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University of South Florida  
College of Behavioral and Community Sciences  
Rehabilitation and Mental Health Counseling  
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## **EDUCATION**

- Ph.D. University of South Florida, 1989  
Doctor of Philosophy in Experimental Psychology
- M.A. University of South Florida, 1985  
Master of Arts in Experimental Psychology
- M.A. University of the Pacific (California), 1979  
Master of Arts in Experimental Psychology
- B.A. Central College (Iowa), 1976  
Bachelor of Arts in Psychology

## **PROFESSIONAL EXPERIENCE**

### **University of South Florida**

College of Behavioral and Community Sciences, Department of Rehabilitation and Mental Health Counseling

- *Research Associate Professor Retired Meritorious* (2018-present)
- *Research Associate Professor* (2011-2018)
- *Research Assistant Professor* (2008-2011)

Louis de la Parte Florida Mental Health Institute

Department of Aging & Mental Health

- *Research Assistant Professor* (2008-2011)
- *Associate in Research (Faculty)* (1996-2008)

FMHI Office of Information Technology

- *Director - Office of Information Technology* (1992-2003)

Department of Mental Health Law & Policy

- *Assistant in Research (Faculty)* (1989-1995)

USF Health

- *Department of Psychiatry* (1981-1987)

### **Rollins College**

Department of Psychology

- *Instructor* 1987-1988

### **Johns Hopkins School of Medicine**

Department of Psychiatry

- *Research Technician* (1979-1981)

## GRANTS AND CONTRACT FUNDED PROJECTS

### Center for Innovation, Technology and Aging

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Funding Agency: University of South Florida  
Funding Level: \$1,000,000  
Role in Project: Investigator  
Description: Research and development of technologies for older adults, including first-aid robot for use in older adult home environments, and advanced sensor development.  
Dates: 2024-2027

### A Passive Safety Monitoring System for Electric Powered Wheelchairs Operators with Alzheimer's disease (AD) and Cognitive Impairments

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Funding Agency: National Institutes of Health  
Funding Level: \$48,951  
Role in Project: Principal Investigator on USF subcontract from IDL Technologies  
Description: Determination of optimum device characteristics through focus groups of wheelchair users and caregivers. Evaluation of prototype device.  
Dates: 2017-2018

### VA Smart Home Assistive Technology Service Project

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Funding Agency: Ubisense, Inc.  
Funding Level: \$48,708  
Role in Project: Investigator  
Description: Assessment of intelligent assistive cognitive orthotics developed in a clinical setting and exported for use in home-based care.  
Dates: 2012-2013

### MRI: Acquisition of a CAREN Virtual Reality System for Collaborative Research in Assistive and Rehabilitation Technologies

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Funding Agency: National Science Foundation  
Funding Level: \$642,852  
Role in Project: Investigator (PI, Rajiv Dubey, PhD)  
Description: Investigation of possible applications of the CAREN for assessing cognitive impairment to gait and balance variability.  
Dates: 2012-2015

### Extending Smart Home Technology for Cognitively Impaired Veterans to Delay Institutionalization (T-21)

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Funding Agency: U.S. Department of Veterans Affairs  
Funding Level: \$650,952  
Role in Project: Investigator (PI, Jan Jasiewicz, PhD)  
Description: Assessment of intelligent assistive cognitive orthotics developed in a clinical setting and exported for use in home-based care.  
Dates: 2011-2012

Changes in Movement Variability and Functional Status in Veterans with Traumatic Brain Injury receiving rehabilitation in the JAHVA Polytrauma Transitional Rehabilitation Program (PTRP) and Student Veterans

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Funding Agency: U.S. Department of Defense  
Funding Level: \$198,000  
Role in Project: Principal Investigator  
Description: Novel assessment as a method for detecting mild traumatic brain injury in veterans.  
Dates: 2010-2013

Telemedicine for Mental Health Services for the Linguistically Isolated: A Pilot Study (R03)

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Funding Agency: Agency for Healthcare Research & Quality  
Funding Level: \$100,000  
Role in Project: Co-Investigator (PI, Yuri Jang, PhD)  
Description: Assessed potential for the delivery of cognitive-based therapies via telemedicine to Korean elders.  
Dates: 2011-2012

Telemedicine for Behavioral Health: State Reimbursement Policies, Procedures and Outcomes

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Funding Agency: Florida Agency for Health Care Administration  
Funding Level: \$145,279  
Role in Project: Investigator (PI, David Chiriboga, PhD)  
Description: Investigation of state reimbursement policies and procedures as well as implementation outcomes.  
Dates: 2011-2012

Design of a Patient-Centered “Welcome Home” for Independent Living

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Funding Agency: U.S. Department of Veterans Affairs  
Funding Level: \$2,980,000  
Role in Project: Investigator (PI, Jan Jasiewicz, PhD)  
Description: Create a prototype intelligent residential environment to facilitate the recovery and function of veterans with moderate to severe traumatic brain injury.  
Dates: 2010-2012

Preventing Adverse Events Associated with Mobility

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Funding Agency: U.S. Department of Veterans Affairs National Center for Patient Safety  
Funding Level: \$640,000  
Role in Project: Investigator  
Description: Use of high precision tracking technologies to prevent elopement and falls in veterans with cognitive impairment related to dementia.  
Dates: 2009-2011

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#### Home Evaluation of Visual Exit Barriers in Dementia-Related Wandering

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Funding Agency: U.S. Department of Veterans Affairs  
Funding Level: \$405,280  
Role in Project: Co-Principal Investigator  
Description: Use of precision tracking systems to determine the effectiveness of two types of elopement management techniques developed for persons with dementia who wander.  
Dates: 2008-2010

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#### HSR&D/RR&D Research Center of Excellence: Maximizing Rehabilitation Outcomes

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Funding Agency: U.S. Department of Veterans Affairs  
Funding Level: \$4,850,000  
Role in Project: Investigator  
Description: Application of precision tracking technologies in the assessment of fall risk and elopement likelihood in veterans with cognitive impairment related to dementia.  
Dates: 2009-2013

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#### Evaluation and Integration of an Automatic Fall Prediction System R21

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Funding Agency: Agency for Healthcare Research & Quality  
Funding Level: \$299,452  
Role in Project: Principal Investigator  
Description: Exploration of a measure of path variability as a predictor of impending falls in residents of assisted living facilities.  
Dates: 2009-2012

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#### Locomotor Variability in ALF Residents with AD MCI

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Funding Agency: Johnnie B. Byrd Sr. Alzheimer's Research Center  
Funding Level: \$51,890  
Role in Project: Principal Investigator  
Description: Exploration of tracking technologies as a means of detecting small movement pattern changes indicative of cognitive impairment in residents of assisted living facilities.  
Dates: 2007-2009

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#### Safe Wandering at Home: Clinical and Research Interventions to Reduce Hazardous Wandering by Persons with Dementia

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Funding Agency: U.S. Department of Veterans Affairs  
Funding Level: \$14,175  
Role in Project: Co-Principal Investigator  
Description: Examination of passive technologies to manage wandering by veterans in home environments.  
Dates: 2006-2008

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#### Evaluation of Stakeholder Attitudes towards Technologies to Control Wandering

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Funding Agency: University of South Florida  
Funding Level: \$7,000

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Role in Project:	Principal Investigator
Description:	Investigate caregiver opinions on the potential effectiveness of existing technologies for managing wandering in persons with dementia living in the community, and on the elements that such technologies should possess from the user's perspective.
Dates:	2005-2005

## PUBLICATIONS

### *Patent*

- Kearns, W. D., Fozard, J., & Kostis, E. (2011). Human and physical asset movement pattern analyzer. Patent number 7978085-1. University of South Florida.
- Kearns, W.D., Crosland, K.A., Craighead, J.D., & Fozard, J.L. (2023). System and medication box for improving medication adherence. Patent number 11806312. University of South Florida.

