

**MOHANRAJ THIRUMALAI, M.S, M.Eng, Ph.D.**

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University of Alabama at Birmingham  
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Birmingham, AL 35294  
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**ACADEMIC AND ADMINISTRATIVE EXPERIENCE**

**Assistant Professor** 2016-present  
Health Informatics, Department of Health Services Administration  
School of Health Professions, University of Alabama at Birmingham

**Director of Information and Communication Technologies**  
UAB/Lakeshore Research Collaborative

**Co-Director/Co-Principal Investigator** 2017-present  
Rehabilitation Engineering Research Center  
School of Health Professions, University of Alabama at Birmingham  
*Annual \$1M center with 6 research and development projects.*

**Information Systems Manager** 2012-2016  
UAB/Lakeshore Research Collaborative  
School of Health Professions, University of Alabama at Birmingham

**Senior Network Analyst** 2003-2011  
Department of Disability and Human Development  
University of Illinois at Chicago

**Graduate Research Assistant** 2000-2003  
Department of Disability and Human Development  
University of Illinois at Chicago

**EDUCATION**

**University of Illinois** Chicago, IL  
*Doctor of Philosophy in Management & Information Systems* May 2016

**University of Illinois** Chicago, IL  
*Masters of Engineering in Bioengineering* December 2009

**University of Illinois** Chicago, IL  
*Masters of Science in Computer Engineering* May 2003

**University of Madras** Chennai, India  
*Bachelor of Engineering in Electrical & Electronics Engineering* May 1999

## **TEACHING ACTIVITIES**

### Courses Taught

**HI 653**

2017 to Current

***Managing the User-Centered Development Process***

### Doctoral Thesis Committees

**Ayse Zengul**

PhD in Nutrition Sciences

**Committee Chair**

2019-Present

Thesis/Dissertation Title: TBD

**Matthew Ainsworth**

PhD in Health Behavior

**Committee Member**

2018-2019

Thesis/Dissertation Title: Examining the Role of Perceived Benefits and Barriers in Physical Activity Behavior for Cancer Prevention and Control

### Master's Thesis Committee(s)

**John Hoyle**

MS in Biomedical Engineering

**Committee Member**

2016-2017

### MSHI Capstone Advising

**Jeff DeGarmo**

2017-2019

**Emanuel McClain**

2017-2019

## **RESEARCH/SCHOLARSHIP ACTIVITIES**

### Scholarly Award(s)

**Creativity is a Decision Award**

2017

***UAB's Nutrition Obesity Research Center***

### Refereed Articles

#### ***Published***

Guerra, N., Neumeier, W., Breslin, L., Geer, B., Thirumalai, M., Ervin, D., & Rimmer, J. (n.d.). Feedback and Strategies from Individuals with Intellectual Disability Completing a Personalized Online Weight Loss Intervention: A Qualitative Analysis. *Intellectual and Developmental Disabilities*. [published online ahead of print, 8/2019]

Rimmer, J. H., Mehta, T., Wilroy, J., Lai, B., Young, H. J., Kim, Y., . . . Thirumalai, M. (2019). Rationale and design of a Scale-Up Project Evaluating Responsiveness to Home Exercise and Lifestyle Tele-Health (SUPER-HEALTH) in people with physical/mobility disabilities: A type 1 hybrid design effectiveness trial. *BMJ Open*, 9(3). doi:[10.1136/bmjopen-2018-023538](https://doi.org/10.1136/bmjopen-2018-023538)

