load Perspective*. Talk presented at the 52nd Learning Disabilities Association (LDA) Annual International Conference, Chicago, IL.
- Dahlstrom-Hakki, I. (November, 2014). *The iPad Toolbox: Supporting Student Study Skills through Ubiquitous Technology*. Talk presented at the 65<sup>th</sup> International Dyslexia Association (IDA) Annual Reading, Literacy & Learning Conference, San Diego, CA.
- Dahlstrom-Hakki, I. (October, 2014). *Educating Struggling Students: Understanding and Managing Cognitive Load*. Talk presented at the 4<sup>th</sup> International Conference on Disability and Rehabilitation, Riyadh, Saudi Arabia.



- Banerjee, M., & Dahlstrom-Hakki, I. (July, 2014). *Universally Designed For Instruction: Tools, Strategies, and Pedagogical Practices for Blended Classrooms*. Featured session at the Sloan-C Blended Learning Conference & Workshop, Denver, CO.
- Dahlstrom-Hakki, I., & Bower, M. (February, 2014). *Making Data Accessible to Diverse Populations of Students*. Talk presented at the EDUCAUSE Learning Initiative Annual Meeting, New Orleans, LA.
- Dahlstrom-Hakki, I., Bower, M., & Klucken, F. (November, 2013). *Using TinkerPlots to Help Students with Learning Disabilities Understand Statistical Concepts*. Poster presented at the 64<sup>th</sup> International Dyslexia Association (IDA) Annual Reading, Literacy & Learning Conference, New Orleans, LA.
- Dahlstrom-Hakki, I., Bower, M., & Klucken, F. (November, 2013). *Teaching Statistics to Students with LD: A Novel Visual Approach*. Poster presented at the 39<sup>th</sup> AMATYC Annual Conference, Anaheim, CA.
- Dahlstrom-Hakki, I. (October, 2013). *Investigating the Effectiveness of TinkerPlots in Helping Students with Learning Disabilities Understand Statistical Concepts*. Talk presented at Landmark College's Learning Disabilities Innovation Symposium, Putney, VT.
- Dahlstrom-Hakki, I., & Klucken, F. (April, 2013). *Teaching Statistics for Students with LD: A Novel Approach*. Talk presented at the 29<sup>th</sup> Annual Pacific Rim International Conference on Disability & Diversity, Honolulu, HI.
- Dahlstrom-Hakki, I., Bower, M., & Klucken, F. (November, 2012). *Using TinkerPlots to Help Students with Learning Disabilities Understand Statistical Concepts*. Poster presented at the Association of American Colleges and Universities (AAC&U) "Next Generation STEM Learning: Investigate, Innovate, Inspire" Conference, Kansas City, MS.
- Dahlstrom-Hakki, I. (June, 2012). *Investigating the Effectiveness of TinkerPlots in Helping Students with Learning Disabilities Understand Statistical Concepts*. Talk presented at the 2012 Joint Annual Meeting (JAM) of awardees funded by the NSF's Directorate for Education and Human Resource's Division of Human Resource Development, Washington, DC.
- Konold, C., Kazak, S., Dahlstrom-Hakki, I., Lehrer, R., & Kim, M.J. (August, 2007). *Students building data models*. Paper presented at the Fifth International Research Forum on Statistical Reasoning, Thinking and Literacy (SRTL-5). The University of Warwick, UK.
- Pollatsek, A., Dahlstrom-Hakki, I., Slattery, T. J. (November, 2005). *The role of attention in processing rotary motion across fixations*. Paper presented at the 46<sup>th</sup> Annual Meeting of the Psychonomics Society, Toronto, Canada.
- Hakki, I., Pollatsek, A., Rayner, K., Fisher, D., Miller, B., Goertz, B. (August, 2001). *Cube Rotation: An investigation in Mental Rotation and Manipulation*. Poster presented at the 11<sup>th</sup> European Conference on Eye Movements, Turku, Finland.
- Miller, B., Fisher, D., Hakki, I., Pollatsek, A., & Rayner, K. (November, 2000). *An Eye Movement Examination of Mental Box Folding*. Poster presented at the 41<sup>st</sup> Annual Meeting of the Psychonomics Society, New Orleans, LA.