### *Refereed Journal Articles*

- Tam, A.Y., Mao, Y., Lai, D.K., Chan, A.C., Cheung, D.S.K., Kearns, W., Wong, D.W. & Cheung, J.C. (submitted for publication). SaccpaNet: A Separable Atrous Convolution-based Cascade Pyramid Attention Network to estimate body landmarks using cross-modal knowledge transfer for under-blanket sleep posture classification. *Journal of Biomedical and Health Informatics*.
- Aleksic, S., Atanasov, M., Calleja Agius, J., Camilleri, K., Čartolovni, A., Climent-Pérez, P., Colantonio, S., Cristina, S., Despotovic, V., Ekenel, H. K., Erakin, E., Florez-Revuelta, F., Germanese, D., Grech, N., Sigurðardóttir, S. G., Emirzeoğlu, M., Iliev, I., Jovanovic, M., Kampel, M., Kearns, W.,... Zgank, A. (2022). State of the art of audio- and video-based solutions for AAL. Zenodo. <https://doi.org/10.5281/zenodo.6390709>
- Wallisch, A., Irvin, D., Kearns, W. D., Luo, Y., Boyd, B., & Rous, B. (2022). Exploring a novel tool to measure wandering behavior in the early childhood classroom. *OTJR: Occupational Therapy Journal of Research*, 42(2), 137–145. <https://doi.org/10.1177/15394492211065705>
- Kearns, W. D., Becker, A. J., Condon, J. P., Molinari, V., Hanson, A., Conover, W., & Fozard, J. L. (2022). Views of wheelchair users and caregivers regarding a passive safety monitoring system for electric powered wheelchair operators with cognitive impairment. *Assistive Technology: The Official Journal of RESNA*, 34(1), 64–76. <https://doi.org/10.1080/10400435.2019.1689537>
- Aspnes, E., Bergschold, J., Charness, N., Fang, M. L., Gutman, G., Hsu, Y., Kearns, W., Kort, H. S. M., Raymundo, T. M., Nap, H., Zandi, D., Zhang, W. (2022). WHO-ISG collaboration on assistive technologies for healthy ageing-in-place: A round table discussion. *Gerontechnology*, 21(s), 1-1. <https://doi.org/10.4017/gt.2022.21.s.721.sp7>
- Fozard, J.L. & Kearns, W.D. (2021). Quantifying movement variability with fractals: From fall prediction to pharmaceutical evaluations and automated social distancing. *Gerontechnology*, 20(2), 1-8 <https://doi.org/10.4017/gt.2021.20.2.3.443.06>
- Kearns, W.D. & Fozard, J.L. (2020). Phasic and long-term shifts in mobility and cognition: Implications for gerontechnology design. *Gerontechnology*, 19(0), 1-1 <https://doi.org/10.4017/gt.2020.19.s.70118.3>
- Bowen, M. E., Kearns, W., Crenshaw, J. R., & Stanhope, S. J. (2019). Using a real-time locating system to measure walking activity associated with wandering behaviors among

- institutionalized older adults. *Journal of Visualized Experiments: JoVE*, (144), e58834. <https://doi.org/10.3791/58834>
- Tinker, A., Fozard, J. L., Kearns, W., Mihailidis, A., Atoyebi, O., Bailey, A., Bet, P., Lapierre, N., Neubauer, N., Roque, N., Vermeer, Y., & Taipale, V. (2018). Twelve years of ISG masterclasses: Past, present, and future. *Gerontechnology*, 17(4), 232–237. <https://doi.org/10.4017/gt.2018.17.4.004.00>
- Kearns, W. & Gutman, G.M. (2018) Editorial: Welcome to ISG's 11<sup>th</sup> World Conference of Gerontechnology. *Gerontechnology*, 17(Suppl.), 1s. <https://doi.org/10.4017/gt.2018.17.s.001.00>
- Bullers, K., Howard, A.M., Hanson, A, Kearns W.D., Orriola J.J., Polo R.L., Sakmar, K.A. (2018). It takes longer than you think: librarian time spent on systematic review tasks. *Journal of the Medical Library Association*, 106(2):198-207. <https://doi.org/10.5195/jmla.2018.323>
- Fozard, J. & Kearns, W. (2017). Linking longitudinal variability in physiological and behavioral data to disease processes: Opportunities and challenges. *Public Policy & Aging Report*, 27(2), 62–67. <https://doi.org/10.1093/ppar/prx012>
- Kearns, W. (2017) Gerontechnology: Is it time for regulation? *Gerontechnology*, 16(2), 63-64. <https://doi.org/10.4017/gt.2017.16.2.001.00>
- Irvin, D., Crutchfield, S., Greenwood, C., Kearns, W. & Buzhardt, J. (2017) An automated approach to measuring child movement and location in the early childhood classroom. *Behavioral Research Methods*. <https://doi.org/10.3758/s13428-017-0912-8>
- Kearns, W. & Fozard, J.L. (2016) Evaluating gerontechnologies: Proof of concept is necessary, but not sufficient. *Gerontechnology*, 14(3), 139-145. <https://doi.org/10.4017/gt.2016.14.3.007.00>
- Bulat, T., Kerrigan, M. V., Rowe, M., Kearns, W., Craighead, J. D., & Ramaiah, P. (2016). Field evaluations of tracking/locating technologies for prevention of missing incidents. *American Journal of Alzheimer's Disease and Other Dementias*, 31(6), 474-80. <https://doi.org/10.1177/1533317515619479>
- Kearns, W., Fozard, J., & Nams, V. (2016). Movement path tortuosity in free ambulation: Relationships to age and brain disease. *IEEE Journal of Biomedical and Health Informatics*, 21(2), 539-548. <https://doi.org/10.1109/JBHI.2016.2517332>
- Kearns, W. D., Fozard, J. L., Ray, R. D., Scott, S., Jasiewicz, J. M., Craighead, J. D., & Pagano, C. V. (2016). Movement path tortuosity predicts compliance with therapeutic behavioral prompts in patients with traumatic brain injury. *Journal of Head Trauma Rehabilitation*, 31(1), E20-E27. <https://doi.org/10.1097/htr.0000000000000126>
- Kearns, W. D., Scott, S., Fozard, J. L., Dillahunst-Aspillaga, C., & Jasiewicz, J. M. (2016). Decreased movement path tortuosity is associated with improved functional status in patients with traumatic brain injury. *Journal of Head Trauma Rehabilitation*, 31(1), E13-E19. <https://doi.org/10.1097/htr.0000000000000125>
- Kearns, W. D., Fozard, J. L., Schonfeld, L., Scott, S., & Marshall, K. (2015). Elevated movement path tortuosity in voluntary outdoor ambulation in community-dwelling veterans with a history of traumatic brain injury. *Journal of Head Trauma Rehabilitation*, 30(1), E8-14. <https://doi.org/10.1097/htr.0000000000000021>
- Fozard, J.L., Kearns, W.D. (2015). Editorial: Roots, trunk, branches. *Gerontechnology*, 14 (1), 1-3. <https://doi.org/10.4017/gt.2015.14.1.002.00>

- Barakat, A., Woolrych, R., Kort, H. S. M., Sixsmith, A., & Kearns, W. D. (2013). E-Health technology competencies for health professionals working in home care to support older adults to age in place: Outcome of a two day collaborative workshop. *Medicine 2.0*, 2(2), e10-e-12. <https://doi.org/10.2196/med20.2711>
- Kearns, W. D., Jasiewicz, J. M., Fozard, J. L., Webster, P., Scott, S., Craighead, J., Bowen, M. E., McCarthy, J. (2013). Temporo-spacial prompting for persons with cognitive impairment using smart wrist-worn interface. *Journal of Rehabilitation Research and Development*, 50(10), vii-xiv. <https://doi.org/10.1682/JRRD.2013.12.0261>
- Applegarth, S.P, Rowe, M.R., Kearns, W.D, Fozard, J.L, Bowen, M.E. (2013) Activation thresholds and operating characteristics of commercial alarm products that may be used to provide surveillance for dementia caregivers. *Gerontechnology*, 11(3), 480-487. <https://doi.org/10.4017/gt.2013.11.3.007.00>
- Kearns, W. D., Fozard, J., Becker, M. A., Jasiewicz, J., Craighead, J., Holtsclaw, L. et al. (2012). Path tortuosity in everyday movements of elderly persons increases fall prediction beyond knowledge of fall history, medication use, and standardized gait and balance assessments. *Journal of the American Medical Directors Association*, 13(7), 665.e7-665.e13. <https://doi.org/10.1016/j.jamda.2012.06.010>.
- Kearns, W. D., & Fozard, J. (2012). The sensitive residence: Predicting health changes using sensor networks. *Gerontechnology*, 11(2), 272. <https://doi.org/10.4017/gt.2012.11.02.047.00>
- Kearns, W. D., Fozard, J., Becker, M. A., Dion, C., Craighead, J., & Jasiewicz, J. (2012). Something in the way she moves: Falls and fractal dimension. *Gerontechnology*, 11(2), 272-273. <https://doi.org/10.4017/gt.2012.11.02.188.00>
- Jasiewicz J, Kearns W, Craighead J, Fozard JL, Scott S, McCarthy J. (2011) Smart rehabilitation for the 21st century: The Tampa Smart Home for veterans with traumatic brain injury. *Journal of Rehabilitation Research & Development*, 48(8), vii-viii. <https://doi.org/10.1682/JRRD.2011.07.0129>
- Kearns, W. D., Nams, V. O., Fozard, J. L., & Craighead, J. (2011) Wireless telesurveillance system for detecting dementia. *Gerontechnology*, 10(2), 90-102. <https://doi.org/10.4017/gt.2011.10.2.004.00>
- Bowen, M.E, Craighead, J, Wingrave, C.A, Kearns, W.D. (2010) Real-time locating systems (RTLS) to improve fall detection. *Gerontechnology*, 9(4), 464-471. <https://doi.org/10.4017/gt.2010.09.04.005.00>
- Kearns W.D. (2010). Elder path tortuosity covaries with MMSE geographical orientation subscale. *Gerontechnology*, 9(2), 176-177. <https://doi.org/10.4017/gt.2010.09.02.020.00>
- Kearns, W.D. (2010). Of falls and fractals: My career with my mentor, colleague and friend, Professor James L. Fozard. *Gerontechnology*, 9(3), 388-396. <https://doi.org/10.4017/gt.2010.09.03.010.00>
- Kearns, W. D., Nams, V., & Fozard, J. (2010). Tortuosity in movement paths is related to cognitive impairment. *Methods of Information in Medicine*, 49(6), 592-598. <https://doi.org/10.3414/ME09-01-0079>
- van Bronswijk, J. E. M. H., & Kearns, W. D. (2009). Preventive health engineering in earlier and later life. *Gerontechnology*, 8(2), 76-81. <https://doi.org/10.4017/gt.2009.08.02.005.00>.
- King-Kallimanis, B., Schonfeld, L., Molinari, V. A., Algase, D., Brown, L. M., Kearns, W. D. et al. (2009). Longitudinal investigation of wandering behavior in Department of Veterans