- Lai, B., Wilroy, J., Young, H. J., Howell, J., Rimmer, J. H., Mehta, T., & Thirumalai, M. (2019). A mobile app to promote adapted exercise and social networking for people with physical disabilities: Usability study. *Journal of Medical Internet Research*, 21(3). doi:[10.2196/11689](https://doi.org/10.2196/11689)
- Kim, Y., Lai, B., Mehta, T., Thirumalai, M., Padalabalanarayanan, S., Rimmer, J. H., & Motl, R. W. (2019). Exercise Training Guidelines for Multiple Sclerosis, Stroke, and Parkinson Disease: Rapid Review and Synthesis. *American Journal of Physical Medicine and Rehabilitation*, 98(7), 613-621. doi:[10.1097/PHM.0000000000001174](https://doi.org/10.1097/PHM.0000000000001174)
- Mehta, T., Young, H. -J., Lai, B., Wang, F., Kim, Y., Thirumalai, M., . . . Rimmer, J. H. (2019). Comparing the Convergent and Concurrent Validity of the Dynamic Gait Index with the Berg Balance Scale in People with Multiple Sclerosis.. *Healthcare (Basel)*, 7(1). doi:[10.3390/healthcare7010027](https://doi.org/10.3390/healthcare7010027)
- Malone, L. A., Thirumalai, M., Padalabalanarayanan, S., Neal, W. N., Bowman, S., & Mehta, T. (2019). Energy expenditure and enjoyment during active video gaming using an adapted Wii fit balance board in adults with physical disabilities: Observational study. *Journal of Medical Internet Research*, 21(2). doi:[10.2196/11326](https://doi.org/10.2196/11326)
- Wingo, B. C., Yang, D., Davis, D., Padalabalanarayanan, S., Hopson, B., Thirumalai, M., & Rimmer, J. H. (2019). Lessons learned from a blended telephone/e-health platform for caregivers in promoting physical activity and nutrition in children with a mobility disability. *Disability and Health Journal*. doi:[10.1016/j.dhjo.2019.100826](https://doi.org/10.1016/j.dhjo.2019.100826)
- Rimmer, J. H., Thirumalai, M., Young, H. J., Pekmezi, D., Tracy, T., Riser, E., & Mehta, T. (2018). Rationale and design of the tele-exercise and multiple sclerosis (TEAMS) study: A comparative effectiveness trial between a clinic- and home-based telerehabilitation intervention for adults with multiple sclerosis (MS) living in the deep south. *Contemporary Clinical Trials*, 71, 186-193. doi:[10.1016/j.cct.2018.05.016](https://doi.org/10.1016/j.cct.2018.05.016)
- Thirumalai, M., Rimmer, J. H., Johnson, G., Wilroy, J., Young, H. J., Mehta, T., & Lai, B. (2018). Teams (Tele-exercise and multiple sclerosis), a tailored telerehabilitation mhealth app: Participant-centered development and usability study. *JMIR mHealth and uHealth*, 6(5). doi:[10.2196/10181](https://doi.org/10.2196/10181)
- Thirumalai, M., Kirkland, W. B., Misko, S. R., Padalabalanarayanan, S., & Malone, L. A. (2018). Adapting the wii fit balance board to enable active video game play by wheelchair users: User-centered design and usability evaluation. *Journal of Medical Internet Research*, 20(3). doi:[10.2196/rehab.8003](https://doi.org/10.2196/rehab.8003)
- Neumeier, W. H., Guerra, N., Thirumalai, M., Geer, B., Ervin, D., & Rimmer, J. H. (2017). POWERS<inf> forID</inf>: Personalized Online Weight and Exercise Response System for Individuals with Intellectual Disability: Study protocol for a randomized controlled trial. *Trials*, 18(1). doi:[10.1186/s13063-017-2239-2](https://doi.org/10.1186/s13063-017-2239-2)
- Malone, L. A., Padalabalanarayanan, S., McCroskey, J., & Thirumalai, M. (2017). Assessment of Active Video Gaming Using Adapted Controllers by Individuals With Physical Disabilities: A Protocol.. *JMIR Res Protoc*, 6(6), e116. doi:[10.2196/resprot.7621](https://doi.org/10.2196/resprot.7621)

Malone, L. A., Rowland, J. L., Rogers, R., Mehta, T., Padalabalanarayanan, S., Thirumalai, M., & Rimmer, J. H. (2016). Active Videogaming in Youth with Physical Disability: Gameplay and Enjoyment. *Games for Health Journal*, 5(5), 333-341. doi:[10.1089/g4h.2015.0105](https://doi.org/10.1089/g4h.2015.0105)

Rowland, J. L., Malone, L. A., Fidopiastis, C. M., Padalabalanarayanan, S., Thirumalai, M., & Rimmer, J. H. (2016). Perspectives on Active Video Gaming as a New Frontier in Accessible Physical Activity for Youth With Physical Disabilities. *Physical Therapy*, 96(4), 521-532. doi:[10.2522/ptj.20140258](https://doi.org/10.2522/ptj.20140258)

Lambert, B. L., Yu, C., & Thirumalai, M. (2004). A system for multiattribute drug product comparison.. *Journal of medical systems*, 28(1), 31-56.

