

CURRICULUM VITAE

Name: Jennifer N. Boger

Work Address: Department of Occupational Science & Occupational Therapy
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Position / Rank: IATSL Research Manager / TRI Research Associate (Level 3)

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1. DEGREES

DESIGNATION	INSTITUTION	DEPARTMENT	YEAR
M.A.Sc.(Eng.) Biomedical Engineering	University of Toronto	Institute of Biomaterials and Biomedical Engineering Supervisor: Dr. G. Fernie	2004
B.Sc.(Eng.) Biological Engineering	University of Guelph	School of Engineering	2002

2. EMPLOYMENT HISTORY

DATE	RANK/POSITION	DEPARTMENT/INSTITUTION/COMPANY
2004 – present	Research Manager	Department of Occupational Science and Occupational Therapy, Faculty of Medicine, University of Toronto, Toronto, ON
2004 – present	Research Associate	Toronto Rehabilitation Institute, Department of Research, Toronto, ON
2001	Engineering Intern	HATCH, Brisbane, Australia
1999-2000	Research Assistant	Bone Biology Research Lab, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, ON

3. SCHOLARLY AND PROFESSIONAL ACTIVITIES

MEMBERSHIP IN ACADEMIC / PROFESSIONAL SOCIETIES

- Active Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)
(Member of the Board of Directors, Chair Website Committee, Member of Meetings
Committee, Member of Research Committee)
- Active Member – Planning committee International Conference on Technology and Aging (ICTA)
- Active Member - Association of Professional Engineers Ontario
- Active Member - Ontario Society of Professional Engineers

REVIEWER

- IEEE Transactions on Mechatronics (paper reviewer)
- The American Journal of Alzheimer's Disease (paper reviewer)
- International Journal of Human-Computer Studies (paper reviewer)
- Gerontechnology (paper reviewer)
- PETRA (invited reviewer)
- International Conference on Technology and Aging (Abstract/Paper Reviewer)
- Advancement of Artificial Intelligence - AAAI (papers on artificial intelligence in elder care)
- International Journal of Human-Computer Studies (paper reviewer)
- Neuropsychological Rehabilitation (paper reviewer)
- Alzheimer's Association (invited grant reviewer)
- Ministry of Health, Singapore (invited grant reviewer)

4. PUBLICATIONS

BOOKS EDITED

- Mihailidis, A., Boger, J., Kautz, H. and Normie, L. (2008). Technology and Aging: Selected Papers from the 2007 International Conference on Technology and Aging. IOS Press: Amsterdam, The Netherlands. ISBN: 9781586038151.

MONOGRAPHS

Mihailidis, A., Boger, J., Hoey, J. and Jiancaro, T. (2011). Zero Effort Technologies: Considerations, Challenges and Use in Health, Wellness, and Rehabilitation. In R. M. Baecker, (Ed.), *Synthesis Lectures on Assistive, Rehabilitative, and Health-Preserving Technologies*. San Rafael, CA: Morgan & Claypool Publishers. ISBN: 9781608455195. DOI: 10.2200/S00380ED1V01Y201108ARH002.

BOOK CHAPTERS

Mihailidis, A., Boger, J., Czarnuch, S., Nagdee, T. and Hoey, J. (in press, 2011). Ambient Assisted Living Technology to Support Older Adults with Dementia with Activities of Daily Living: Key Concepts and the State of the Art. In A. Sixsmith (Ed.), *Handbook on AAL for Healthcare, Well-being and Rehabilitation*. Amsterdam, The Netherlands: IOS Press.

Adlam, T., Carey-Smith, B., Evans, N., Orpwood, R., Boger, J. and Mihailidis, A. (2009). Implementing Monitoring and Technological Interventions in Smart Homes for People with Dementia: Case Studies. In B. Gottfried & H. Aghajan (Eds.), *Behaviour Monitoring and Interpretation - BMI: Smart Environments*. Amsterdam, The Netherlands: IOS Press, ISBN: 978-1-60750-048-3.

TECHNICAL REPORTS AND TRADE PUBLICATIONS

Mihailidis, A., Boger, J., Lockton, V. and Chibba, M. Sensors and In-Home Collection of Health Data: A Privacy by Design Approach. Report prepared in collaboration with the Information and Privacy Commissioner, Ontario, Canada. 2010.