- Affairs nursing home care units. *International Journal of Geriatric Psychiatry*, 25(2), 166-174. <https://doi.org/10.1002/gps.2316>.
- Bronswijk, J., Bouma, H. H., Fozard, J. L., Kearns, W. D., Davison, G. C., & Tuan, P. C. (2009). Defining gerontechnology for R&D purposes. *Gerontechnology*, 8(1), 3-10. <https://doi.org/10.4017/gt.2009.08.01.002.00>.
- Kearns, W. D., & Fozard, J. (2008). Locomotor variability assessment of the elderly using ultra wideband radio. *Telemedicine and E-Health*, 14(6), 611-620. <https://doi.org/10.1089/tmj.2008.8493>.
- Kearns, W. D., Algase, D., Moore, D. H., & Ahmed, S. (2008). Ultra wideband radio: A novel method for measuring wandering in persons with dementia. *Gerontechnology*, 7(1), 48-57. <https://doi.org/10.4017/gt.2008.07.01.005.00>.
- Kearns W.D. & Fozard J.L. (2008). Ultra wideband assessment of locomotion in elderly. *Gerontechnology*, 7(2), 138. <https://doi.org/10.4017/gt.2008.07.02.075.00>.
- Fozard, J. L., & Kearns, W. D. (2008). Communication technology changes how we age. *Gerontechnology*, 7(2), 106. <https://doi.org/10.4017/gt.2008.07.02.043.00>.
- Bronswijk, J., Fozard, J. L., Kearns, W. D., Davison, G. C., & Tuan, P. C. (2008). Implementing gerontechnology. *Gerontechnology*, 7(3), 325-327. <https://doi.org/10.4017/gt.2008.07.03.007.00>.
- Schonfeld, L., King-Kallimanis, B., Brown, L. M., Davis, D. M., Kearns, W. D., Molinari, V., Werner, D. H., Beattie, E. R., & Nelson, A. (2007). Wanderers with cognitive impairment in VA nursing home care units. *Journal of the American Geriatrics Society*, 55(5), 692-699. <https://doi.org/10.1111/j.1532-5415.2007.01135.x>
- Kearns W.D, & Fozard J. L. (2007). High-speed networking and embedded gerontechnologies. *Gerontechnology*, 6(3), 135-146. <https://doi.org/10.4017/gt.2007.06.03.003.00>
- Kearns, W. D., Rosenberg, D., West, L., & Applegarth, S. (2007). Attitudes and expectations of technologies to manage wandering behavior in persons with dementia. *Gerontechnology*, 6(2), 89-101. <https://doi.org/10.4017/gt.2007.06.02.004.00>
- Feldman, D. M., & Kearns, W. D. (2007). The mental health needs and perspectives of culturally deaf older adults living in two counties in Florida. *JADARA*, 40(2), 5-18. <https://nsuworks.nova.edu/jadara/vol40/iss2/4/>
- Bronswijk, J., Kearns, W. D., & Normie, L. R. (2007). ICT infrastructures in the aging society. *Gerontechnology*, 6(3), 129-134. <https://doi.org/10.4017/gt.2007.06.03.002.00>.
- Kearns, W. (2006). Community mobility: Driving and transportation alternatives for older persons [Book Review]. *Clinical Gerontologist*, 30(2), 111 – 112.
- Powell-Cope, G., Moore, D., Kearns, W. D., Baptiste, A., Lloyd, J., & Applegarth, S. (2005). VISN 8 patient safety center of inquiry: Direct support for clinicians preventing wandering and associated adverse events for veterans with dementia. *TIPS - Topics in Patient Safety*, 5(6), 3-5. [http://www.va.gov/ncps/TIPS/Docs/TIPS\\_NovDec05.pdf](http://www.va.gov/ncps/TIPS/Docs/TIPS_NovDec05.pdf).
- Peters, R. H., Strozier, A. L., Murrin, M. R., & Kearns, W. D. (1997). Treatment of substance-abusing jail inmates: Examination of gender differences. *Journal of Substance Abuse Treatment*, 14(4), 339-349. [https://doi.org/10.1016/S0740-5472\(97\)00003-2](https://doi.org/10.1016/S0740-5472(97)00003-2)
- Dow, M. G., Kearns, W. D., & Thornton, D. H. (1996). The Internet II: Future effects on cognitive behavioral practice. *Cognitive and Behavioral Practice*, 3(1), 137-157. [https://doi.org/10.1016/S1077-7229\(96\)80035-6](https://doi.org/10.1016/S1077-7229(96)80035-6)



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- Peters, R. H., May, R. L., & Kearns, W. D. (1992). Drug treatment in jails: Results of a nationwide survey. *Journal of Criminal Justice*, 20(4), 283-295. [https://doi.org/10.1016/0047-2352\(92\)90014-Z](https://doi.org/10.1016/0047-2352(92)90014-Z)
- Peters, R. H., Kearns, W. D., Murrin, M. R., & Dolente, A. S. (1992). Psychopathology and mental health needs among drug-involved inmates. *Journal of Prison and Jail Health*, 11(1), 3-25.
- Peters, R. H., Kearns, W. D., Murrin, M. R., & Dolente, A. S. (1992). Effectiveness of in-jail substance abuse treatment: Evaluation results from a National Demonstration Program. *American Jails*, 6(1), 98-104.
- Peters, R. H., & Kearns, W. D. (1992). Drug abuse history and treatment needs of jail inmates. *American Journal of Drug and Alcohol Abuse*, 18(3), 355-366. <https://doi.org/10.3109/00952999209026072>
- Kimmel, H. D., Kearns, W. D., & Anderson, D. E. (1992). Extinction instead of incubation following classical aversive conditioning in dogs. *Integrative Psychological and Behavioral Science*, 27(4), 356-370. <https://doi.org/10.1007/BF02691170>
- Kearns, W. D. (1992). Merging data from different sources: Combining forensic mainframe data with information collected on personal computers. *American Jails*, 6(1), 21-23.
- May, R., Peters, R. H., & Kearns, W. D. (1990). The extent of drug treatment in jails: A 7 summary report. *American Jails*, 4(3), 32-35.
- Anderson, D. E., Murphy, P., & Kearns, W. (1986). High calcium intake does not prevent stress-salt hypertension in dogs. *Integrative Psychological and Behavioral Science*, 21(1), 25-31. <https://doi.org/10.1007/BF02995040>
- Anderson, D. E., Sharinus, M. W., & Kearns, W. D. (1984). Urinary sodium concentration decreases in avoidance-saline hypertension. *Pavlovian Journal of Biological Science*, 19(2), 104.
- Anderson, D. E., Kearns, W. D., & Worden, T. J. (1983). Potassium infusion attenuates avoidance-saline hypertension in dogs. *Hypertension*, 5(4), 415-420. <https://doi.org/10.1161/01.HYP.5.4.415>
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- Kearns, W. D., Better, W. E., Daley, L. A., & Anderson, D. E. (1981). A tether system for psychophysiological studies in the dog. *Behavior Research Methods & Instrumentation*, 13(3), 323-327. <https://doi.org/10.3758/BF03202021>

#### Books

- Boot, W., Gutman, G., Kearns, W., Fozard, J., & Leong, S. (2018, Eds.) Conference Issue: Abstracts of the 11<sup>th</sup> World Conference of Gerontechnology. 17(Suppl). Taipei, Taiwan: Gerontechnology.
- Nomellini, S., & Kearns, W. D. (1979). *An instructor's manual to accompany "Introduction to Experimental Psychology"* (1st ed.). New York, NY: Holt Rinehart and Winston.

