

VITA
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EDUCATION

- Ph.D. Human Performance** 2020
Indiana University Bloomington (IUB) Bloomington, IN
Department of Kinesiology
Concentration: Physical Activity and Motor Development in Individuals with Disabilities
Minor: Informatics
Dissertation: Preliminary Efficacy of a Gamified, Behavior Change Technique-Based Mobile Application PuzzleWalk on Increasing Physical Activity and Reducing Anxiety in Adults with Autism Spectrum Disorder
- M.Sc. Adapted Physical Activity** 2016
Katholieke Universiteit (KU)-Leuven Leuven, Belgium
Faculty of Kinesiology and Rehabilitation Sciences
Thesis: Motor Skills Interventions in Children with Developmental Coordination Disorder: A Review Study
- M.Sc. Adapted Physical Activity (Joint degree)** 2016
Palacký University Olomouc, Czech Republic
Faculty of Physical Culture
- B.PE. Athletics Coaching** 2013
Kookmin University Seoul, South Korea
College of Physical Education

PROFESSIONAL EXPERIENCE

- 08/2023 - Present Assistant Professor, Department of Health Behavior and Nutrition Sciences, UD
- 01/2021 - 05/2023 Assistant Professor, Department of Applied Human Sciences, University of Minnesota Duluth (UMD)
Program Coordinator, Developmental Adapted Physical Education (DAPE), UMD
- 06/2020 - 12/2020 Postdoctoral Fellow, Department of Kinesiology, IUB
- 08/2016 - 05/2020 Associate Instructor & Graduate Research Assistant, Department of Kinesiology, IUB
Program Coordinator, IU Adapted Physical Activity for Children with Disabilities, IUB
- 03/2013 - 05/2014 Research Assistant, Korea Institute of Sport Science, South Korea
- 08/2011 - 03/2013 Research Assistant, Kinesmetrics Lab, Kookmin University, South Korea
- 03/2010 - 12/2011 Elementary Adapted Physical Education Teacher, Jeong-duk Elementary School, South Korea

RESEARCH AGENDA

Broadly, my research revolves around physical activity and health promotion in people with disabilities, with special emphasis on adults on the autism spectrum using interactive technologies, such as mobile health applications and wearable accelerometers. I am particularly interested in the role of physical activity and sedentary behavior as potential determinants of mental health disparities (e.g., anxiety and depression), widely observed in autistic individuals. Developing a behavior change theory-guided mobile health application ‘*PuzzleWalk*’ using gamification techniques is a notable example of my research pursuit on technology-leveraged behavior change interventions, specifically targeting increasing physical activity and reducing the burden of impaired mental health in individuals on the autism spectrum.

HONORS AND AWARDS

2020	National Doctoral Scholar Award, American Kinesiology Association
2019 - 2020	Kinesiology Graduate Fellowship Award, Department of Kinesiology, IUB
2018	Marian Godeke Miller Fellowship, School of Public Health, IUB
2018 - 2019	John H. Edwards Fellowship, Indiana University Graduate School (Total Award: \$25,000). <i>The John H. Edwards Fellowship is one of the Indiana University's most prestigious academic awards. The Edwards Trust Fund Committee provides two fellowships for graduate students in terminal degree programs at any campus of Indiana University based on criteria, including scholastic ability, intellectual capacity, public service, exemplary character, and the likelihood of future usefulness to society. A university-wide committee selects the fellows from nominations made by the deans of schools and departments.</i>
2017	Judges Choice of Most Potential for Social Good Award, Fall Projects and Research Symposium, School of Informatics, Computing, and Engineering, IUB
2017	Gallahue Morris Graduate Research Award, School of Public Health, IUB
2016 - 2020	Research Travel Grant (three times), Research and Creativity Committee, Department of Kinesiology, IUB
2016	School of Public Health Graduate Fellowship, School of Public Health, IUB
2015	1 st place, Sports Industry Promotion User Generated Contents Award, Korean Ministry of Culture, Sports and Tourism, Seoul, South Korea
2015	Best Conference Presentation Award, 5th International Students Conference Full of Colors, Palacký University, Czech Republic
2015	3 rd place, Korean Paralympic Committee User Generated Contents Award, Korean Paralympic Committee, Seoul, South Korea
2014 - 2016	Erasmus Mundus Scholarship, European Commission, Belgium (Total Award: €54,000).
2013	Summa cum laude (Overall GPA: 4.19/4.5), Faculty of Physical Education, Kookmin University, Seoul, South Korea

PUBLICATIONS (*denotes advisee)

