Jennifer N. Boger   PhD, PEng

CURRICULUM VITAE as of 20 June 2018

Work Address:	Department of Systems Design Engineering 6th floor, E5, 200 University Ave. W., Waterloo, ON, Canada, N2L 3G1
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1.   EDUCATION

DEGREES

2014	Ph.D., Life and Health Sciences, University of Ulster, Jordanstown, United Kingdom. Supervisors: Dr. S. Martin and Dr. G. Kernohan
2004	M.A.Sc. Biomedical Engineering, Institute of Biomaterials and Biomedical Engineering, University of Toronto, Toronto, Ontario, Canada. Supervisor: Dr. G. Fernie
2002	B.Sc. Biological Engineering, School of Engineering, University of Guelph, Guelph, Ontario, Canada.

QUALIFICATIONS, CERTIFICATIONS AND LICENSES

Professional Engineer, Professional Engineers Ontario, Ontario, Canada (Licence #100119230)

2.   EMPLOYMENT

2016 - present	**Assistant Professor**, Department of Systems Design Engineering, Faculty of Engineering, University of Waterloo, Waterloo, ON, Canada
2016 - present	**Schlegel Chair in Technology for Independent Living**, Research Institute for Aging, Waterloo, ON, Canada
2016 - 2016	**Postdoctoral Fellow**, Department of Occupational Science and Occupational Therapy, Faculty of Medicine, University of Toronto, Toronto, ON, Canada

2004 – 2016	**Research Manager**, Intelligent Assistive Technology and Systems Lab (IATSL), Department of Occupational Science and Occupational Therapy, Faculty of Medicine, University of Toronto, Toronto, ON, Canada
2015- 2016	**Scientific Associate**, Toronto Rehabilitation Institute, Toronto, ON, Canada
2011 - 2016	**Manager**, AI & Robotics Research team, Toronto Rehabilitation Institute, Toronto, ON, Canada
2004 - 2015	**Research Associate**, Toronto Rehabilitation Institute, Toronto, ON, Canada
2001	**Engineering Intern**, HATCH, Brisbane, Australia
1999- 2000	**Research Assistant**, Bone Biology Research Lab, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, ON, Canada

CROSS-APPOINTMENTS AND AFFILIATIONS

2017 - present	**Assistant Professor (cross-appointed)**, School of Public Health and Health Systems, University of Waterloo, Waterloo, ON, Canada
2017 - present	**Scientist (affiliated)**, AI & Robotics group, Toronto Rehabilitation Institute, University Health Network (UHN), Toronto, ON, Canada

3.   SCHOLARLY AND PROFESSIONAL ACTIVITIES

ACADEMIC TEACHING

2018 (May-Aug)	**Course instructor**, *Ambient technologies for supporting health, wellbeing, and quality of life (SYDE 740-003)*, University of Waterloo.
2018 (Jan – Apr)	**Course instructor**, *Biomedical Engineering Ethics (BME381)*, University of Waterloo.
2018 (Jan – Apr)	**Course developer/instructor**, *Fundamentals of assistive technology and rehabilitation engineering (SYDE 750-003)*, University of Waterloo.
	This co-created graduate level course introduced students to key concepts in assistive technology and rehabilitation engineering.
2017 (Sept – Dec)	**Course instructor**, *Ambient technologies for supporting health, wellbeing, and quality of life (SYDE 740-003)*, University of Waterloo.
2017 (Jan – Apr)	**Course instructor**, *Biomedical Engineering Ethics (BME381)*, University of Waterloo.
2016	**Course developer**, *Biomedical Engineering Ethics (BME381)*, University of Waterloo. Undergraduate level course.
	Created the first version of *Biomedical Engineering Ethics*, which is a core course for the Biomedical Engineering program and unique to the University of Waterloo. This highly interactive and interdisciplinary course blended philosophy with engineering to

challenge students to explore and engage with ethical considerations related to Biomedical Engineering.

2015 - 2016   **Course co-coordinator**, *Applied Skills and Technology: Human Factors and Design in Occupational Therapy (OCT1100H)*, University of Toronto. Core graduate level course.

MEMBERSHIP IN ACADEMIC / PROFESSIONAL SOCIETIES

2017 – present   **Member**, Association for Computing Machinery (ACM)

2008 - present   **Member**, Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2008 - present   **Member**, Association of Professional Engineers Ontario

2010 - 2013   **Member**, Ontario Society of Professional Engineers

OTHER MEMBERSHIPS

2018 – present   **Member,** Games Institute

2017 – present   **Member**, Member, Waterloo Artificial Intelligence Institute (Waterloo.ai)

2016 – present   **Member**, Centre for Bioengineering and Biotechnology

2016 – present   **Member**, Network for Aging Research

2014 - present   **Member**, Aging2.0 | Toronto Chapter

2010 - present   **Member**, Emerging Health Leaders

COMMITTEES

Present Committees

BIOMEDInnov (Innovation in Education and Entrepreneurship in Biomedical Engineering)

2017 - present   **Member**, Steering Committee

Centre for Bioengineering and Biotechnology

2017 - present   **Member**, Operations Committee

International Conference on Data Mining (ICDM)