### Invited Presentations

#### **International**

Thirumalai, M. (2018, Oct). Promoting Accessible and Inclusive Physical Activity for People with Disabilities using Information Technology. *Inclusion and Diversity: International Conference on Accessibility Development*. Conference conducted at Tsinghua University, Beijing, China.

#### **National**

Thirumalai, M. (2018, Jul). Telehealth Interventions to increase Physical Activity in PWD. *State of the Science on ICT Access*. Conference conducted at Arlington, VA by University of Pittsburgh and Carnegie-Mellon University.

Thirumalai, M. (2015, Oct). Advances in Telehealth for Children with Disabilities. *Research Summit IV - Innovations in Technology for Children with Brain Insults: Maximizing Outcomes*. Conference conducted at Arlington, VA by APTA Section on Pediatrics and University of Hartford.

### Refereed Conference Papers

M. Thirumalai and A. Ramaprasad, "Ontological Analysis of the Research on the Use of Social Media for Health Behavior Change," *2015 48th Hawaii International Conference on System Sciences*, Kauai, HI, 2015, pp. 814-823. doi: 10.1109/HICSS.2015.103

Ramaprasad, A., Syn, T., & Thirumalai, M. (2014). An Ontological Map for Meaningful Use of Healthcare Information Systems (MUHIS). *HEALTHINF*.

### Refereed Conference Abstracts

Ainsworth, M.C., Perumean-Chaney, S.E., Fontaine, K.R., Thirumalai, M., Rogers, L.Q., & Pekmezi, D. (2019). Sedentary Adult Characteristics and Exercise Benefits and Barriers: Associations in an Interactive Voice Response Study: 2605 Board #269 May 31 9:30 AM - 11:00 AM.

Thirumalai, M., Lai, B., Wilroy, J., Young, H., Mehta, T., & Rimmer, J.H. (2018). User-Centered Design of mHealth Apps to Promote Physical Activity Behavior Change in People With Disabilities. *Archives of Physical Medicine and Rehabilitation*, Volume 99, Issue 10, e88.

Jereme Wilroy, Tapan Mehta, Dorothy Pekmezi, Mohanraj Thirumalai, Hui-Ju Young, James Rimmer, Scale Up Project Evaluating Responsiveness to Home Exercise And Lifestyle Tele-Health (SUPER HEALTH), Archives of Physical Medicine and Rehabilitation, Volume 98, Issue 10, 2017, Page e107

Neal W, Young H, Mehta T, Thirumalai M, Tracy T, Riser E, Rimmer J. Comparative Effectiveness Trial between a Clinic- and Home-Based Exercise Intervention for Multiple Sclerosis. Archives of Physical Medicine and Rehabilitation , Volume 98 , Issue 10 , e46

Laurie A. Malone, Sangeetha Padalabalanarayanan, Mohanraj Thirumalai, Casey Herman, Christopher Mills, Audrey B. Cody, David Ryan, & James H. Rimmer, Making active video games accessible for youth with physical disabilities. NARRTC 2014

Vijay Vasudevan, MPH, Ming-De Chen, MS, OT, Mohanraj Thirumalai, MS, James Rimmer, PhD Database of Systematic Evidence on Physical Activity and Disability (DOSE-PAD). Presented at the annual meeting for American Public Health Association, 2011.

Amy Rauworth, MS, RCEP, Mohanraj Thirumalai, MS, Using Social Media to Promote Positive Health Behavior Change in Individuals with Disabilities. Presented at the annual meeting for American Public Health Association, 2011.

#### Refereed Conference Posters

Goodner, E. S., Neal, W., Tracy, T., Mehta, T., Thirumalai, M., Neumeier, W. H., ... & Rimmer, J. H. (2018). A Multilevel Patient Engagement Model for Recruiting Hard-to-reach Populations into Exercise Training Studies: 1871 Board# 132 May 31 2. Medicine & Science in Sports & Exercise, 50(5S), 447.

Malone, L., Padalabalanarayanan, S., Thirumalai, M., Herman, C., Fidopiastis, C., Rowland, J., & Rimmer, J. (2014). Designing Interactive Gaming Environments for Youth with Disabilities. ISBNPA Pre-Conference Symposium, Games for Increasing Physical Activity: Mechanisms for Change. Houston, TX.