Refereed Journal Publications

- **Lee D**, Frey GC, Cothran DJ, Harezlak J, and Shih PC. Concordance between Accelerometer-Measured and Self-Reported Physical Activity and Sedentary Time in Adults with Autism. *Journal of Autism and Developmental Disorders*. 2023; 1-10. <https://doi.org/10.1007/s10803-022-05862-y>
- **Lee D**, Frey GC, Cothran DJ, Harezlak J, and Shih PC. Effects of a Gamified, Behavior Change Technique-Based Mobile App on Increasing Physical Activity and Reducing Anxiety in Adults with Autism Spectrum Disorder: Feasibility Randomized Controlled Trial. *JMIR Form Res*. 2022; 6(7): e35701. <https://doi.org/10.2196/35701>
- Hwang BH and **Lee D**. Association between Motor and Language Skills Development in Children with Autism Spectrum Disorder: A Scoping Review. *International Journal of Disability, Development and Education*. 2022; 1-15. <https://doi.org/10.1080/1034912X.2022.2092081>
- Lee JE, Zeng N, Oh Y, **Lee D**, and Gao Z. Effects of Pokémon Go on Physical Activity and Psychological and Social Outcomes: A Systematic Review. *Journal of Clinical Medicine*. 2021; 10(9): 1860. <https://doi.org/10.3390/jcm10091860>
- **Lee D**. Knowledge Gaps in Mobile Health Research for Promoting Physical Activity in Adults with Autism Spectrum Disorder. *Frontiers in Psychology*. 2021; 12: 635105. <https://doi.org/10.3389/fpsyg.2021.635105>
- **Lee D**, Frey GC, Min A, Kim B, Cothran DJ, Bellini S, Han K, and Shih PC. Usability Inquiry of a Gamified Behavior Change App for Increasing Physical Activity and Reducing Sedentary Behavior in Adults with and without Autism Spectrum Disorder. *Health Informatics Journal*. 2020; 26(4): 2992-3008. <https://doi.org/10.1177/1460458220952909>
- Kim B, **Lee D**, Min A, Paik S, Frey GC, Bellini S, Han K, and Shih PC. PuzzleWalk: A Theory-Driven Iterative Design Inquiry of a Mobile Game for Promoting Physical Activity in Adults with Autism Spectrum Disorder. *PLOS One*. 2020; 15(9): e0237966. <https://doi.org/10.1371/journal.pone.0237966>

- Min A, Lee D, Gao G, Jeong S, and Shih PC. Design and Assessment of a Personal Breathalyzer Intervention to Support Responsible Drinking. *International Journal of Human-Computer Studies*. 2020; 137: 102382. <https://doi.org/10.1016/j.ijhcs.2019.102382>
- Lee D, Psotta R, and Vagaja M. Motor Skills Interventions in Children with Developmental Coordination Disorder: A Review Study. *European Journal of Adapted Physical Activity*. 2016; 9(2): 20-29. <http://doi.org/10.5507/euj.2016.007>

Refereed Conference Proceedings

- Lee D, Frey GC, Cheng A, and Shih PC. Puzzle Walk: A Gamified Mobile App to Increase Physical Activity in Adults with Autism Spectrum Disorder. In Proceedings of the *10th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)*. September 2018; 1-4. Wurzburg, Germany. IEEE. <https://doi.org/10.1109/VS-Games.2018.8493439> [24% acceptance rate]

Other Publications

- Lee D, Zmudy M, Oh J, and Bryant LG. Increasing Physical Activity in K-12 Students with Autism. *PHE America*. 2021. <http://www.pheamerica.org/2021/increasing-physical-activity-in-k-12-students-with-autism/>

Manuscripts Under Review

- Lee D, Oeding G*, and Hwang BH. (Under review). Parental Perception of Motor, Language, and Literacy Skills Development in School-Aged Autistic Children. *International Journal of Developmental Disabilities*.
- Lee D, Kennedy JM, Cothran DJ, Shih PC, Dickinson S, Golzarri-Arroyo L, and Frey GC. (Under review). Correlates of Physical Activity, Sedentary Time, and Cardiovascular Disease Risk in Adults with Autism Spectrum Disorder. *Disability and Health Journal*.
- Lee D, Cothran DJ, Kennedy JM, Shih PC, Golzarri-Arroyo L, Dickinson S, and Frey GC. (Under review). Association between Physical Activity, Sedentary Time, and Technology Use in Autistic Adults. *Journal of Developmental and Physical Disabilities*.

Manuscripts in Preparation

- Lee D, Voermans-Dean H*, Lee JE, and Dominick G. (Manuscript writing stage). Comparison of ActiGraph CentrePoint Insight Watches Worn on Dominant and Non-Dominant Wrists in Free-Living Environments. Target: *Journal for the Measurement of Physical Behaviour*.
- Larson H*, Lee JE, and Lee D. (Manuscript writing stage). Acute Effects of Immersive Virtual Reality Exercise on Heart Rate and Mood among College Students with Mental Disorder Symptoms: A Pilot Study. Target: *Game for Health Journal*.
- Lee D & Ravizza D. (Manuscript writing stage). The Impact of On-Campus Adapted Physical Education Practicum Experiences on Preservice Teachers and Other Key Stakeholders of Students with Disabilities. Target: *Adapted Physical Activity Quarterly*.
- Lee D, Bhat A, Suminski RR, and Obrusnikova I. (Manuscript writing stage). A Self-Determination Theory-Guided mHealth Intervention for Improving Physical Health in Autistic Adults: Protocol for Community-Partnered Participatory Research. Target: *JMIR Research Protocols*.
- Lee D, Shih PC, and Frey GC (Manuscript writing stage). Exercise and Mental Health in Autistic Adults. Target: *Exercise and Sport Sciences Reviews*.

Books

- Song H, Go B, Lee M, Kim G, Park S, ... & Lee D. *The Exercise Guidelines for Fitness Promotion of Korean Adolescents*. Seoul, South Korea. Korea Institute of Sport Science; 2013.