#### Book Chapters

- Kearns, W. D., & Fozard, J. L. (2015). Smart homes, RFID and wandering. In J. van Hoof, G. Demiris & E. J. M. Wouters (Eds.), *Handbook of smart homes, health care and well-being* (pp. 1-8). Geneva, Switzerland: Springer International Publishing.  
[https://dx.org/10.1007/978-3-319-01904-8\\_50-1](https://dx.org/10.1007/978-3-319-01904-8_50-1)
- Kearns, W., & Fozard, J. (2013). Location-aware technologies for studying resident paths and spatial usage patterns. In A. Joseph & U. Nanda (Eds.), *Development of tools for healthcare environments research and practice* (pp. 43-44). McLean, VA: Environmental Design Research Association.
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### *Technical Reports*

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- Kearns, W. D., Mitchell, G., Kwak, J., & Kim, G. (2005). *Urban and rural HCBS service penetration in Florida*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute.
- Kearns, W. D. Mitchell, G., Kwak, J., & Kim, G. (2005). *Urban vs. rural access to health and mental health services in Florida* (Agency for Health Care Administration Report Series; AHCA Series No. 220). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute.
- Chiriboga, D. A., Jang, Y., Becker, M. A., Chen, H.-J., Greenbaum, P. E., Brown, L. M. et al. (2005). *Mental health disparities in the state of Florida: An evaluation*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute.
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#### *Conference Proceedings*

- Chen, S., Kearns, W., Fozard, J. & Li, M. (2017) Personalized Fall risk Assessment for long-term care services improvement. IEEE 2017 Annual Reliability and Maintainability Symposium (RAMS). Orlando, Florida, January 23-26, 2017. 10.1109/RAM.2017.7889692
- Kearns, W. D., & Moore, H. (2007). RFID technology: A novel observational and measurement method in dementia-related wandering. In *Proceedings of FICCDAT/ICTA: the 2nd International Conference on Technology and Aging*. Toronto, Ontario, Canada: Rehabilitation Engineering and Assistive Technology Society of North America.
- Fozard, J. L., & Kearns, W. D. (2007). Persuasive technologies which change attitudes and behaviors can support the ambitions and activities of older persons. In *Proceedings of the March 2007 International Conference on Gerontic Technology and Service Management*. Nantou, Taiwan, ROC: Nan Kai Institute of Technology.
- Barbeau, S., Winters, P., Georggi, N., Labrador, M., Perez, R., Kearns, W. D. et al. (2007). Travel assistance device: electronic mobility and transportation guidance assistance for persons with cognitive disabilities. In *Proceedings of the Workshop on Assisted Cognition*. Rochester, NY: University of Rochester.

- Fozard, J. L., & Kearns, W. D. (2006). Persuasive gerontechnology: Reaping technology's coaching benefits at older age. In W. IJesslstein, Y. d. Kort, C. Midden, B. Eggen, & E. v. d. Hoven (Eds.), *Persuasive technology: First International Conference on Persuasive Technology for Human Well-Being* (pp. 199-202). Berlin, Germany: Springer-Verlag.
- Kearns, W. D. (2003). Streaming video databases in support of mental health education and training. In N. Callaos (Ed.), *Conference proceedings of the SCI 2003: The 7th world multiconference on systemics, cybernetics, and informatics: Volume III, Communication, network and control systems, technologies and applications* (pp. 1-3). Orlando, FL: International Institute of Informatics and Systemics.
- Anderson, D., Sharinus, M., & Kearns, W. D. (1984). Salt loading decreases intraday cardiac variability in dogs. In *Stress, reactivity and cardiovascular disease: Proceedings of the working conference* (pp. 229-230). Bethesda, MD: National Institutes of Health.
- Anderson, D., Kearns, W. D., & Haley, J. H. (1984). Blood pressure monitoring in laboratory animals during behavioral experiments. In J. A. Herd, & A. M. Gotto (Eds.). *Cardiovascular instrumentation: Proceedings of the Working Conference on Applicability of New Technology to Biobehavioral Research, May 16-19, 1982, Houston, Texas* (pp. 41-53). Bethesda, MD: National Institutes of Health.

*Conference Abstracts (Peer Reviewed)*

- Kearns, W., Fozard, J.L. and Kumar, A. (2019). Algorithmic analysis of wandering behavior in ALF residents. International Association for Gerontology and Geriatrics – IAGG2019- 11th IAGG Asia/Oceania Regional Congress. Taipei, Taiwan. Oct. 23 – 27.  
<https://www.iagg2019.org/>
- Kearns, W., Fozard, J.L. and Kumar, A. (2018). A longitudinal analysis of ALF resident wandering using ultra wideband real-time location services (RTLS): Results of a yearlong study. 2018 Conference on Movement and Cognition - Movementis – [www.movementis.com](http://www.movementis.com)
- Kearns, W. (Accepted for publication). Meeting the Challenges of an International Aging Population: The Promise of Gerontechnology. *International Journal of Behavioral Nutrition and Physical Activity*.
- Crosland, K., Moore, J. & Kearns, W. (2018) An innovative inexpensive behaviorally-based medication management application. *Gerontechnology*, 17(Suppl), 51s.  
<https://doi.org/10.4017/gt.2018.17.s.051.00>
- Kearns, W., Fozard, J., & Kumar, A. (2018) Longitudinal analysis of ALF resident wandering using real-time location services: Results of a yearlong study. *Gerontechnology*, 17(Suppl), 111s. <https://doi.org/10.4017/gt.2018.17.s.108.00>
- Kearns, W. (2018) Building creative gerontechnology research funding to support international collaborations. *Gerontechnology*, 17(Suppl), 7s.  
<https://doi.org/10.4017/gt.2018.17.s.007.00>
- Sullivan, D. & Kearns, W. (2017). Real-time location systems facilitate independence in Long-term and specialized care settings. *Innovation in Aging*, 1(S1), 710.
- Phillips, S., Scott, S. McCarthy, J., Martinez, K., Mann, K., Reich, C., Archer, R. & Kearns, W. (2017). VA Smart Home technology for cognitive impairment. *Innovation in Aging*, 1(S1), 711.
- Kearns, W. (2016). Location, location, location: Where is as important as when. *Gerontechnology*, 15(Suppl), 110s.

- Fozard, J.L. & Kearns, W. (2016) How well does an elderly person's actual use of a gerontechnology relate to its intended use? *Gerontechnology*, 15(Suppl), 36s.
- Kearns, W. & Fozard, J.L. (2014). An example of a university/government relationship in the North American chapter of the ISG. *Gerontechnology*, 13(2), 155-156.  
<https://doi.org/10.4017/gt.2014.13.02.101.00>
- Kearns, W.D, Fozard, J.L., Webster, P. & Jasiewicz, J. (2014) Location aware smart watch to support aging in place. *Gerontechnology*, 13(2), 223.  
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- Fozard J.L., & Kearns W.D. (2010). Where and how are you? Location aware technologies to assess gait and everyday activities. *Gerontechnology*, 9(2), 87.  
<https://doi.org/10.4017/gt.2010.09.02.028.00>
- Kearns, W. D., & Fozard, J. L. (2009). A multidisciplinary challenge of benefits and risks: Preventive health engineering in earlier and later life. *Journal of Nutrition, Health & Aging*, 13(Suppl 1), S32.
- Kearns, W. D., & Fozard, J. L. (2009). Evaluation of wandering by residents in an assisted living facility (ALF) using ultra wideband radio RTLS. *Journal of Nutrition, Health & Aging*, 13(Suppl 1), S54.
- Beattie, E., McCrow, J. M., Kearns, W. D., & Applegarth, S. P. (2009). Attitudes and expectations of technologies to manage high risk wandering and elopement in persons with dementia: An Australian perspective. *Gerontologist*, 49(Suppl 2), 93-93.  
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## CONFERENCE PRESENTATIONS