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### **Contracted Professional Development Workshops and Trainings**

- Dahlstrom-Hakki, I. (December, 2019). *Computational Thinking and Executive Function Supports*. Session presented at Braintree Public Schools, Braintree, MA.
- Dahlstrom-Hakki, I. (November, 2019). *Differentiation for Neurodiverse Learners*. Sessions presented at Braintree Public Schools, Braintree, MA.
- Dahlstrom-Hakki, I. (June, 2019). *Technology Without Tears: Simple Tools to Improve Access and Student Success*. Workshop presented at the Landmark College 2019 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (May, 2019). *Assistive Technology for Supporting Students with LD and ADHD in Math: Tools and Techniques to Improve Comprehension and Performance*. Workshop presented at Westfield State University, Westfield, MA.
- Dahlstrom-Hakki, I. (February, 2019). *Supporting Math Learners as a Non-Mathematician: Strategies and Tools*. Workshop presented at the Landmark College Winter Institute, San Francisco, CA.
- Dahlstrom-Hakki, I. (October, 2018). *Introducing Supportive Study Skills*. Workshop presented at Elizabeth City State University, Elizabeth City, NC.
- Dahlstrom-Hakki, I. (October, 2018). *Teaching Math to Students Who Learn Differently*. Workshop presented at Elizabeth City State University, Elizabeth City, NC.
- Dahlstrom-Hakki, I., & Lator, A. (October, 2018). *Serving All Students: Universal Design in the Classroom and Beyond*. Workshop presented at Elizabeth City State University, Elizabeth City, NC.

- Dahlstrom-Hakki, I., & Lalor, A. (October, 2018). *Understanding Student Learning Profiles*. Workshop presented at Elizabeth City State University, Elizabeth City, NC.
- Dahlstrom-Hakki, I. (June, 2018). *Technology for Student Success*. Workshop presented at the Landmark College 2018 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (May, 2018). *Understanding Transitions and Providing Supports for Struggling Learners*. Workshop presented at Cape Cod Community College, Barnstable, MA.
- Dahlstrom-Hakki, I. (March, 2018). *Supporting Students with Learning and Attention Challenges: Assessment of Learning*. Workshop presented to CUNY ECI faculty and staff, New York, NY.
- Dahlstrom-Hakki, I. (October, 2017). *Manipulatives for High School and College STEM: How Non-Mathematicians Can Support Students' Comprehension and Computation*. Webinar presented as part of Landmark College's Fall 2017 webinar series.
- Dahlstrom-Hakki, I. (June, 2017). *Math Support and Advocacy for Students with Math Challenges*. Workshop presented at the Landmark College 2017 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (February, 2017). *Understanding and Removing Math Barriers: How Non-Mathematicians Can Help Students with LD, ADHD, and ASD*. Webinar presented as part of Landmark College's Spring 2017 webinar series.
- Dahlstrom-Hakki, I. (November, 2016). *Teaching Inquiry-Based Math and Science to All Learners: Why Some Students Struggle and What You Can Do to Challenge and Support a Wide Range of Learners*. Workshop presented at Mohawk Trail Regional School District, Shelburne Falls, MA.
- Dahlstrom-Hakki, I. (August, 2016). *Removing Barriers to Learning: Identifying and Addressing Unnecessary Cognitive Loads*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I. (August, 2016). *Supporting Diverse Learners in Transition: Strategies for Life After High School*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I. & Shaoul, C. (June, 2016). *Cognitive Neuroscience of Teaching and Learning: What Works*. Workshop presented at the Landmark College 2016 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (May, 2016). *Universal Design: Best Practices for Faculty Serving All Students*. Workshop presented at Cape Cod Community College, Barnstable, MA.
- Dahlstrom-Hakki, I. (May, 2016). *Best Practices for Faculty Serving Students with Learning Disabilities*. Workshop presented at Cape Cod Community College, Barnstable, MA.
- Dahlstrom-Hakki, I. (April, 2016). *Supporting Students with LD in Math*. Workshop presented at Raritan Community College, Branchburg, NJ.
- Dahlstrom-Hakki, I. (August, 2015). *Supporting Diverse Learners in Transition: Strategies for Life After High School*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I. (August, 2015). *App Pedagogy for the 21<sup>st</sup> Century Classroom*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I., Hecker, L., & Alstad, Z. (June, 2015). *Ubiquitous Technology: Using Apps Strategically*. Workshop presented at the Landmark College 2015 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (August, 2014). *The 21<sup>st</sup> Century Classroom: Tablet-Based Pedagogical Practices for Supporting Diverse Learners*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I. (August, 2014). *Ubiquitous Technology: Using Mainstream App Technology to Support Students who Learn Differently*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I. & Hecker, L. (June, 2014). *Ubiquitous Technology: Apps to Support Student Learning*. Workshop presented at the Landmark College 2014 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (April, 2014). *Sources of Mathematical Difficulty and Frameworks for Support*. Workshop presented to CUNY START mathematics faculty and staff, New York, NY.
- Dahlstrom-Hakki, I. (March, 2014). *Neuroscience of Learning*. Session presented at the Learning Disabilities Association of York Region, Aurora, ON, Canada.
- Dahlstrom-Hakki, I. (March, 2014). *Teaching Math: Why Students Struggle & What You Can Do To Help*. Session presented at the Learning Disabilities Association of York Region, Aurora, ON, Canada.
- Dahlstrom-Hakki, I. (March, 2014). *App Pedagogy for the 21<sup>st</sup> Century Classroom*. Workshop presented at The Academy of the Holy Cross, Kensington, MD.
- Dahlstrom-Hakki, I. (January, 2014). *Using Mind Mapping Apps to Facilitate Writing*. Webinar presented as part of Landmark College's Spring 2014 webinar series.