PRESENTATIONS (*denotes advisee)

Refereed International & National Conference Presentations/ Published Abstracts

- Johnson B, ... & Lee D. Challenges, Needs, and Opportunities for Emerging Behavioural Nutrition and Physical Activity Researchers: in (Post-)Pandemic Times. Poster presented at: International Society of Behavioral Nutrition and Physical Activity Annual Meeting; June 2023; Uppsala, Sweden.

- Ravizza D & Lee D. Infusing Adaptive Sports into The General Physical Education Curriculum. 60-min workshop presented at: 2022 Move United Education Conference; May 2022; Colorado Springs, CO.
- Lee D, Paulson L, and Wendinger PJ. Sustainable University-Public School Partnership to Improve Pre-service Teachers' Practicum Experience. Poster presented at: SHAPE America 2022 National Convention & Expo; April 2022; New Orleans, LA.
- Lee D & Hwang BH. Association between Motor and Language Skills in Children with Autism Spectrum Disorder: A Scoping Review. Oral presentation at: International Symposium of Adapted Physical Activity 2021; June 2021; Jyväskylä, Finland (Virtual).
- Lee JE, Zeng N, Oh Y, Lee D, and Gao Z. Effects of Pokémon Go on Physical Activity and Health Outcomes: A Systematic Review. Oral presentation at: International Society of Behavioral Nutrition and Physical Activity XChange 2021 Annual Meeting; June 2021; Virtual Conference.
- Lee D, Frey GC, Cothran DJ, Harezlak J, and Shih PC. A Gamified Mobile App for Increasing Physical Activity and Reducing Anxiety in Adults with Autism. e-Poster presented at: American College of Sports Medicine 2021 Annual Meeting; June 2021; Washington, D.C (Virtual).
- Frey GC, Lee D, Cothran DJ, Harezlak J, and Shih PC. Concordance between Accelerometer-Derived and Self-Reported Physical Activity and Sedentary Time in Adults with Autism. e-Poster presented at: American College of Sports Medicine 2021 Annual Meeting; June 2021; Washington, D.C (Virtual).
- Ravizza D and Lee D. Make it Yourself: Adaptive Physical Education Equipment Development for Children with Severe Disabilities. e-Poster presented at: 2021 National Consortium for Physical Education for Individuals with Disabilities; February 2021; Virtual Conference.
- Lee D, Shih PC, Kim B, Han K, Min A, Cothran DJ, Bellini S, and Frey GC. Objectively Measured Physical Activity and Sedentary Time in Adults with Autism Spectrum Disorder. e-Poster presented at: American College of Sports Medicine 2020 Annual Meeting; May 2020; San Francisco, CA (Virtual).
- Lee D, Cothran DJ, Bellini S, Shih PC, Han K, Kim B, Min A, Paik S, and Frey GC. Ecological Momentary Assessment of Physical Activity, Sedentary Time, and Anxiety in Adults with Autism Spectrum Disorder. e-Poster presented at: International Society for Autism Research Annual Meeting; May 2020; Seattle, WA (Virtual).
- Lee D, Kennedy JM, Cothran DJ, Shih PC, Dickinson S, Golzarri-Arroyo L, and Frey GC. Association between Sedentary Behavior and Cardiovascular Disease Risk in Adults with Autism Spectrum Disorder. Poster presented at: International Society of Behavioral Nutrition and Physical Activity 2019 Annual Meeting; June 2019; Prague, Czech Republic.
- Lee D, Cothran DJ, Kennedy JM, Shih PC, Golzarri-Arroyo L, Dickinson S, and Frey GC. Association between Physical Activity, Sedentary Time, and Technology Use in Adults with Autism Spectrum Disorder. Poster presented at: International Society for Autism Research 2019 Annual Meeting; May 2019; Montreal, Canada.
- Lee D, Shih PC, Bellini S, Min A, Cothran DJ, and Frey GC. Interactive Development of a Technology- Guided Intervention to Increase Physical Activity and Reduce Anxiety in Adults with Autism Spectrum Disorder. 40 minutes Mini lecture at: 2018 North American Symposium of Adapted Physical Activity; October 2018; Corvallis, OR.
- Lee D, Kennedy JM, Cothran DJ, Chomistek AK, Shih PC, Min A, and Frey GC. Physical Activity, Technology Use, and Cardiovascular Risk in Adults with Autism Spectrum Disorder: A Mixed Methods Study. Oral presentation at: 2018 North American Symposium of Adapted Physical Activity; October 2018; Corvallis, OR.
- Lee D, Psotta R, and Vagaja M. Motor Skills Interventions in Children with Developmental Coordination Disorder: A Review Study. Poster presented at: 2016 North American Symposium of Adapted Physical Activity; September 2016; Edmonton, Canada.
- Lee M, Park K, Park C, Lee D, and Choi M. Validity Evidence of Children's OMNI Perceived Exertion Scale. Poster presented at: 2014 AAHPERD National Convention & Expo; April 2014, St. Louis, MO.
- Lee D, Lee M, Han M, Roh H, Kim D, and Choi M. Inaccuracy of an Accelerometer to Measure Physical Activity in Korean Older Adults with Physical Disabilities. Oral presentation at: 19th International Symposium of Adapted Physical Activity; July 2013; Istanbul, Turkey.
- Choi M, Lee M, Han M, Park J, Kim I, and Lee D. Validity Evidence of an Accelerometer to Estimate Physical Activity. Oral presentation at: 19th International Symposium of Adapted Physical Activity; July 2013; Istanbul, Turkey.
- Lee M, Lee DT, Park C, and Lee D. Validity Evidence of Omron Pedometer HJ-720ITC for Korean Children: A Preliminary Study. Poster presented at: 4th International Congress on Physical Activity and Public Health; October

2012; Sydney, Australia.