Viswanathan, P., Boger, J., Hoey, J., Elinas, P. and Mihailidis, A. An intelligent powered wheelchair to enable mobility in older adults with cognitive impairments. *Geriatrics and Aging Magazine*, 2007, 10(4), 253-6.

REFEREED JOURNAL CONTRIBUTIONS

Boger, J., Craig, T. and Mihailidis, A. (in review, 2011). The impact of familiarity on faucet usability for older adults with dementia. *Alzheimer's & Dementia*.

Lu, E., Wang, R., Hebert, D., Boger, J., Galea, M. and Mihailidis, A. (2011). The development of an upper limb stroke rehabilitation robot: Identification of clinical practices and design requirements through a survey of therapists. *Disability and Rehabilitation: Assistive Technology*, 6(5), 420-431.

Boger, J. and Mihailidis, A. (2011). The Future of Intelligent Assistive Technologies for Cognition: Devices Under Development to Support Independent Living and Aging-with-Choice. *NeuroRehabilitation*, 28(3), 271-80.

Green, S., Boger, J. and Mihailidis, A. (2011). A winter coat for older adults. *Canadian Journal of Occupational Therapy*, 78(1), 57-64.

- Mihailidis, A., Blunsden, S., Boger, J., Richards, B., Zutis, K., Young, L. and Hoey, J. (2010). Towards the Development of a Technology for Art Therapy and Dementia: Definition of Needs and Design Constraints. *Arts in Psychotherapy*, 37(4), 293-300.
- Boger, J., Hoey, J., Fenton, K., Craig, T. and Mihailidis, A. (2010). Using actors to develop technologies for older adults with dementia: A pilot study. *Gerontechnology*, 9(4), 450-463.
- Mihailidis, A. and Boger, J. (2009). How engineers are helping seniors with dementia stay at home. *Journal of Policy Engagement*, 1(4), 2-8. (Invited article).
- Hamill, M., Young, V., Boger, J. and Mihailidis, A. (2009). Development of an automated speech recognition interface for personal emergency response systems. *Journal of NeuroEngineering and Rehabilitation*, 6(26).
- Mihailidis, A., Boger, J., Craig, T. and Hoey, J. (2008). The efficacy of the COACH prompting system to assist older adults with dementia through activities of daily living: An intervention study. *BMC Geriatrics*, 8(28).
- Lam, P., Hebert, D., Boger, J., Lacheray, H., Gardner, D., Apkarian, J. and Mihailidis, A. (2008). A haptic-robotic platform for upper-limb reaching stroke therapy: Preliminary design and evaluation results. *Journal of NeuroEngineering and Rehabilitation*, 5(15).
- Mihailidis, A., Cockburn, A., Longley, C. and Boger, J. (2008). The acceptability of home monitoring technology among community-dwelling older adults and baby boomers. *Assistive Technology*, 20(1), 1-12.
- Mihailidis, A., Boger, J., Canido, M. and Hoey, J. (2007). The use of an intelligent prompting system for people with dementia: A case study. *ACM Interactions* (Special issue on *Designing for seniors: innovations for graying times*), 14(4), 34-37.
- Mihailidis, A., Elinas, P., Boger, J. and Hoey, J. (2007). An Intelligent Powered Wheelchair to Enable Mobility of Cognitively Impaired Older Adults: An Anti-Collision System. *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, 15(1), 136-143.
- Viswanathan, P., Boger, J., Hoey, J., Elinas, P. and Mihailidis, A. (2007). The Future of Wheelchairs: Intelligent Collision Avoidance and Navigation Assistance. *Geriatrics and Aging*, 10(4), 253-256.
- Mihailidis, A., Kronen, L. and Boger, J. (2006). Assistive Computing Devices: A Pilot Study to Explore Nurses' Preferences and Needs. *Computers, Informatics, Nursing (CIN)*, 24(6), 328-336.
- Tam, T., Boger, J., Dolan, A., Mihailidis, A. (2006). An Intelligent Emergency Response System: Preliminary Development and Testing of a Functional Health Monitoring System. *Gerontechnology*, 4(4), 209-222.
- Boger, J., Hoey, J., Poupart, P., Boutilier, C., Fernie, G., and 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.