### *International*

- Kearns, W. (2023, May) Gerontechnology: Proof of concept is necessary but not sufficient. Paper presented at the PolyU Academy for Interdisciplinary Research (PAIR) Conference at the Hong Kong Polytechnic Institute in Hong Kong, China on May 10, 2023.
- Kearns, W. (2022, October) Digital aging and the future of age-friendly industry. Paper presented at the International Gerontechnology Forum (IGEF) of the 6th International Gerontechnology Expo & Forum, Daegu, Korea on October 24, 2022.
- Kearns, W. (2018, October) The promise of Gerontechnology. Keynote address at the Jockey Club Smart Ageing Hub Opening Ceremony & Symposium at the Hong Kong Polytechnic Institute in Hong Kong, China on October 29, 2018.
- Kearns, W., Fozard, J.L. and Kumar, A. (2018, July) *A longitudinal analysis of ALF resident wandering using ultra wideband real-time location services (RTLS): Results of a yearlong study*. Paper presented at the 2018 conference on movement and cognition (Movementis) at the Harvard Medical School on July 28, 2018.
- Kearns, W. (2018, June). *Meeting the challenges of an international aging population: The promise of gerontechnology*. Invited Keynote address at the annual meeting of the International Society for Behavioral Nutrition and Physical Activity in Hong Kong, China on June 6, 2018.
- Kearns, W. & de Grey, A. (2018, June). *The future of aging*. Invited panel session at the International Society for Behavioral Nutrition and Physical Activity annual meeting in Hong Kong, China, June 6, 2018.

- Kearns, W. (2018, May) *Longitudinal analysis of Alf resident wandering using real-time location services: Results of a yearlong study*. Paper presented at the 11<sup>th</sup> World Conference on Gerontechnology in St. Petersburg, Florida on May 7, 2018.
- Crosland, K., Moore, J. & Kearns, W. (2018) *An innovative inexpensive behaviorally-based medication management application*. Paper presented at the 11<sup>th</sup> World Conference on Gerontechnology in St. Petersburg, Florida on May 7, 2018.
- Kearns, W. (2018, May) *Building creative gerontechnology research funding to support international collaborations*. Symposium presented at the 11<sup>th</sup> World Conference on Gerontechnology in St. Petersburg, Florida on May 7, 2018.
- Kearns, W. (2017, July) *Using Robots to Address the Psychosocial, Health and Functional Needs of Older Adults*. Invited panel session at Technology Day at the International Association of Gerontology and Geriatrics World Congress in San Francisco, CA, July 26, 2017.
- Kumar, A., Tong Lau, C., Chan, S., Ma, M. & Kearns, W.D. (2017, July). *A Longitudinal Study of the Navigation Patterns of Dementia Patients and their Relationship to MMSE*. Poster presented at the International Association of Gerontology and Geriatrics World Conference, San Francisco, CA.
- Sullivan, D. & Kearns, W. (2017, July) *Real-time location systems facilitate independence in Long-term and specialized care settings*. Symposium presented at the International Association of Gerontology and Geriatrics World Conference, San Francisco, CA.
- Phillips, S., Scott, S. McCarthy, J., Martinez, K., Mann, K., Reich, C., Archer, R. & Kearns, W. (2017, July) *VA Smart Home technology for cognitive impairment*. Symposium presentation at the International Association of Gerontology and Geriatrics World Conference, San Francisco, CA.
- Chen, S, Kearns, W.D, Fozard, J.L. & Li, M. (2017, January) *Personalized fall risk assessment for long-term care services improvement*. Annual Reliability and Maintainability Symposium, Institute of Environmental Sciences and Technology. Orlando, FL, January 23-26, 2017.
- Kearns, W. (2016) *Location, location, location, where is as important as when*. Symposium presentation at the International Society for Gerontechnology 10th World Conference in Nice, France on 9/28/2016.
- Kumar, A., Tong Lau, C., Chan, S., Ma, M. & Kearns, W.D. (2016, August). *A unified grid-based wandering pattern detection algorithm*. Paper presented at the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society in Orlando, FL.
- Fozard, J.L. & Kearns, W. (2016) *How well does an elderly person's actual use of a gerontechnology relate to its intended use?* Presentation at the 10th World Conference on Gerontechnology, September 28, 2016, Nice, France.
- Kearns, W. D. (2015, November). *International Society for Gerontechnology*. Paper presented at the meeting of the Gerontological Society of America, Orlando, FL.
- Kearns, W. D. (2015, November). *The tortuous path to TBI recovery: Mapping the punch-drunkard's walk*. Paper presented at the Brain Injury Association of America Mitchell Rosenthal Memorial Webinar, Vienna, VA. [sponsored by the *Journal of Head Trauma Rehabilitation*].
- Kearns, W. D. (2015, May). *Extending smart home technology for persons with cognitive impairment*. In S. Robinovitch (Chair), Technologies for managing your home and

- making it/you safer. Panel presented at the meeting of the John K. Friesen Conference, Vancouver, BC, Canada.
- Kearns, W. D. (2015, April). *Precise RTLS in healthcare can yield new understanding and unexpected benefits*. In K. Mann (Chair), The US Department of Veterans Affairs Smart Home Project: Process, methods, and (unexpected) outcomes. Paper presented at the meeting of the Intelligent Health Association, Chicago, IL.
- Kearns, W. D., & Fozard, J. L. (2014, June). *An example of a university/government relationship in the North American chapter of the ISG*. In R. Woolrych (Chair) "Inter-university and inter-disciplinary collaboration in Gerontechnology: Lessons from North America." Symposium presented at the meeting of the International Society of Gerontechnology, Taipei, Taiwan.
- Fozard, J. L., & Kearns, W. D. (2014, June). *Talking, walking, and falling: Technology-based assessments and interventions*. Keynote presented at the meeting of the International Society of Gerontechnology, Taipei, Taiwan.
- Kearns, W.D., Fozard, J.L, Webster, P., & Jasiewicz, J. (2014, June). *Location aware smart watch to support aging in place*. Paper presented at the meeting of the International Society of Gerontechnology, Taipei, Taiwan.
- Kearns, W. D., (2014, April). *Tracking technologies for measuring mobility of older persons in home settings*. Panel presented at the meeting of the CLSA-Tech (Canadian Longitudinal Study on Aging), Toronto, ON, Canada. [Invited presentation].
- Kort, HSM, Woolrych, R, Sixsmith, A, & Kearns, W. D. (2013, September). *Health professional competencies for e-health technology to age in place: Outcome of a two day collaborative workshop*. Paper presented at the meeting of the Medicine 2.0: Social Media, Mobile Apps, and Internet/Web 2.0 in Health, Medicine and Biomedical Research, London, UK.
- Kearns, W.D, & Fozard, J.L. (2013, June) *Tele-surveillance for falls in ambient assisted living facilities*. Paper presented at the meeting of the International Association for Gerontology and Geriatrics (IAGG) World Congress of Gerontology and Geriatrics: Digital Ageing: A new horizon for health care and active aging. Seoul, Korea.
- Kort, H.S.M, Fozard, J.L. & Kearns, W.D. (2013, June) *Building physics requirements (BPR) for life enrichment care facilities (LCEF)*. Paper presented at the meeting of the International Association for Gerontology and Geriatrics (IAGG) World Congress of Gerontology and Geriatrics: Digital Ageing: A new horizon for health care and active aging. Seoul, Korea.
- Kearns, W. D. (2012, July). *Falls and dementia: Predicting health changes using sensor networks*. Paper presented at the meeting of the Utrecht University of Applied Sciences Health and Engineering Summer Program, Utrecht, The Netherlands [Invited speaker].
- Kearns, W. D., Fozard, J., Becker, M. A., Dion, C., Craighead, J., & Jasiewicz, J. (2012, June). *Something in the way she moves: Falls and fractal dimension*. Paper presented at the meeting of the ISG\*ISARC (International Society of Gerontechnology and the International Symposium of Automation and Robotics in Construction) Eindhoven, The Netherlands.
- Kearns, W. D., & Fozard, J. (2012, June). (Conveners). Symposium: "The sensitive residence: Predicting health changes using sensor networks". Symposium conducted at the meeting of the ISG\*ISARC (International Society of Gerontechnology and the International Symposium of Automation and Robotics in Construction) Eindhoven, The Netherlands.