Refereed Presentations at National Conference on Undergraduate Research

- Voermans-Dean H*, Lee JE, and **Lee D.** A Comparison of ActiGraph Accelerometers Worn on Non-Dominant and Dominant Wrists in Free-Living Conditions. Poster presented at: 2023 National Conference on Undergraduate Research; April 2023; Eau Claire, WI.
- Larson H*, Lee JE, and **Lee D.** Virtual Reality Exercise Effects on College Students with Anxiety and Depression. Poster presented at: 2023 National Conference on Undergraduate Research; April 2023; Eau Claire, WI.
- Footit E*, Lee JE, and **Lee D.** Parental Perceptions of Physical and Outdoor Activities in Their Adult Child with Autism and Intellectual Disability. Oral presentation at: 2023 National Conference on Undergraduate Research; April 2023; Eau Claire, WI.

Regional Conference/ Workshop Presentations

- **Lee D.** Team Building Adapted Physical Activity for All. Workshop presented at: Northern Lights Special Education Cooperative Mentoring Day; Fond du Lac Tribal and Community College, March 2023; Cloquet, MN.
- Shih PC, **Lee D.**, and Frey GC. Mobile Technologies for Health Informatics. Oral presentation at: Informatics Colloquium Series; Indiana University Luddy School of Informatics, Computing, and Engineering, September 2022; Bloomington, IN.
- Massie J*, Miller D*, Selman L*, Hinnenkamp E*, Ryan L*, and **Lee D.** Adaptive Sports for K-12 Physical Education. Workshop presented at: Northern Lights Special Education Cooperative DAPE Training; Independent School District 704, April 2022; Proctor, MN.
- **Lee D.** Gamified mHealth for Recreational Physical Activity Promotion in People with Autism Spectrum Disorder. Oral presentation at: Sports Technology Research Lab Co-Design Workshop; University of Calgary, May 2021; Virtual Meeting.
- **Lee D.**, Paulson L, Wendinger P, Johnson J*, Massie J*, and Schliemann S*. Simple Icebreaker Activities for All. Pre-recorded instructional video presented at: 45th Minnesota Developmental Adapted Physical Education Conference; September 2020; Virtual Meeting.
- **Lee D.**, Paulson L, Wendinger P, Johnson J*, Massie J*, and Schliemann S*. A Gamified Mobile App PuzzleWalk for Increasing Physical Activity and Reducing Sedentary Behavior in Transitional Age Youth with Autism Spectrum Disorder. Pre-recorded oral presentation at: 45th Minnesota Developmental Adapted Physical Education Conference; September 2020; Virtual Meeting.
- Michael S*, Frey GC, Shih PC, and **Lee D.** Iterative Development of a Gamified, Behavioral Change Techniques-Based Mobile App PuzzleWalk for Increasing Physical Activity in Adults with Autism Spectrum Disorder. Poster presented at: 2019 Student Research Poster Competition; Center of Excellence for Women and Technology, IUB, April 2019; Bloomington, IN. [*Won 2nd Place in Technology and Computing Field*]
- **Lee D.**, Cheng A, Kariyattin S, and Tilak S. Physical Activity Application for People on the Spectrum. Poster presented at: 2017 Fall Research Symposium; Luddy School of Informatics, Computing, and Engineering, IUB, November 2018; Bloomington, IN. [Awarded Judges Choice of Most Potential for Social Good, top 6 out of 121 projects]
- **Lee D.** Is Pokémon Go Beneficial for Increasing Physical Activity in Children with Developmental Disabilities? Oral presentation at: 2016-17 Movement Sciences Meeting; School of Public Health, IUB, November 2016; Bloomington, IN.
- **Lee D.** Effects of Short-Term Exercise Intervention on Motor Performance of Children with Developmental Coordination Disorder. Oral presentation at: 5th International Students Conference Full of Colors; December 2015; Olomouc, Czech Republic. [Awarded Best Conference Presentation]

Invited Talks

- **Lee D.** Leveraging mHealth to Improve Physical Activity and Health in Adults with Autism Spectrum Disorder. Talk presented at: Thought Leadership Summit on Aging in Autism; Autism Speaks, June 2022; Virtual Meeting.
- **Lee D.** Gamified Behavior Change App for Physical Activity Promotion in Adults with Autism Spectrum Disorder. Talk presented at: Innovative Solutions for Improving Quality of Life for Autistic Individuals Symposium; Autism Aspergers Friendship Society & University of Calgary, May 2022; Calgary, Canada.