- Dahlstrom-Hakki, I. (January, 2014). *App Pedagogy for the 21<sup>st</sup> Century Classroom*. Workshop presented at St. Mary's College High School, Berkeley, CA.
- Dahlstrom-Hakki, I. (August, 2013). *Implementing Universal Design: The Principles in Practice*. Workshop presented at Maine Maritime Academy, Castine, ME.
- Dahlstrom-Hakki, I. (August, 2013). *Ubiquitous Technology: Using Mainstream App Technology to Support Students who Learn Differently*. Workshop presented at Sturgis Charter Public Schools, Hyannis, MA.
- Dahlstrom-Hakki, I. (June, 2013). *Teaching Math: Why Students Struggle & What You Can Do To Help*. Workshop presented at the Landmark College 2013 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (May, 2013). *Why Universal Design?* Session presented at the Nurturing Student Potential: Universal Design in Tribal Higher Education Conference, Keshena, WI.
- Dahlstrom-Hakki, I. (May, 2013). *Teaching Math: Why Students Struggle & What You Can Do to Help Using UDL Principles*. Workshop presented at the Nurturing Student Potential: Universal Design in Tribal Higher Education Conference, Keshena, WI.
- Dahlstrom-Hakki, I. (March, 2013). *Effective Instructional Approaches for All Students*. Workshop presented at The Academy of the Holy Cross, Kensington, MD.
- Dahlstrom-Hakki, I. (January, 2013). *Universal Design: Instructional Approaches for Students with Diverse Learning Needs*. Workshop presented at Maine Maritime Academy, Castine, ME.
- Dahlstrom-Hakki, I. (November, 2012). *Difficulties Learning Math: Why Some Students Struggle with Mathematical Content*. Session presented at the Expanding Horizons Conference: 6<sup>th</sup> Annual Institute on Learning Differences, Houston, TX.
- Dahlstrom-Hakki, I. (November, 2012). *Teaching STEM with Technology: How TinkerPlots and Other Tech Tools Can Be Used to Help Students Grasp STEM Concepts*. Session presented at the Expanding Horizons Conference: 6<sup>th</sup> Annual Institute on Learning Differences, Houston, TX.
- Dahlstrom-Hakki, I. (November, 2012). *Supporting Student Transitions*. Session presented at the Expanding Horizons Conference: 6<sup>th</sup> Annual Institute on Learning Differences, Houston, TX.
- Dahlstrom-Hakki, I. (August, 2012). *Innovations in Teaching Math to Struggling Learners*. Workshop presented to South Burlington School District Teachers, South Burlington, VT.
- Dahlstrom-Hakki, I. (July, 2012). *Teaching STEM: What Works and What Doesn't*. Workshop presented at the Landmark College 2012 Summer Institute, Putney, VT.
- Dahlstrom-Hakki, I. (February, 2012). *Universal Design for Instruction: Instructional Approaches for Students with Diverse Learning Needs*. Workshop presented at Flint Hill School, Oakton, VA.
- Dahlstrom-Hakki, I. (January, 2012). *Cognitive Overview and Instructional Approaches for Math Students with Learning Challenges*. Workshop presented to CCNY/CUNY faculty and staff, New York, NY.
- Dahlstrom-Hakki, I. (December, 2011). *Cognitive Overview and Instructional Approaches for Math Students with Learning Challenges*. Webinar presented to CCNY/CUNY faculty and staff.
- Dahlstrom-Hakki, I. (November, 2011). *Math Disorders: Why Do Students Struggle with Math and What You Can Do to Help*. Session presented at the Expanding Horizons Conference: 5<sup>th</sup> Annual Institute on Learning Differences, Houston, TX.
- Dahlstrom-Hakki, I. (August, 2011). *College and Career: Planning for Success/Tools for Success*. Session presented at Exploration by Design: How CAD Works, Madison, WI.
- Dahlstrom-Hakki, I. (April, 2011). *Cognitive Overview and Support Strategies for Math Students with Learning Challenges*. Webinar presented as part of CUNY Disability Awareness Month 2011.

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### **Paid Consulting Engagements**

- Princess Nourah Univeristy, 2017 – Current, Riyadh, Saudi Arabia.
- Montville Public School District, 2016, Montville, NJ.
- Sturgis Public Charter Schools, 2014 – 2017, Hyannis, MA.

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### **Relevant Skills**

- Proficient in Team management and organization, Grant writing and development, the use of Microsoft Office, statistical packages (SPSS, SYSTAT, R), OSX, Windows, and Linux environments. Developing research designs, curriculum materials, analyzing and interpreting experimental data. Programming in C/C++, HTML, Python, and other programming languages. Fluent in Arabic.