- Kearns, W. D. (2012, May). *Transdisciplinary working*. Paper presented at the meeting of the Canadian Institutes of Health Research Institute on Aging's Summer Program on Aging, Vancouver, BC, Canada [Invited speaker].
- Kearns, W. D. (2012, May). *Publishing and dissemination*. Paper presented at the meeting of the Canadian Institutes of Health Research Institute on Aging's Summer Program on Aging, Vancouver, BC, Canada [Invited speaker].
- Kearns, W. D. (2012, May). *Developing practical solutions for older people*. Paper presented at the meeting of the Canadian Institutes of Health Research Institute on Aging's Summer Program on Aging, Vancouver, BC, Canada [Invited speaker].
- Kearns, W. D., & Fozard, J. L. (2012, March). *Locomotor variability and fall risk in seniors with dementia*. Paper presented at the meeting of the International Exchange of Research and Practice in e-Health (iKOP project) Seminar: "Competencies for e-Health Use," Tampa, FL [Invited speaker, joint conference between the University of Utrecht and USF].
- Kearns, W. & Craighead, J. (2010, September). *Location aware technologies: Implications for healthcare research and practice*. Paper presented at the meeting of the Ubisense User Conference at Jesus College, Cambridge University, UK.
- Kearns, W (2010, May). *Of falls and fractals: My career with my mentor, colleague and friend, Professor James L. Fozard*. Closing Plenary Speech presented at the meeting of the International Conference on Gerontechnology, Vancouver.
- Kearns W.D. (2010, May). Elder path tortuosity covaries with MMSE geographical orientation subscale. In C.G. Willems (Chair). Symposium "The use of activity monitoring in care for persons with dementia (Willems, C.G.). Paper presented at the meeting of the International Conference on Gerontechnology, Vancouver, Canada.
- van Bronswijk, J. E. M. H., & Kearns, W. D. (2009, July). *A multidisciplinary challenge of benefits and risks: Preventive health engineering in earlier and later life*. Paper presented at the meeting of the International Association of Gerontology and Geriatrics (IAGG), Paris, France.
- Kearns, W. D., & Fozard, J. L. (2009, July). *Evaluation of wandering by residents in an assisted living facility (ALF) using ultra wideband radio RTLS*. Paper presented at the meeting of the International Association of Gerontology and Geriatrics (IAGG), Paris, France.
- Kearns, W. D., & Fozard, J. L. (2009, September). *Evaluation of wandering by residents in an assisted living facility (ALF) using ultra wideband radio RTLS*. Paper presented at the meeting of the International Research Consortium on Wandering: VISN8 Patient Safety Center of Inquiry, Clearwater, FL.
- Beattie, E., Kearns, W. D., & Applegarth, S. P. (2009, September). *Australian family and professional carer attitudes to technologies used to manage wandering in persons with dementia*. Paper presented at the meeting of the International Consortium on Wandering and Adverse Events, VISN8 Patient Safety Center of Inquiry, Clearwater, FL.
- Kearns, W. D., & West, L. (2009). *Locomotor variability in ALF residents with AD/MCI: Update*. Paper presented at the meeting of the International Consortium on Wandering and Adverse Events, VISN8 Patient Safety Center of Inquiry, Clearwater, FL.
- Kearns, W. D. (2008, November). *Locomotor variability in ALF residents with dementia*. Poster presented at the meeting of the UK-US International Alzheimer's Disease Symposium, Tampa, FL.
- Kearns, W. D., & Fozard, J. (2008, September). *Locomotor variability assessment of the elderly using ultra wideband radio*. Paper presented at the meeting of the International Research



- Consortium on Wandering and Adverse Events: VISN8 Patient Safety Center of Inquiry, Tampa, FL.
- Kearns, W. D. (2008, May). *Locomotor variability in ALF residents with A/D MCI*. Keynote speech delivered at the meeting of the International Conference on Gerontic Technology and Service Management (Nan Kai Institute of Technology), Nan Tou, Taiwan, ROC.
- Kearns, W. D. (2008, May). *Communications technology and the elderly*. Master class conducted at the meeting of the International Conference on Gerontic Technology and Service Management (Nan Kai Institute of Technology), Nan Tou, Taiwan, ROC.
- Fozard, J. L., & Kearns, W. D. (2008, June). *Communication technology changes how we age*. Paper presented at the meeting of the International Society for Gerontechnology, Pisa, Italy.
- Kearns, W. D. (2008, March). *Locomotor variability in ALF Residents with AD/MCI*. Paper presented at the meeting of the International Research Consortium on Wandering: VISN8 Patient Safety Center of Inquiry, Tampa, Florida.
- Kearns, W. D. (2007, May). *Sensor networks for healthcare monitoring of the elderly*. Paper presented at the meeting of the Chin Min Institute of Technology, Nantou, Taiwan, ROC.
- Kearns, W. D. (2007, May). *Sensor networks for healthcare monitoring of the elderly*. Paper presented at the meeting of the International Conference on Gerontechnology and Service Management, Nantou, Taiwan, ROC.
- Kearns, W. D., & Moore, D. (2007, June). *RFID: A novel measure of wandering in dementia*. Paper presented at the meeting of the Festival of International Conferences on Caregiving Disability and Technology, International Conference on Technology and Aging (FICCDAT/ICTA), Toronto, Ontario, Canada.
- Kearns, W. D., & Fozard, J. L. (2007). *Persuasive technologies which change attitudes and behaviors can support the ambitions and activities of older persons*. Workshop conducted at the meeting of the International Conference on Gerontic Technology and Service Management (Nan Kai Institute of Technology), Nantou, Taiwan, ROC.
- Kearns, W. D. (2007). *Sensor networks for healthcare monitoring of the elderly*. Workshop conducted at the meeting of the Chaoyang University of Technology, Nantou, Taiwan, ROC.
- Schonfeld, L., Molinari, V., Brown, L. M., Kearns, W. D., & Kallimanis, B. (2006, December). *Wandering MDS analysis*. Paper presented at the meeting of the International Consortium on Wandering and Adverse Events, VISN8 Patient Safety Center of Inquiry, Tampa, FL.
- Fozard, J. L., & Kearns, W. D. (2006). *Persuasive GERONtechnology: Reaping technology's coaching benefits at older age*. Paper presented at the meeting of the International Conference on Persuasive Technology for Human Well-Being: Persuasive 2006, Eindhoven, Netherlands.
- Schonfeld, L., Kearns, W. D., Molinari, V., Brown, L., Kallimanis, B., Werner, D. et al. (2005, December). *Wandering behavior in VA nursing home care units*. Paper presented at the meeting of the International Consortium on Wandering and Adverse Events, VISN8 Patient Safety Center of Inquiry, Tampa, FL.
- Kearns, W. D., & West, L. (2005, December). *Technologies to control wandering: Stakeholders' attitudes*. Paper presented at the meeting of the International Consortium on Wandering and Adverse Events, VISN8 Patient Safety Center of Inquiry, Clearwater, FL.
- Kearns, W. D. (2001). *Internet2: High speed networking in support of research and training*. Paper presented at the meeting of the International Workshop on Digital and Computational Video, Tampa, FL.

Kearns, W. D. (1988). *Cardiovascular concomitants of differential behavioral and motivational states in the telemetered baboon*. Paper presented at the meeting of the Beritashvili Institute of Physiology, Georgian Academy of Sciences, Tbilisi, Georgia, USSR.