- **Lee D.** Autism Spectrum Disorder and Physical Activity. Talk presented at: School of Public Health Lunar Dinner (Dean’s Invitation); IUB, August 2019; Bloomington, IN.
- **Lee D.** Iterative Development of a Gamified, Behavior Change Techniques Based Mobile App PuzzleWalk and Other Health Technologies for Individuals with Autism Spectrum Disorder. Talk presented at: Purdue Autism Research Cluster Seminar; Purdue University, March 2019; West Lafayette, IN.

GRANT ACTIVITIES

* = External funding

Funded

- *Autism Scholars & Pilot and Feasibility Grant 09/01/2023-08/31/2024
Sponsoring Organization: Autism Intervention Research Network on Physical Health
A Self-Determination Theory-Guided mHealth Intervention to Improve Uptake and Sustainability of Physical Activity Engagement and Reduce Sedentary Behavior in Autistic Adults
Role: Principal Investigator
Total Funds Awarded: \$50,000
- Early Innovation Fund 01/16/2023
Sponsoring Organization: University of Minnesota Technology Commercialization
PuzzleWalk – Gamified mHealth Intervention to Improve Health in Autistic Adults
Role: Principal Investigator
Total Funds Awarded: \$10,000 (*declined due to relocation*)
- Grant-in-Aid of Research, Artistry and Scholarship 07/01/2022–06/30/2023
Sponsoring Organization: University of Minnesota Office of the Vice President for Research
Effects of A Gamified Incentive-Based App on Increasing Physical Activity and Reducing Depression in Adults with Autism
Role: Principal Investigator
Total Funds Awarded: \$38,671
- *Van Gorden Outreach Fund 07/01/2022-06/30/2023
Sponsoring Organization: Miller-Dwan Foundation
Community-Engaged Physical Literacy Education for Children with Disabilities
Role: Principal Investigator
Total Funds Awarded: \$9,100
- College Technology Funds 08/29/2022-12/16/2022
Sponsoring Organization: UMD College of Education and Human Service Professions (CEHSP)
Inclusive Adapted Sports for Disability Appreciation and Social Integration
Role: Principal Instructor
Total Funds Awarded: \$8,124
- The ‘U’ is for You Grant 09/01/2021-08/31/2022
Sponsoring Organization: University of Minnesota Clinical and Translational Science Institute
Inclusive Adapted Physical Activity for Children of All Abilities
Role: Principal Investigator
Total Funds Awarded: \$5,000
- College Technology Funds 01/13/2021-05/07/2021
Sponsoring Organization: UMD CEHSP
Video Modeling for Adapted Physical Education Teaching Practicum
Role: Principal Instructor
Total Funds Awarded: \$4,091
- Collaborative Online International Learning Faculty Program 01/13/2021-05/07/2021
Sponsoring Organization: University of Minnesota Global Programs and Strategy Alliance
International Learning Partnership for Adapted Physical Education

Role: Principal Instructor
Total Funds Awarded: \$500

- *ACSM Foundation Doctoral Student Research Grant 07/01/2020–06/30/2021
Sponsoring Organization: American College of Sports Medicine (ACSM)
A Gamified Mobile App Intervention to Increase Physical Activity and Reduce Anxiety in Adults with ASD
Role: Principal Investigator
Total Funds Awarded: \$5,000
- *Woodcock Institute Research Grant 01/01/2020–08/31/2021
Sponsoring Organization: Woodcock Institute for Advancement of Neurocognitive Research and Applied Practice
Association between Motor Skills and Elementary Literacy Development in Children with ASD
Role: Principal Investigator (Co-PIs: Smith & Hwang)
Total Funds Awarded: \$14,869
- GPSG Research Award 01/01/2020–05/31/2020
Sponsoring Organization: Indiana University Graduate and Professional Student Government (GPSG)
Sustainability Assessment of a Mobile App-Supported Behavior Change Intervention for Promoting Physical Activity in Individuals with ASD
Role: Principal Investigator
Total Funds Awarded: \$1,000
- Indiana University Collaborative Research Grant 05/01/2018–04/30/2019
Sponsoring Organization: Indiana University Office of the Vice President for Research
A Randomized Control Trial to Assess the Efficacy of a Gamified Mobile Application Intervention to Increase Physical Activity and Reduce Anxiety in Adults with ASD
Role: Key personnel (PIs: Frey, Shih, and Bellini)
Total Funds Awarded: \$74,971

Under Review

- *CIHR Research Excellence, Diversity, and Independence Early Career Transition Award (Phase 1)
Sponsoring Organization: Canadian Institutes of Health Research (CIHR)
Community-Engaged Physical Literacy Program Development to Improve Health in Children and Youth with Neurodevelopmental Disorders Including Intellectual Disability Living in Rural Areas
Role: Mentor (PI: Milajerdi)
Total Funds Requested: CAD \$270,000 (May 2023)