Laurie A. Malone, Sangeetha Padalabalanarayanan, Mohanraj Thirumalai, Casey Herman, Christopher Mills, Audrey B. Cody, David Ryan, & James H. Rimmer, Identification of Accessibility Barriers Encountered By Youth With Physical Disabilities During Active Video Game Play. RESNA 2014

Ramaprasad, Arkalgud and Thirumalai, Mohanraj, Managing Population Health: An Ontological Framework (December 1, 2012). 2012 Summit on the Science of Eliminating Health Disparities, Washington DC, USA, December 2012.

Jennifer Gray-Stanley, MA, James Rimmer, PhD, Cheeri Ong, MS, Mohanraj Thirumalai, MS, Onar Vikingstad, Developing a responsive consumer request service system. Presented at the annual meeting for American Public Health Association, 2006.

Padalabalanarayanan Sangeetha, Thirumalai Mohanraj, John Sam F, Fay Brian, RERC RecTech's Online Solutions Database for Assistive Technology Equipment, submitted for RESNA 2005.

Conference Workshops

Padalabalanarayanan S, Thirumalai M. Adapted Video Game Controllers for People With Mobility Limitations. RESNA 2016. 14 Jul 2016

Thirumalai M, Padalabalanarayanan S. A Geotagged and Crowdsourced Platform for Mapping Accessible Community Resources. RESNA 2016. 13 Jul 2016

Grant Activities

**Active Extramural Grants**

90IFDV0013

10/1/2019 - 9/30/2022

Administration for Community Living/DHHS/NIDILRR

*Artificial Intelligence Assisted Inclusive Diabetes Telecoaching Self-Management Program.*

The goal of this project is to create the first ever online diabetes self-management program for people with disabilities that is accessible, inclusive, scalable and sustainable.

Role: **Principal Investigator**

90REGE0002-01-00

10/1/2017 - 9/30/2022

Administration for Community Living/DHHS/NIDILRR

*Rehabilitation Engineering Research Center on Interactive Exercise Technologies and Exercise Physiology Benefiting Persons with Disabilities.*

The Center addresses access to recreation and exercise using telehealth, virtual reality and other forms of technology in adults with physical disabilities.

Role: **Co-PI/Co-Director and Director of ICT**

NIH/NCI R01CA233550-01A1

06/01/2019 – 05/31/2024

*Testing Scalable, IVR-Supported Cancer Prevention Interventions in the Rural Alabama Black Belt*

This proposal tests a multi-level, interactive voice response system- supported physical activity intervention in populations at high risk for sedentary behavior (rural, mostly minority residents in the Deep South).

Role: **Co-Investigator**

Nielsen Foundation/Lakeshore Foundation 000514208

4/1/2017 to 3/31/2019

*Is a Blended Residential/eHealth Lifestyle Intervention for Improving Cardiovascular Health and Managing Pain in At-Risk Individuals with Spinal Cord Injury More Effective than an eHealth Program Alone?*

Role: **Principal Investigator**

PCORI MS-1511-3653

11/1/2016–11/30/2020

*Comparative Effectiveness Trial between a Clinic- and Home-Based Complementary and Alternative Medicine Telerehabilitation Intervention for Adults with Multiple Sclerosis (MS)*

The proposed study will determine if our evidence-based rehabilitation and exercise program produces similar health outcomes when delivered in clinic or at home, using pre-loaded tablets and

Interactive Voice Response (IVR) system technology among 820 participants with MS from 30 clinics across Alabama and Mississippi.

Role: **Co-Investigator/Director of ICT**

NIH 5R01HD085186-02

4/1/2016–3/31/2021

*NIH-R01: Scale Up Evaluation of a Physical Activity Program for Adults with Physical Disability*

The proposed study will test a remote, home-based exercise training and monitoring system specifically designed for adults with physical/mobility disability. The program consists of a set of creative movement-2-music (M2M) exercise patterns/videos that target improvements in cardiorespiratory, musculoskeletal and mental health. Several built-in features of the telehealth platform are aimed at increasing exercise compliance, engagement and scalability.

Role: **Co-Investigator/Director of ICT**

HHS U59DD000906

4/1/2016–Current

Centers for Disease Control and Prevention (CDC)

*National Center on Health, Physical Activity and Disability*

The central goal of this national practice center (funded by CDC since 1999) is to develop leadership, policy training and telehealth initiatives that support the health and wellness of people with disabilities.