Mihailidis, A., Carmichael, B. and Boger, J. (2004). The use of computer vision in an intelligent environment to support aging-in-place, safety, and independence in the home. *IEEE Transaction on Information Technology in Biomedicine (Special Issue on Pervasive Healthcare)*, 8(3), 238-247.

REFEREED CONFERENCE CONTRIBUTIONS

Boger, J., Astell, A. and Nygård, L. (accepted, 2011). The appropriate design of technologies to support people living with dementia. Workshop accepted to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology, Toronto, ON.

Quraishi, M., Turcotte, N., Dunal, L. and Boger, J. (accepted, 2011). An assessment tool to identify assistive technologies used to support community-dwelling older adults with dementia. Poster accepted to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology, Toronto, ON.

Czarnuch, S., Boger, J. and Mihailidis, A. (accepted, 2011). COACH@Home: An ambient assistive living technology for people with dementia. Plenary presentation accepted to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology (FICCDAT), Toronto, ON.

Flagg, A., Boger, J. and Mihailidis, A. (accepted, 2011). An intelligent toothbrush. Poster accepted to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology (FICCDAT), Toronto, ON.

Lu, E., Wang, R., Boger, J., Hebert, D. and Mihailidis, A. (accepted, 2011). Development of a rehabilitation robot: National differences in therapist practice. Plenary presentation accepted to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology (FICCDAT), Toronto, ON.

Bimbrahw, J., Boger, J., Monroy, V. and Mihailidis, A. (2010). The Development of an Automated Prompting System to Help Teach Children with Autism Spectrum Disorder Self-Care Activities. Poster presented at the 2010 Geneva Centre for Autism International Symposium, Toronto, ON.

Boger, J., Turcotte, N., Quraishi, M. and Dunal, L. (2010) Assistive Technologies Used to Support Occupations by Community-dwelling Older Adults with Dementia and Informal Caregivers. Poster presented to the International Society for Gerontechnology conference, Vancouver, BC.

Blunsden, S., Richards, B., Bartindale, T, Jackson, D., Olivier, P., Boger, J., Mihailidis, A. and Hoey, J. (2009). Design and prototype of a device to engage cognitively disabled older adults in visual artwork. Proceedings of the ACM 2nd International Conference on Pervasive Technologies Related to Assistive Environments, Corfu, Greece.

Kalales, D., Ribaille, C., Boger, J., Monroy, V. and Mihailidis, A. (2008). Prompting strategies used to develop handwashing skills in children with autism spectrum disorder (ASD). Poster presented at the Geneva Centre for Autism International Symposium, Toronto, ON.

Mihailidis, A., Boger, J., Fenton, K., Craig, T. and Li, Z. (2008). The impact of familiarity on the usability of everyday products for older adults with Alzheimer's disease. Poster presented at the 11th International Conference on Alzheimer's Disease and Related Disorders (ICAD), Chicago, IL.

von Bertoldi, A., Hoey, J., Fenton, K., Boger, J. and Mihailidis, A. (2007). Autonomous guidance through handwashing using a partially observable Markov decision process model. Paper presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Viswanathan, P., Boger, J., Hoey, J. and Mihailidis, A. (2007). A comparison of stereovision and infrared as sensors for an anticollision powered wheelchair for older adults with cognitive impairments. Paper presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Hoey, J., von Bertoldi, A., Fenton, K., Boger, J., Mihailidis, A. (2007). Autonomous guidance of handwashing for people with dementia using a partially observable Markov decision process. Paper presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Boger, J., Beach, C., Snoek, J., Mitz, A. and Mihailidis, A. (2007). Identifying the risk of falling: An artificially intelligent tool to support a deployable falls prevention program for older adults. Poster presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Kan, P., Boutilier, C., Hebert, D., Hoey, J., Mihailidis, A. and Boger, J. (2007). The preliminary development of a POMDP controller for upper-limb stroke rehabilitation. Poster presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Li, Z., Boger, J. and Mihailidis, A. (2007) The usability of water faucets for older adults with and without dementia: How important is familiarity? Poster presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Li, Y., Pavri, S., Boger, J., Mihailidis, A. and Fernie, G. (2007). Pedestrian behaviours at signalized crosswalk – the effect of temperature and time of day. Poster presented at the 2nd International Conference on Technology and Aging (ICTA), Toronto, ON.