Unfunded

- *Pilot Grant
Sponsoring Organization: Eagles Autism Foundation
Development and Evaluation of a Gamified Mobile Health Intervention to Promote Sustainable Physical Activity and Sedentary Behavior Changes in Adults with Autism Spectrum Disorder
Role: Principal Investigator (Co-PI: Obrusnikova)
Total Funds Requested: \$400,000 (August 2023)
- *NIH R03 PA-21-199 Research on Autism Spectrum Disorders
Sponsoring Organization: National Institutes of Health
Association between Physical Activity, Sedentary Behavior, and Depression in Adults with Autism
Role: Multiple Principal Investigator (Multiple PI: Kim)
Total Funds Requested: \$161,963 (February 2022)
- Grant-in-Aid of Research, Artistry and Scholarship
Sponsoring Organization: University of Minnesota Office of the Vice President for Research
Effects of A Gamified Incentive-Based App on Increasing Physical Activity and Reducing Depression in Adults with Autism
Role: Principal Investigator

Total Funds Requested: \$27,408 (September 2021)

- *Pilot Innovation Grant
Sponsoring Organization: American Foundation for Suicide Prevention
Gamified Behavior Change App to Increase Physical Activity and Reduce Suicide Risk in Adults with Autism
Role: Principal Investigator (Co-PI: Kim)
Total Funds Requested: \$30,000 (November 2020)
- *Small Grants Program
Sponsoring Organization: Northland Foundation
Inclusive Adapted Physical Activity for Children of All Abilities in Northland
Role: Principal Investigator
Total Funds Requested: \$5,000 (April 2021)
- *NSF 19-589 Cyber-Human Systems Small Grant
Sponsoring Organization: National Science Foundation
Walk and Play: Gamified Health Behavior Change App to Increase Physical Activity and Reduce Anxiety in Adults with ASD
Role: Key personnel (PIs: Shih and Frey)
Total Funds Requested: \$499,959 (November 2019)
- *Predoctoral Research Fellowship
Sponsoring Organization: Autism Speaks
Technology Guided Physical Activity for Improving Sleep Quality in Adults with ASD
Role: Principal Investigator
Total Funds Requested: \$69,924 (April 2019, Finalist)
- *Reinterpretation of Disability Research Competition
Sponsoring Organization: Korea Foundation for Persons with Disabilities
Technology Use, Physical Activity, and Digital Social Interactions in Korean Adolescents and Adults with High-Functioning ASD
Role: Principal Investigator
Total Funds Requested: Approx. \$2,800 (December 2017)
- *Graduate Student Research Grant
Sponsoring Organization: SHAPE America
Mobile Application for Physical Activity in Children with Developmental Disabilities
Role: Principal Investigator
Total Funds Requested: \$2,500 (December 2016)

RESEARCH EXPERIENCE

University of Delaware

Principal Investigator

Newark, DE
2023 – Present

- Mobile and Wearable Technologies for Behavioral Health Measurement and Promotion
- Mobile Ecological Momentary Assessment for Physical and Mental Health Assessments in People with Intellectual and Developmental Disabilities
- Associations of Physical Activity, Sedentary Behavior, and Mental Health in Autistic Adults

University of Minnesota Duluth

Principal Investigator

Duluth, MN
2021 – 2023

- Association between Fundamental Motor and Language Skills in Children with ASD
- Effects of Gamified Incentive-Based mHealth Interventions on Promoting Physical and Mental Health in People with and without Disabilities

Indiana University-Bloomington

Doctoral Researcher

Bloomington, IN
2016 – 2020

- Deployment of A Gamified, Physical Activity-Promoting Mobile App PuzzleWalk Designed For Autistic Individuals (PuzzleWalk can be accessed through [App Store](#) & [Google Play](#))

Research Assistant (Advisor: Dr. Georgia Frey)

- A Pilot Study to Assess Physical Activity, Mobile Technology Use, and Cardiovascular Disease Risk in Adults with ASD [Funded by Institute for Advanced Study, IUB]

Palacký University

Olomouc, Czech Republic

Research Assistant (Advisor: Dr. Rudolf Psotta)

2015

- Gross Motor Skills Assessment of Czech Children with Developmental Coordination Disorder using the Movement Assessment Battery for Children 2nd Edition (MABC-2) and Dartfish Motion Analysis Software [Funded by Palacký University Science Foundation]

Korea Institute of Sport Science

Seoul, South Korea

Research Assistant (Advisor: Dr. Hongseon Song)

2013 – 2014

- Development of Exercise Guidelines for Korean Adolescents

Kookmin University Kinesmetrics Lab

Seoul, South Korea

Research Assistant (Advisor: Dr. Miyoung Lee)

2011 – 2013

- Development of Adapted Physical Activity Guidelines for People with Disabilities in Seoul [Funded by National Research Foundation of Korea]
- Development of A Community-Wide Physical Activity Instructor Training Program and Management System: “서울시 애들아 뛰어놀자” [Funded by City of Seoul]
- Development of Physical Activity Guidelines for Children and Seniors in Seoul: A Final report [Funded by National Research Foundation of Korea]
- Validity Assessment of Physical Activity Measurement Tools (i.e., Omron HJ-720itc pedometers, GT3X ActiGraph accelerometers, and a K4B2 portable metabolic analyzer) and Estimation of Eligible Amount of Physical Activity for Children [Funded by National Research Foundation of Korea]
- Development of Assessment Tools and Monitoring System to Promote Physical Activity of Children in Seoul [Funded by City of Seoul]

TEACHING EXPERIENCE

University of Delaware

Newark, DE

Assistant Professor

2023 – Present

- BHAN 240 Fundamental Movement Skills (1 semester)