Role: **Co-Investigator/Director of ICT**

90DPTB0015-02-02

10/1/2018 - 9/30/2022

Administration for Community Living/DHHS/NIDILRR

*University of Alabama at Birmingham Traumatic Brain Injury Model System.*

Role: **Co-Investigator**

### ***Active Intramural Grants***

UAB Community Health Scholars Pilot Grant Program

4/1/2017 to 3/31/2019

*Prevention through Intervention: Telehealth Solution to Deter Preventable 911 Calls Due to Hypoglycemia*

This pilot research project aims to (i) establish a standardized the intervention protocol for a community paramedicine program with a specific focus on hypoglycemia, (ii) use telehealth to facilitate tailoring of the intervention to meet the precise educational needs of the participants, and (iii) perform a preliminary evaluation of the program.

Role: **Principal Investigator**

UAB Diabetes Research Center, Pilot & Feasibility Program

11/1/2018 to 11/30/2019

*An Artificial Intelligence Assisted Telehealth Intervention To Promote Self-Management In Patients With Type 2 Diabetes Mellitus*

This pilot project is used to test various artificial intelligence algorithms and suitability for using in a telecoaching dashboard for people with Type 2 Diabetes Mellitus

Role: **Principal Investigator**

### ***Completed Grants***

H133A130044

10/01/2013 - 09/30/2018

Dept of Education/NIDRR

*Dose-Response Effects of Transformative Exercise in Improving Health and Function in Adults with Spinal Cord Injury and Multiple Sclerosis*

Longitudinal study focused on collecting information on a range of variables to investigate the differential influences of factors on health and function in spinal cord injury and multiple sclerosis participants.

Role: ICT Lead

Sub Contract

10/01/2013 - 09/30/2018

Dept of Education/NIDRR/UIC

*RRTC on Developmental Disabilities and Health*

Role: ICT Lead

DED H133E120005

10/1/2012 - 9/30/2017

Dept of Education/NIDRR

Rehabilitation Engineering Research Center on Interactive Exercise Technologies and Exercise Physiology Benefiting Persons with Disabilities.

The Center addresses measurement issues and access to recreation and exercise using virtual reality and other forms of technology in adults with physical and cognitive disabilities.

Role: Director of ICT

H133A120102-12A

10/01/2013 - 9/30/2015

Dept of Education/NIDRR

UAB Obesity Research Project on Prevalence, Adaptations and Knowledge Translation in Youth and Young Adults with Disabilities

This project addresses significant gaps in the literature related to prevalence, risk factors and consequences of obesity in youth and young adults with disabilities.

Role: ICT Lead

NIH 1R21HD073487-01A1

9/18/2013– 8/31/2015

National Institute on Child Health and Human Development

Internet Based System for Managing Obesity in Children with Disabilities

The proposed feasibility study will develop and pilot test an innovative telehealth system to promote improved physical activity and nutrition in children with spina bifida. POWERS (Personalized Online Weight and Exercise Response System) is a novel, multifocal family-centered tailored intervention utilizing an innovative online tool designed to facilitate improvements in physical activity and nutritional behaviors.

Role: ICT Lead

Agency for Healthcare Research and Quality (AHRQ)

05/01/2010 - 05/31/2013

Improving Health Care Quality through Health IT for Persons with Intellectual Disabilities

(Grant #HHS 1R21HS018766)

Role: ICT Lead

Centers for Disease Control and Prevention

04/01/2008-03/31/2012

National Center on Physical Activity and Disability (Grant #U59DD000437)

Role: ICT Lead



Centers for Disease Control and Prevention 9/30/06-9/29/10  
Personalized Physical Activity and Nutrition Intervention for Overweight/Obese Adults with  
Mobility Disabilities. (Grant #1R01DD000134)  
Role: ICT Lead

Centers for Disease Control and Prevention [Supplement] 2/26/13-9/29/13  
Customization of a self-management health promotion program for people with hemophilia.  
(Grant # 1U59DD000906-01).  
Role: ICT Lead

National Institute on Disability and Rehabilitation Research (NIDRR) 10/1/07-9/30/12  
Rehabilitation Engineering Research Center on Recreational Technology and Exercise  
Physiology Benefiting Persons with Disabilities. (Grant # H133E070029).  
Role: ICT Lead