Viswanathan, P., Boger, J., Hoey, J., Elinas, P., Little, J., Mackworth, A., Mihailidis, A. (2007). An intelligent powered wheelchair to enable mobility in older adults with cognitive impairments. Robotics for Society, Cognitive Science Conference, Vancouver, BC.

Wilson, R., Boger, J., Mihailidis, A. and Rochon, E. (2006). Determining successful communication strategies during interactions between Alzheimer patients and formal caregivers. Poster presented at Celebrating Innovations in Health Care Expo, Toronto, ON.

Boger, J. Poupart, P., Hoey, J., Boutilier, C., Fernie, G. and Mihailidis, A. (2005). A decision-theoretic approach to task assistance for persons with dementia. Paper presented at the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI), Edinburgh, Scotland, 1293-1299.

Boger, J., Poupart, P., Mihailidis, A. and Fernie, G. (2003). Using a POMDP controller to guide persons with dementia through activities of daily living. Abstract and poster presented at the Fifth International Conference on Ubiquitous Computing, Seattle, WA, pp. 219-220.

Mihailidis, A., Carmichael, B., Boger, J. and Fernie, G. (2003) An intelligent environment to support aging-in-place, safety, and independence of older adults with dementia. Paper presented at the Fifth International Conference on Ubiquitous Computing, Seattle, WA.

INVITED PRESENTATIONS / LECTURES

Boger, J. (2011). Enabling Independence: Supporting Aging with Choice with Intelligent Zero-effort Technologies. Invited speaker at the On Lok conference on Living with a Chronic Disease, San Francisco, CA.

Boger, J. (2011). Interventions to improve safety for people with Alzheimer's and their caregivers. Invited speaker at the International Conference on Alzheimer's Disease. Toronto, ON.

Boger, J. (2011). Research in Rehabilitation and Compensatory Technologies for Older Adults. Invited lecturer, Clinical Engineering Instrumentation II (BME1439), University of Toronto, graduate level course.

Boger, J. (2011). Supporting People with Dementia's Independence. Invited lecturer, Human Behavioural Biology (HMB420), University of Toronto, undergraduate/graduate level course.

Mihailidis, A. and Boger, J. (2010). The Development of Intelligent Systems to Support Aging in Place. Invited co-speaker at American Speech-Language-Hearing Association (ASHA), Philadelphia, PA.

Boger, J. (2010). Considerations for Developing Intelligent Assistive Technologies for Older Adults with Dementia: Lessons Learned Through Real-world Applications. Invited workshop presentation at NIPS, Whistler, BC.

Boger, J. (2010). Supporting People with Dementia's Independence. Invited lecturer, Human Behavioural Biology (HMB420), University of Toronto, undergraduate/graduate level course.

Boger, J. (2009) Using Technology to Support Wellness and Aging-in-place. Invited speaker and member of expert panel "Can Technology Help Us to Age in Place?", Atlantic Seniors Housing Needs Conference (ASHRA), Halifax, NS.

Boger, J. (2009). The development of artificially intelligent technology to support wellness and aging-in-Place. Invited speaker at the SPARC & KT-EQUAL workshop, Reading, Reading, United Kingdom.

Boger, J. (2009). The Development of Intelligent Systems to Support Older Adults and Aging-in-Place. Invited lecturer, Human Behavioural Biology (HMB420), University of Toronto, undergraduate/graduate level course.

Boger, J. (2007). Intelligent Assistive Technology: Using Artificial Intelligence to Support Wellness and Aging-in-Place. Speaker at Issues in Aging Conference, Detroit, MI.

Boger, J. (2005). Technology for wellness and its application in supporting aging-in-place. Speaker at 5th Annual KLARU Conference, Toronto, ON.

DISSERTATIONS

Boger, J. (2004) *Design of a Markov decision process system to guide people with moderate-to-severe dementia through the activity of handwashing*. Unpublished M.A.Sc. thesis, University of Toronto, Toronto, Canada.