### **National**

- Kearns, W. D., Fozard, J. L., Scott, S., Schonfeld, L., & Marshall, K. (2014, January). *Measuring spatial disorientation in veterans with TBI using GPS and fractal mathematics*. Poster presented at the meeting of the Veterans Administration Research Day, Tampa, FL.
- Moore, D. Helen, Houston, A.M., Kearns, W. D. & Fozard, J. (2013, November). *Visual exit barriers: Deter exit-seeking in home-dwelling elderly with dementia?* Poster presented at the meeting of the Gerontological Society of America, New Orleans, LA
- Houston, A.M, Moore, D.H. & Kearns, W.D. (2013, July) *Visual barriers to aid in the prevention of exit-seeking in older adults with dementia*. Poster presented at the meeting of the American Psychological Association, Honolulu, HI.
- Kearns, W, Fozard, J.L, Schonfeld, L, Scott, S, & Marshall, K. (2013, April) *Measuring spatial disorientation in veterans with TBI using GPS and fractal mathematics*. Poster presented at the meeting of the Veterans Administration Research Day, Tampa, FL.
- Kearns, W. D. (2012, December). *Tampa Smart Home: Rehabilitation for the 21st century*. Paper presented at the meeting of the Special Operations Medical Association (SOMA), Tampa, FL [Invited speaker].
- Kearns, W. D. (2012, August). *Increased path tortuosity related to falls in assisted living facility residents*. Paper presented at the meeting of the Transforming Fall Management Practices Conference (US Department of Veterans Affairs), Clearwater Beach, FL [Invited speaker].
- Kearns, W. (2011, June). *Ultra-wideband RTLS tracking in ALF residents links natural movement variability to dementia*. Paper presented at the meeting of the US Department of Veterans Affairs national conference "Tracking our Future: VHA and RTLS", Atlanta, GA.
- Kearns, W. (2011, February). *Innovative uses of UWRfid in Healthcare – How knowing who where and when can improve health services*. Paper presented at the meeting of the HIMSS Conference - Orlando Orange County Convention Center.
- Craighead, J, Kearns, W, Fozard, J, Hart-Hughes, S. & Jasiewicz, J. (2010, June). *Gait up & go: A therapist-friendly iPod based tool for mobility assessment*. Paper presented at the meeting of the Agency for Healthcare Research and Quality Grantee and Contractors, Washington, DC.
- Kearns, W. (2010, May). *Evaluation and integration of an automatic fall prediction system*. Plenary speech presented at the meeting of the Transforming Fall Management Practices Conference (US Department of Veterans Affairs), Clearwater Beach, Florida.
- Kearns, W.D, Fozard, J.L, Nams V.O, Craighead, & J, Jasiewicz, J. (2010, February). *High locomotor variability in free movements of assisted living facility residents predicts cognitive impairment*. Paper presented at the meeting of the GAIT2010 in Washington, DC.
- Kearns, W. D. (2009, October). *Health monitoring of residents in an assisted living facility (ALF) using ultra wideband radio RTLS*. Paper presented at the meeting of Internet2, San Antonio, TX.

- Beattie, E., McCrow, J. M., Kearns, W. D., & Applegarth, S. P. (2009, November). *Attitudes and expectations of technologies to manage high risk wandering and elopement in persons with dementia: An Australian perspective*. Paper presented at the meeting of the Gerontological Society of America (GSA), Atlanta, GA.
- Kearns, W. D. (2009, April). *The Brit Programme* [Teaching and learning special interest group]. Paper presented at the meeting of Internet2, Alexandria, VA.
- Kearns, W. D., & Fozard, J. (2008, September). *Locomotor variability assessment of the elderly using ultra wideband radio*. Paper presented at the meeting of the American Telemedicine Association (ATA), Tampa, FL.
- Kearns, W. D. (2008, October). *Using ultra wideband radio in the study of dementia wandering: Implications for gerontechnology*. Paper presented at the meeting of the IEEE/RAS-EMBS on Biomedical Robotics and Biomechatronics (BioRob), Scottsdale, AZ.
- Kearns, W. D. (2008, October). *Internet2: An overview*. Paper presented at the meeting of the Department of Veterans Affairs VISN8 VA Patient Safety Center of Inquiry, Tampa, FL.
- Kearns, W. D. (2008, April). *Locomotor variability in ALF residents with AD/MCI*. Paper presented at the meeting of Internet2, Alexandria, VA.
- Kearns, W. D. (2007, October). Gerontechnology implications and opportunities for networks. In W. D. Kearns (Chair) "Implications of Rapidly Evolving Gerontechnologies for High Speed Networks". Paper presented at the meeting of Internet2, San Diego, CA.
- Kearns, W. D. (2007, October). (Chair) "Implications of rapidly evolving gerontechnologies for high speed networks". Panel conducted at the meeting of Internet2, San Diego, CA.
- Barbeau, S., Winters, P., Georggi, N., Labrador, M., Perez, R., Kearns, W. D. et al. (2007, October). *Travel assistance device: electronic mobility and transportation guidance assistance for persons with cognitive disabilities*. Poster presented at the meeting of the Workshop on Assisted Cognition, Rochester, NY.
- Moore, D. K. W. D., & Larson, V. (2007). *Interventions to manage wandering in dementia*. Paper presented at the meeting of the National Center for Patient Safety, Washington, DC.
- Kearns, W. D. (2005, March). *Technologies to control wandering in persons with Alzheimer's dementia*. Paper presented at the meeting of the SSR-RC Safety Security Rescue Research Center (National Science Foundation), St. Petersburg, FL.
- Kearns, W. D. (2004, June). *DRIFTER: Autonomous buoyancy controlled underwater platform*. Paper presented at the meeting of the Tufts University Department of Mechanical Engineering, National Science Foundation, National Instruments Corporation, LEGO International Inc., Austin, TX.
- Kearns, W. D., Murphy, R., & Elahi, H. (2004, July). *Videofish: TV worth catching*. In J. Weinberg (Chair) "Curricular themes." Paper presented at the meeting of the Association for the Advancement of Artificial Intelligence (AAAI), Palo Alto, CA.
- Kearns, W. (2004, January). *High speed computer networks and their implications for education: The internet2 project at USF*. Paper presented at the meeting of the Florida Educational Technology Corporation, Orlando, FL.
- Kearns, W. D., & Koberstein, M. (2004, April). *College of Visual and Performing Arts: Multicast technologies at USF*. Paper presented at the meeting of the University Consortium for Advanced Internet Development (UCAID), Alexandria, VA.
- Kearns, W. D. (2003, June). *Streaming video databases in support of mental health education and training*. Paper presented at the meeting of the International Institute of Informatics and Systemics, Orlando, FL.

- Kearns, W. D. (2002). *A demonstration of USF's Internet2 connection, and how it may be used to maximal effect*. Paper presented at the meeting of the Southeastern Association of Marine Laboratories & Mote Marine Institute National Shark Research Center, Sarasota, FL.
- Kearns, W. D. (2001, October). *Implications of the Health Insurance Portability and Accountability Act*. Paper presented at the meeting of the Association of Mental Health Librarians, Tampa, FL.
- Kearns, W. D. (2001). *USF's Internet2 Project: Advancing the Public Broadcasting System*. Paper presented at the meeting of the Higher Education Telecommunications Consortium, Tampa, FL.
- Kearns, W. D. (2001). *How to use USF's Internet2 connection to maximal effect*. Paper presented at the meeting of the Southeastern Association of Marine Laboratories & Mote Marine Institute National Shark Research Center, Sarasota, FL.
- Kearns, W. D. (2001). *Higher Education Television Consortium (HETC)/Internet2*. Paper presented at the meeting of the Higher Education Telecommunications Consortium, Madison, WI.
- Kearns, W. D. (2000). *Streaming video databases in support of mental health education and training*. Paper presented at the meeting of Internet2, Washington, DC.
- Peters, R. H., Kearns, W. D. S. J., Murrin, M., & Dolente, A. (1991). *Relapse prevention and skill acquisition among offenders referred for in-jail substance abuse treatment*. Paper presented at the meeting of the American Psychological Association (APA), San Francisco, CA.
- Peters, R. H., & Kearns, W. D. (1991). *Drug treatment needs of jail inmates*. Paper presented at the meeting of the American Psychological Association (APA), San Francisco, CA.
- Kearns, W. D. (1989). *Social avoidance behavior in baboons: Systemic and regional hemodynamics*. Paper presented at the meeting of the National Institutes on Aging, Baltimore, MD.

### **State**

- Kearns, W. D. (2024, March). *Using statistics to improve library science research and services*. Workshop presented at the meeting of the Florida Health Sciences Library Association Conference, Orlando, FL.
- Kearns, W. D. (2007, June). *Provider effects on racial/ethnic disparity in the Florida Medicaid population*. Poster presented at the meeting of the Florida Medicaid Research Conference, Tallahassee, FL.
- Kearns, W. D. (2007, June). *Broadband networking and the new Gerontechnology or "What will I do when those fibers grow grey"*. Poster presented at the meeting of the Florida Medicaid Research Conference, Tallahassee, FL.

### **Local**

- Kearns, W. D. (2001, March). *Internet2: High bandwidth networking at USF*. Paper presented at the meeting of the USF Symposium on 21st Century Teaching Technologies, Tampa, FL.
- Kearns, W. D., & Hanson, A. (2000, March). *From catalogue to video: The use of electronic media as curriculum and research support*. Workshop conducted at the meeting of the USF Symposium on 21st Century Teaching Technologies, Tampa, FL.

