



SFU Gerontology Research Centre

&

Department of Gerontology

Publications and Activities in the Area of:

“Technology and Aging”



MAY 2009

Technology and aging

Research, development and evaluation of technologies to support independent living and enhance quality of life

Publications and activities

The GRC and has a long-standing involvement in the area of technology and aging and has been involved in projects on

- Research into the needs and requirements of older people for assistive technologies, particularly in respect to information and communication technologies (ICTs)
- Technology and people with dementia
- Development of prototype systems and technologies
- Development of methodologies for user-driven research
- Evaluation of devices and systems in field trials
- Theoretical and conceptual development
- Inequalities in access and use of systems (the Digital Divide)
- Social and psychological perspectives on the role of technology in everyday life
- Knowledge transfer and the dissemination of research findings, for example the GRC will be hosting the 7th World Congress on Gerontechnology in Vancouver in May 2010

The GRC is a partner in the EU-funded project SOPRANO (<http://www.soprano-ip.org/>). The project is designing and developing innovative, context-aware, smart services with natural and comfortable interfaces for older people at affordable cost, meeting requirements of users, family and care providers and significantly extending the time they can live independently.

I. Publications

1. Books

Bardram, J., **Mihailidis, A.**, & Wan, D. (Eds.). (2006). *Pervasive computing in healthcare*. Boca Raton, FL.: Taylor & Francis.

Gutman, G.M. (Ed). (1998). *Technology innovation for an aging society: Blending research, public and private sectors*. Vancouver: Gerontology Research Center, Simon Fraser University.

Mihailidis, A., Boger, J., Kautz, H., & Normie, L. (Eds.) (2008). *Technology and Aging: Selected Papers from the 2007 International Conference on Technology and Aging - Volume 21 Assistive Technology Research Series (Assistive Technology Research)*. Sherbrooke, QC: IOS Press.

2. Technical Reports

Gutman, G.M., & Love, T. (2008, January) *Towards more elder friendly hospitals: Final report – Studies 3b and 3c.* [Report submitted to Fraser Health Geriatric Clinical Service Planning and Delivery Team]. Vancouver: Gerontology Research Centre, Simon Fraser University.

Paris-Seeley, N., Raschke, S., **Watzke, J.R.**, **Jones, Y.** & Halsted, N. (2000, March). *Evaluation of portable lift and transfer devices to reduce the risk of musculoskeletal injury (MSI) to home care workers*. Report prepared for the Workers' Compensation Board of British Columbia.

Watzke, J.R. (1996). *Environmental control devices and older adults: Phase 2*. Report submitted to Industry Canada.

3. Journal articles

Boger, J., Hoey, J., Poupart, P., Boutilier, C., Fernie, G., & **Mihailidis, A.** (2006). A planning system based on Markov decision processes to guide people with dementia through activities of daily living. *IEEE Transactions on Information Technology in BioMedicine*, 10(2), 323-333.

Dry, A., Colantonio, A., Cameron, J., & **Mihailidis, A.** (in-press). Technology in the lives of women who have memory impairment as a result of traumatic brain injury. *Assistive Technology*.

Gutman, G.M., **Jones, Y.**, Walji, M., **Clark Scott, M.A.** (2001). *Space efficient universal design innovations*. *Gerontology*, 47 (supp.1), 36 [Abstract]

Holliday, P., **Mihailidis, A.**, Rolfson, R., & Fernie, G. (2002). Does sideways movement increase mobility and manoeuvrability in a powered wheelchair? *Gerontechnology*, 2(1), 99.

Holliday, P.J., **Mihailidis, A.**, Rolfson, R., & Fernie, G. (2005). Understanding and measuring powered wheelchair mobility and manoeuvrability: Part I – Reach in confined spaces. *Disability and Rehabilitation*, 27(16), 939-949.