University of Minnesota Duluth

Duluth, MN

Assistant Professor

2021 – 2023

†= Course newly developed and taught

- PETE 1006 Teaching Aquatic & Adapted Activities (2 semesters; co-teaching)
- †PETE 3550 Assessment in Adapted Physical Education (2 semesters)
- PETE 3400 Adapted Physical Education (2 semesters)
- †PETE 3450 Teaching Students with Disabilities (3 semesters; 1 online)
- †PETE 3200 Developmental Movement: Concepts and Experiences (2 semesters; 1 online)
- PETE 4991 Independent Study (1 semester)
- †PETE 4996 Internship in Adapted Physical Education (2 semesters)

Guest Lectures

- PETE 1000 Introduction and Foundations of Physical Education, “Intro to Adaptive Sports”, 10/14/2021; 11/17/2022
- PETE 3400 Adapted Physical Education, “Preparing Qualified and Effective APE Teachers”, 09/30/2020

Indiana University-Bloomington

Associate Instructor

Bloomington, IN

2016 – 2020

- SPH K-398 Adapted Physical Education (8 semesters)
- SPH K-385 Practicum in Adapted Physical Education (8 semesters)
- SPH K-524 Exercise and Physical Activity for People with Disabilities (2 semesters; graduate course)

Indiana University Adapted Physical Activity (IUAPA) Program Coordinator

- Coordinated teaching and lab responsibilities for 30 undergraduate students and supervised 15 peer mentor staff each semester. The IUAPA program is designed to serve children with developmental disabilities and their families who live in Monroe County, IN and to prepare undergraduate students in Kinesiology major and other health-related programs to work with people with various movement challenges.

Kookmin University

Principal Instructor

Seoul, South Korea

2012 – 2013

- Developed a ‘City of Seoul Physical Activity Instructor Training Program’ and taught elementary educators recreational sports and physical activities.

Jeong-duk Elementary School (K-12)

Adapted Physical Education Teacher

Seoul, South Korea

2010 – 2011

- Taught elementary school students with developmental disabilities fundamental motor skills and inline skating.

MEDIA COVERAGE

- “15 Ground-Breaking Video Games Modernizing Healthcare” *Chaos Theory Games*. 07/01/22.
<https://www.chaostheorygames.com/blog/15-groundbreaking-video-games-modernising-healthcare>
- “Inclusive Track and Field Day” *UMD CEHSP News*. 05/25/22.
<https://cehsp.d.umn.edu/articles/arrowhead-youth-games-2022>
- “Striving to Serve All Students” *UMD CEHSP News*. 10/27/21.
<https://cehsp.d.umn.edu/articles/adapted-pe-practicum>
- “Health Video Games Could Change How We Treat Patients- But Doctors Still Need to Be Convinced” *Business Insider*. 08/04/21.
<https://www.businessinsider.com/health-video-games-mental-health-children-digital-therapeutics-2021-8>
- “App Gives Autistic A Way to Promote Physical Activity” *Jonesboro Sun Newspaper*. 07/07/21.
https://www.jonesborosun.com/news/app-gives-autistic-a-way-to-promote-physical-activity/article_1726f206-935b-57e7-8e3c-f71a4f6ae647.html
- “New UMD Minor Aims to Equip More Teachers on Meeting Needs of Students with Disabilities” *Duluth News Tribune*. 02/07/21.
<https://www.duluthnewstribune.com/news/education/6861536-New-UMD-minor-aims-to-equip-more-teachers-on-meeting-needs-of-students-with-disabilities>
- “UMD Adds Developmental Adapted Physical Education Minor Program” *KBJR 6 TV News*. 01/24/21.
<https://kbjr6.com/2021/01/24/umd-adds-developmental-adapted-physical-education-minor-program/>
- “Keep Calm and Stay Adapted” *UMD CEHSP News*. 01/19/21.
<https://cehsp.d.umn.edu/articles/adapted-pe-minor>
- “Can Video Games Help You Level Up Your Health?” *American Heart Association News*. 10/28/20.
<https://www.heart.org/en/news/2020/10/28/can-video-games-help-you-level-up-your-health>
- “IU Researcher Creates Health App to Aid Those on Autism Spectrum.” *Bloom Magazine*. 03/29/20.
<https://www.magbloom.com/2020/03/iu-researcher-creates-health-app-to-aid-those-on-autism-spectrum/>
- “PhD Candidate Creates Gamified Health App.” *Indiana Daily Student*. 11/12/19.
<https://www.idsnews.com/article/2019/11/p-h-d-candidate-creates-gamified-health-app>
- “Doctoral Student Daehyoung Lee Awarded Indiana University John H. Edwards Fellowship.” *IU School of Public Health-Bloomington News*. 08/09/18.
https://blogs.iu.edu/iusph/2018/08/09/student_award/

PROFESSIONAL AFFILIATIONS

American College of Sports Medicine
International Society for Autism Research
International Federation of Adapted Physical Activity
International Society of Behavioral Nutrition and Physical Activity
International Society for the Measurement of Physical Behaviour
SHAPE America