- Kearns, W. D. (2000, March). *Streaming video databases in support of mental health education and training*. Paper presented at the meeting of USF Symposium on 21st Century Teaching Technologies, Tampa, FL.
- Kearns, W. D. (1999, March). *The USF Internet 2 Project: High speed networking for the future*. Workshop conducted at the meeting of the USF Symposium on 21st Century Teaching Technologies, Tampa, FL.
- Kearns, W. D., & Hanson, A. (1997, March). *A virtual walk through the de la Parte Institute Library*. Workshop conducted at the meeting of the USF Symposium on 21st Century Teaching Technologies, Tampa, FL.
- Kearns, W. D., & Hanson, A. (1996, March). *Building a low-cost library catalog searchable via the world wide web*. Workshop conducted at the meeting of the USF Symposium on 1st Century Teaching Technologies, Tampa, FL.

### ***Other Invited Presentations***

- Kearns, W. (2017, November) *Global Interests on gerontechnology and its future*. Invited speech at the International Gerontechnology Expo & Forum 2017 at Korea International Exhibition and Convention Center ([www.kintex.com](http://www.kintex.com)), on November 9-11. Seoul, Korea.
- Chen, S, Kearns, W, Fozard, J.L & Li, Mingyang (2017, March) *Personalized fall risk assessment for long-term care services improvement*. 9<sup>th</sup> Annual Graduate Student Research Symposium, USF Marshall Student Center Ballroom.
- Kearns, W. (2016, October). *Time, space, and cognition*. Invited speech at the University of Salford on October 4, 2016. Manchester, United Kingdom.
- Kearns, W. D. (2014, May). *Path tortuosity related to cognitive impairment and fall risk in dementia and traumatic brain injury*. Paper presented to University of Missouri-Columbia College of Engineering, Columbia, MO.
- Kearns, W. D. (2014, March). *Tortuosity in walking path predicts cognitive impairment and fall risks*. Paper presented to Draper Laboratory Information and Decisions Systems Technical Talk series, Cambridge, MA.
- Kearns, W. D. (2014, January). *Walking path tortuosity predicts cognitive impairment and fall risks*. Paper presented to Florida Institute for Human-Machine Cognition, Ocala, FL.
- Kearns, W. D. (2014, January). *The report on the use of "smart" rehabilitative technologies*. Paper presented to the U.S. Department of Defense Task Force on the Care, Management, and Transition of Recovering Wounded, Ill, and Injured Members of the Armed Forces, Tampa, FL.
- Kearns, W. D. (2012, August). *Something in the way she moves: Falls and fractal dimension*. Paper presented at the meeting of the Provost's Symposium on Engineering and Information Sciences and Technology, Berks, PA [Invited speaker, Pennsylvania State University Berks Campus].
- Kearns, W. (2010, October). *Location aware technologies: Implications for healthcare research and practice*. Presentation at the USF Polytechnic "Journey through Aging Research" Seminar, Orlando, FL.
- Kearns, W. D. (2004). *High speed computer networks and their implications for education: The internet2 project at USF*. Paper presented at the meeting of the University of South Florida Management Information Systems Society, Tampa, FL.
- Kearns, W. D. (2004). *Videofish: TV worth catching*. Paper presented at the meeting of the Tufts University, Department of Mechanical Engineering, Boston, MA.

## PROFESSIONAL ORGANIZATIONS

### *International*

International Society for Gerontechnology	2004 to present
President	2016-2021
President, North American Chapter	2014-2016

### *National*

U. S. Department of Veterans Affairs	2013-2015
National RTLS Implementation Team	
RFID in Healthcare Consortium	2013-2014
HIMSS 2014 Executive Committee	2013-2014
University Corporation for Advanced Internet Development	2005-2011
Human Factors & Ergonomics Society	2005-2007
Higher Education Telecommunications Consortium	1999-2003
Internet2, USF Representative	1996-2006

## HONORS AND AWARDS

Who's Who in America (Marquis)	2017
U. S. Department of Veterans Affairs national "Brain Trust" competition	
3 <sup>rd</sup> place - VA Smart Home Caregivers: The Forgotten	
Victims of War	2016
International Society for Gerontechnology 9 <sup>th</sup> World Conference (Taiwan)	
Best Leading Edge Technologies Poster Paper Award	2014
University of South Florida	
Department of Research Excellence in Innovation Award	2011
Nan Kai University of Technology (Taiwan)	
International Conference and Master Class on Gerontechnology	
Distinguished Keynote Speaker Award	2008
University of Rochester (NY) and Microsoft, Inc.	
Workshop on Intelligent Systems for Assisted Cognition	2007
USF Career Service Scholarship Award	1986

## JOURNAL EDITORSHIPS AND REVIEWER ACTIVITIES

<i>Canadian Journal on Aging</i>	2017 to present
<i>Disability and Rehabilitation</i>	2017 to present
<i>Brain Science</i>	2017 to present
<i>Gerontechnology</i>	
Associate editor	2006 to present
Manuscript reviewer	2005 to present
<i>IEEE Intelligent Systems</i>	2007 to present
<i>IEEE Journal of Biomedical and Health Informatics</i>	2017 to present
<i>IEEE Transactions Information Technology in BioMedicine</i>	2013 to present
<i>Journal of Behavioral Health Services Research</i>	2010
<i>Journal of Applied Gerontology</i>	2009 to present
<i>PLOS One</i>	2017 to present

### *Grant Reviewer*

National Institutes of Health Risk Prevention and Health (R12)	2016
National Institutes of Health Grants for Early Medical/Surgical Specialists' Transition to Aging Research (GEMSSTAR)	2015
Israeli Ministry of Science, Technology and Space	2015
Canadian Institutes of Health Stacie Prize Applications	2014
Banting Post-doctoral Fellowship Award	
Canada Foundation for Innovation Competition Infrastructure Grant (University of Toronto)	2014
Agency for Healthcare Research & Quality	2010
National Science Foundation	2009
USF Dept. of Research	2006

### *Conference Reviewer and Organizer Activities*

International Society for Gerontechnology/International Association of Gerontology and Geriatrics (ISG/IAGG)	
Conference Chair, Organizing Committee, St. Petersburg	2016-2018
Executive Committee, Organizing Committee, Taiwan	2012-2014
Executive Committee, Organizing Committee, Eindhoven	2011-2012
Track Director, ISG/IAGG, Eindhoven	2011-2012
International Association for Development of the Information Society (IADIS)	2009
Scientific Papers Reviewer for eHealth	
Multiconference on Systemics, Cybernetics and Informatics Chair, Communications Systems and Networks	2003

### **TEACHING**

University of South Florida Department of Child and Family Studies Guest lecturer: Complex Community Environments	2016-2017
Doctoral committee member: Jessica Moore	2016
Simon Fraser University, British Columbia, Canada Gerontology Department <i>Guest lecturer: Technology and Aging</i>	2013
University of South Florida Louis de la Parte Florida Mental Health Institute <i>Instructor</i>	
Communication and Design Process Seminar, SPC6934	2009
Environmental Interventions Seminar, GEY6934.904S07	2008
Videofish Senior Design Project, ART 4806/EGN 4930	2003-2004
Department of Psychology	1987-1988
Rollins College, Winter Park, Florida Department of Psychology	1998
<i>Instructor, Introduction to General Psychology</i>	
University of the Pacific Stockton, CA	1978

*Instructor, Psychophysiology Laboratory*

**SERVICE TO THE UNIVERSITY**

CBCS Instructor Promotion Committee	2013-2018
Advanced Visualization Executive Committee	2012-2018
USF Cyber-infrastructure Committee	2008-2018
Florida Health Information Systems Council	2002-2003
Board of Trustees Representative	
Instructional Technology Council, Chairman	2000-2001
Strategic Planning Task Force Technology Management	
Subgroup member	1998-1999
Internet2 Project, USF Representative	1996-2006
Workgroup on Computers & Technology	1995-2003
Academic Computing Committee	1994-2003
Chair 1994-1998	
Southern Accreditation of Colleges and Schools	1992-1993
Member, Self-Study Section for Computing Resources at USF	

**SERVICE TO THE COMMUNITY**

Lutz Community Church (Tampa, FL)	
Facilities Workgroup	2002-2014
Habitat for Humanity Workgroup	2010-2012
Deacon	2006-2009

**Advisory Board Memberships**

European Union ICT-10-2019-2020: Robotics Core Technology	
SPRING ( <i>Socially Pertinent Robots in Gerontological Healthcare</i> )	
INRIA – University of Grenoble, Rhone Alps	2019-2024

Hong Kong Polytechnic <i>Research Institute for Smart Ageing</i> (RISA)	2019 -
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EU Cost Action Initiatives	
GoodBrother EU Cost Action 19121 – Francisco Florez Revuelta	2017-present
Net4-Age Friendly EU Cost Action CA 19136 – Carina Dantas	2018-present