- Labelle, K.L., & Mihailidis, A. (2006). The use of automated prompting to facilitate handwashing in persons with dementia. *American Journal of Occupational Therapy*, 60(4), 442-450.
- Lee, T., & Mihailidis, A. (2005). An intelligent emergency response system. *Journal of Telemedicine and Telecare*, 11(4), 194-198.
- LoPresti, E.F., Mihailidis, A., & Kirsch, N. (in-press). Assistive technology for cognitive rehabilitation: State of the art. *Neuropsychological Rehabilitation*.
- Paris-Seeley, N., Raschke, S., Watzke, J.R., Jones, Y., & Halsted, N. (1998). *Evaluation of portable lift and transfer devices to reduce the risk of musculoskeletal injury (MSI) to home care workers*. Workers' Compensation Board Report 1150-20 B 1998 (98FS-47).
- Paris-Seeley, N., Raschke, S., Watzke, J.R., Jones, Y., & Halsted, N. (2001). Evaluation of transfer devices to reduce the risk of musculoskeletal injury to home care workers. *Gerontology*, 47 (Suppl.1), p.522 [Abstract].
- Watzke, J.R., Gutman, G.M., & Wister, A.V.** (1994). Emergency medical alert (EMA): Findings from a large Canadian study. *Gerontologist*, 34 (Special Issue 1) p.71 [Abstract]
- Watzke, J.R., & Kemp B.** (1992) Safety for older adults: the role of technology and the home environment. *Topics in Geriatric Rehabilitation*, 7 (4), 9-21.
- Watzke, J.R., & Sakiyama, M.** (1993). The Kinsmen Rehabilitation Foundation of British Columbia. *Technology and Disability*, 2 (1), 79-85.
- Watzke, J.R., & Smith, D.B.D.** (1994). Concern for and knowledge of safety hazards among older people: Implications for research and prevention. *Research on Aging*, 20 (3), 177-188.
- Watzke, J.R., & Wister, A.V.** (1993). Resident location monitoring technology in long-term care facilities: An analysis of care staff attitudes. *Journal of Gerontological Nursing*, 19, 23-29.

4. Book Chapters & Conference Proceedings

- Abrahamsohn, G., Gutman, G.M. & Wister, A.V. (1994). Necessary elements of a cost-effectiveness analysis of technical aids for the elderly. In G. Gutman & A. Wister (Eds.) *Progressive accommodation for seniors: Interfacing shelter and services* (pp.197-210). Vancouver: Simon Fraser University Gerontology Research Centre.
- Brink, S.** (1994). Bridging the technology gap – The links between research, development, production and policy for products supporting independent living. In G. Gutman & A. Wister (Eds.) *Progressive accommodation for seniors: Interfacing shelter and services* (pp.211-222). Vancouver: Simon Fraser University Gerontology Research Centre.
- Gutman, G.M.** (1995). The role of gerontology research centres in developing and marketing information and communication technology to older adults and to persons with disabilities. In: *Proceedings Persons with disabilities and older adults: How to capitalize on a growing market* (pp. 41-54). Laval, Quebec: Centre d' innovation en technologies de l'information (CITI).

Gutman, G.M. (1998). Technology, aging and disability in Canada. In G. Gutman (Ed.), *Technology Innovation for an Aging Society: Blending Research, Public and Private Sectors* (pp.7-21). Vancouver: Gerontology Research Centre, Simon Fraser University.

Gutman, G.M. (1998). Technological approaches to management of “problem” behaviours in home and institutional settings. In G. Gutman (Ed.), *Technology Innovation for an Aging Society: Blending Research, Public and Private Sectors* (pp. 51-67). Vancouver: Gerontology Research Centre, Simon Fraser University.

Gutman, G.M. (2003). Gerontechnology and the home environment. In N. Charness & W.K. Schaie (Eds.) *Impact of Technology on Successful Aging* (pp251-261). New York: Springer Publishing Company.

Watzke, J.R. (1994). Personal response systems: Canadian data on subscribers and alarms. In G. Gutman & A. Wister (Eds.) *Progressive accommodation for seniors: Interfacing shelter and services* (pp.147-166). Vancouver: Simon Fraser University Gerontology Research Centre.

Watzke, J.R., & Birch, G. (1994). Older adults' response to automated environmental control devices. In G. Gutman & A. Wister (Eds.) *Progressive accommodation for seniors: Interfacing shelter and services* (pp.167-180). Vancouver: Simon Fraser University Gerontology Research Centre.

5. Newsletter, Newspaper and Magazine Articles

Edge, M., Taylor, B., Dewsbury, B., & **Groves, M.** (2000). The potential for ‘smart home’ systems in meeting the care needs of older persons with disabilities. *Seniors' Housing Update*, 10(1), 6-7.

Groves, M. (2002). The changing location of long term care: The seamless integration of technology-enhanced health care in the home and community. *Seniors Housing Update*, 11(1), 1-2.

Groves, M. (2002). The Dr. Tong Louie Living Laboratory. *Seniors Housing Update*, 11(1), 20.

Gutman, G.M. (1999). Technology innovation for an aging society: Application to environmental design. *GRC News*, 18(1), 3-5, 15.

6. Audio-visual Materials

Watzke, J.R. (1994). *The Living Lab*. Vancouver: Gerontology Research Centre, Simon Fraser University (Video).

7. Materials in Electronic Format

Mihailidis, A., Cockburn, A., & Longley, C. (2005). The acceptability of home monitoring technology by baby boomers and older adults. *28th Annual Rehabilitation Engineering and*

Assistive Technology Society of North America (RESNA) conference proceedings, June 23–27, 2005, Atlanta, GA. [CD-ROM].

8. Theses:

Amanda S. (2004). Benefits and limitations of a reminder device for older adults with memory loss. Unpublished MA Project, Simon Fraser University.