National Institute on Disability and Rehabilitation Research (NIDRR) 11/1/06-10/31/10  
Obesity and Obesity-Related Secondary Conditions in Youth with Disabilities. (Grant #  
H133A060066).  
Role: ICT Lead

Centers for Disease Control and Prevention 4/1/03-3/31/08  
National Center on Physical Activity and Disability.  
Role: ICT Lead

National Institute on Disability and Rehabilitation Research (NIDRR) 11/1/02-10/31/07  
Rehabilitation Engineering Research Center on Recreational Technology and Exercise  
Physiology Benefiting Persons with Disabilities. (Grant # H133E020715).  
Role: ICT Lead

Centers for Disease Control and Prevention 4/1/99-3/31/03  
National Center on Physical Activity and Disability.  
Role: ICT Lead

#### Media/Press Coverage

“Developing AI assisted telecoaching solution for people with disabilities and diabetes” -  
<https://www.news-medical.net/news/20191025/Developing-AI-assisted-telecoaching-solution-for-people-with-disabilities-and-diabetes.aspx>

“How Lakeshore Foundation and UAB are working to reduce a common, costly 911 challenge” -  
<https://www.bizjournals.com/birmingham/news/2017/05/12/how-lakeshore-foundation-and-uab-are-working-to.html>

“UAB, Lakeshore project aims to revolutionize multiple sclerosis therapy”-  
<https://www.bizjournals.com/birmingham/news/2017/05/15/uab-lakeshore-project-aims-to-revolutionize.html#i1>

## **SERVICE ACTIVITIES**

### *Professional Service Activities*

#### ***Journals Refereed***

Disability and Health Journal  
Journal of Medical Internet Research  
JMIR Research Protocols  
BMJ Open  
JMIR Formative Research  
Health Systems  
JMIR Human Factors  
Clinical Obesity

#### ***Grant Review Panels***

**HHS/ACL/NIDILRR** **2017**  
SBIR Phase I Grant Review Panel

**HHS/ACL/NIDILRR** **2017**  
Field Initiated Proposals Grant Review Panel

**HHS/ACL/NIDILRR** **2017**  
SBIR Phase II Grant Review Panel

**HHS/ACL/NIDILRR** **2018**  
SBIR Phase I Grant Review Panel

**HHS/ACL/NIDILRR** **2018**  
NERC on Universal Access to Information Technology Grant Review Panel

**HHS/ACL/NIDILRR** **2018**  
DRRP on Community Living Grant Review Panel

**HHS/ACL/NIDILRR** **2019**  
DRRP on Assistive Technology to Promote Independence and Community Living Grant Review Panel

**HHS/ACL/NIDILRR** **2019**  
NERC on Information and Communication Technologies Access Grant Review Panel

#### ***Invited Site Reviews***

**University of Maryland**  
For HHS/ACL/NIDILRR

**College Park, MD**

**Shepherd Center**  
For HHS/ACL/NIDILRR

**Atlanta, GA**

**University of Pittsburgh**  
For HHS/ACL/NIDILRR

**Pittsburgh, PA**

University Level Service Activities

UAB President's Strategic Investment Fund Advisory Council  
Member 2019-present

UAB Budget (RCM) Advisory Committee  
Member 2019-present

UAB Dean of Engineering Search Committee  
Member 2019-2020

UAB Human Research Advisory Committee  
Member 2019-present

UAB Electronic Research Administration (IRAP) Replacement Committee  
Member 2019-present

UAB Research Administration Network Group - Process Improvement Com.  
Member 2019-present

UAB Finance Committee  
Member 2019-present

UAB Faculty Senate  
Alternate Faculty Senator 2017-present

UAB Governance and Operations Committee  
Member 2018-2019

UAB Faculty Policy and Procedures Committee  
Member 2017-2018

School Level Service Activities

School of Health Professions Benevolent Fund Committee  
Member 2018-present

School of Health Professions Faculty Senate Liaison  
Liaison 2018-present

Departmental Service Activities

HSA Diversity, Equity and Inclusion Committee 2019-present

Member

*Professional Memberships*

American Congress of Rehabilitation Medicine

2018-present

Healthcare Information and Management Systems Society

2016-present