PROFESSIONAL SERVICE

Service to Department/College/University

2023 Vice Provost for Public Engagement Search Committee, University of Minnesota Office of the Executive Vice President and Provost
2022 College Representative, Public Engagement Coordinator Search Committee, UMD Office of Academic Affairs
2022 - 2023 Reviewer, CEHSP Grant Proposal Feedback Network, UMD
2022 Applied Human Sciences Department Merit Rubric Revision Committee, UMD
2021 - 2023 Developmental Adapted Physical Education Minor Program Coordinator, Department of Applied Human Sciences, UMD
2021 - 2023 Technology Council, CEHSP, UMD
2021 - 2022 College Representative, Campus Athletics Committee, UMD
2021 - 2023 Faculty Representative, Community Advisory Council on Teacher Education, CEHSP, UMD

External Service

2021 - 2022 Communication Committee, Network of Early Career Researchers and Students, International Society of Behavioral Nutrition and Physical Activity (ISBNPA)
2020 - Present Adapted Physical Activity Innovation Project Mentor, Mount Royal University & KU Leuven

Ad Hoc Peer Reviewer

2023 - Present *Disability and Rehabilitation: Assistive Technology*
2022 - Present *Adapted Physical Activity Quarterly*
2022 - Present *International Journal of Human-Computer Interaction*
2022 - Present *Journal of Autism and Developmental Disorders*
2020 - Present *Journal of Medical Internet Research*
2020 - Present *Palaestra*
2020 - Present *Intellectual and Developmental Disabilities*
2018 *The ACM Conference on Human Factors in Computing Systems (CHI), Late-Breaking Work Program*
2017 - Present *European Journal of Adapted Physical Activity*

Advising & Mentoring

2023 - Present Homa Milajerdi, Postdoctoral Fellow, Faculty of Kinesiology, University of Calgary, Canada
2022 - 2023 Haley Voermans-Dean, Undergraduate Researcher, Exercise and Rehabilitation Science, UMD
University of Minnesota Undergraduate Research Opportunities Program (UROP) Award (\$1,500): Funded, Role: Faculty Advisor
2022 - 2023 Hanna Larson, Undergraduate Researcher, Exercise and Rehabilitation Science, UMD
University of Minnesota UROP Award (\$1,800): Funded, Role: Faculty Co-Advisor
2022 - 2023 Emma Footit, Undergraduate Researcher, Physical Education Teacher Education, UMD
University of Minnesota UROP Award (\$1,500): Funded, Role: Faculty Advisor
2021 - 2023 12 Students, Physical Education Teacher Education Major, Department of Applied Human Sciences, UMD
2021 - 2023 16 Students, DAPE Minor, Department of Applied Human Sciences, UMD

2020 - 2021 Grace Oeding, Undergraduate Student, Department of Language, Speech, & Hearing Sciences, IUB

COMMUNITY SERVICE

2022 Volunteer Instructor, Courage Kenny Adaptive Ski Program, MN
2021 Volunteer Taekwondo Coach, Special Olympics Minnesota Virtual Activities, MN
2020 - 2023 University Liaison, Arrowhead Youth Games Organizing Committee, Courage Kenny Rehabilitation Institute Northland, MN
2016 - 2020 Volunteer Master, Adapted Martial Arts Program for Youth and Young Adults with Developmental Disabilities, Bloomington Southeast YMCA, IN
2016 Volunteer Teacher, Topolany Special Education School, Olomouc, Czech Republic
2016 Volunteer, European Congress of Adapted Physical Activity, Olomouc, Czech Republic
2016 Volunteer Instructor, Adapted Ski Program for Visually Impaired Children, Czech Republic
2014 Volunteer Announcer, World Wheelchair Basketball Championship, Incheon, South Korea
2013 Volunteer, 19th International Symposium of Adapted Physical Activity, Istanbul, Turkey
2013 Organizer & Volunteer, Donation Flea Market for Victims of Typhoon Haiyan in Philippines (\$9,900 raised and donated to the Doctors Without Borders), Seoul, South Korea
2009 - 2011 Volunteer Physical Educator, Parangsae Community Study Center, Seoul, South Korea
2007 - 2009 Drill Instructor, Korea Army Training Center, Nonsan, South Korea
2006 - 2007 Taekwondo Demonstrator, Kookmin University Taekwondo Demonstration Team, Seoul, South Korea

PROFESSIONAL DEVELOPMENT & CERTIFICATIONS

2022 Principal Investigator Primer, Clinical and Translational Science Institute, University of Minnesota
2021 University of Minnesota New Faculty Development, Vice Provost for Faculty and Academic Affairs
2021 Inclusive Fitness Training, National Center on Health, Physical Activity and Disability (NCHPAD)
2013 Physical Education Teacher's License, Seoul Metropolitan Office of Education
2011 Anthropometry Level 1, International Society for the Advancement of Kinanthropometry
2011 Taekwondo 4th Dan (Master), Kukkiwon/World Taekwondo Headquarters

Other Certificates

2016 Child CPR AED/ First Aid, American Heart Association
2015 Certificate of Special Olympics Czech Republic Healthy Athlete FUNfitness program, Czech National United Football and Table Tennis, Special Olympics Czech Republic
2014 Certificate of International Seminar of Communities and Crisis-Inclusive Development through Sport, International Council of Sport Science and Physical Education, Germany