2017 - present   **Member**, Program Committee of the Data Mining for Aging, Rehabilitation and Independent Assisted Living (ARIAL) Workshop

International Journal of Mobile Human Computer Interaction (IJMHCI)

2015 - present   **Member,** Review Board

Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2017 – present   **Member**, Membership Marketing and Communication Committee

2013 - present   **Chair,** Student Scientific Paper Competition

2013 - present   **Member**, Standards Committee on Cognitive Technologies

2013 - present   **Member**, Meetings Committee

Standards Council of Canada (SCC)

2018 - present   **Member**, Canadian Mirror Committee to the International ISO Technical Committee
                            on Ageing Societies (MC/ISO/TC 314)

University of Waterloo

2018 - present   **Member,** Biomedical Engineering graduate program planning committee

2017 - present   **Member**, Human Research Ethics Committee

Past Committees

Festival of International Conferences on Caregiving, Disability, Aging & Technology (FICCDAT)

2007   **Member**, Planning Committee

International Conference on Intelligent Environments

2017   **Member**, Programme Committee

2016   **Member**, Programme Committee

2015   **Member**, Programme Committee

International Conference on Technology and Aging (ICTA)

2011   **Member**, Planning Committee

2007   **Member**, Planning Committee

Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2015 - 2016   **Member**, Student Engagement Committee

2010 - 2016   **Member**, Research Committee

2013 - 2016   **Member**, Awards Committee

2012 - 2015   **Chair**, Website Committee

2012 - 2014   **Member,** Board of Directors

2009 - 2011   **Chair**, Sensory and Cognition Special Interest Group

RehabTech Asia 2013

2013   **Member**, International Advisory Committee

Toronto Rehabilitation Institute / University Health Network

2012 - 2016   **Member**, Research Ethics Board

EDITORIAL ACTIVITIES

Journals

Article editor, SAGE Open

REVIEW ACTIVITIES

Granting / funding initiatives

AGE-WELL NCE (scientific member, project review committee)

Alzheimer's Association (reviewer, research granting program)

Israel Science Foundation (external reviewer, individual research grant program)

Ministry of Health, Singapore (external reviewer, health services research grant)

Mitacs (reviewer, Accelerate internship granting program)

Università degli studi di Milano-Bicocca (external reviewer, postdoctoral research award)

Journal and conference submissions

Advancement of Artificial Intelligence - AAAI (paper reviewer)

Aging Health (paper reviewer)

Alzheimer's Association (paper reviewer)

Alzheimer's Association International Conference (abstract reviewer)

American Journal of Alzheimer's Disease (paper reviewer)

Assistive Technology (paper reviewer)

BMC Medical Informatics and Decision Making (paper reviewer)

CHI 2015, 2018 (paper reviewer)

Digital Health (paper reviewer)

Disability and Rehabilitation (paper reviewer)

Disability and Rehabilitation: Assistive Technology (paper reviewer)

Gerontechnology (paper reviewer)

IEEE Journal of Biomedical and Health Informatics (paper reviewer)

IEEE Transactions on Information Technology in BioMedicine (paper reviewer)

IEEE Transactions on Mechatronics (paper reviewer)

International Conference on Data Mining 2017 (ICDM'17) (paper reviewer)

International Conference on Intelligent Environments 2016 (paper reviewer)

International Conference on Intelligent Environments 2015 (paper reviewer)

International Conference on Technology and Aging – ICTA (workshop and paper reviewer)

International Journal of Human-Computer Studies (paper reviewer)

International Journal of Mobile Human Computer Interaction (paper reviewer)

Journal of Medical Internet Research (paper reviewer)

Journal of NeuroEngineering and Rehabilitation (paper reviewer)

Mobile Networks and Applications: Special issue on Pervasive Healthcare (paper reviewer)

Neuropsychological Rehabilitation (paper reviewer)

Pervasive Computing Technologies for Healthcare (paper reviewer)

Conference on Pervasive Technologies Related to Assistive Environments - PETRA (paper reviewer)

Rehabilitation Engineering and Assistive Technology Society of North America - RESNA (instructional course, workshop, poster, and paper reviewer)

Systematic Reviews (paper reviewer)

Systems (paper reviewer)

4.   SCHOLARSHIPS / AWARDS

August 2016   **CIHR Postdoctoral Fellowship Award ($120,000 CAD)**
Canadian Institutes of Health Research (CIHR)
Awarded to complete research titled "A cognitive computing tool for family members to identify products that support their community-based dementia caregiving needs"

2014   **Certificate of Appreciation** for efforts and contributions as a member of the BOD
Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2012 - 2013   **Dobbin Scholarship ($7000 CAD)**

Ireland Canada University Foundation
Awarded to complete research titled "Collaborative international interdisciplinary development of intelligent assistive technologies for supporting well-being in the home"

2011 **Rookie of the Year Award**
Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2011 **Certificate of Appreciation** for two years as SIG Chair
Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2011 **Certificate of Appreciation** for efforts and contributions to the Website Redesign Committee
Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

2010 **Certificate of Appreciation** for efforts and contributions to the SIG Reorganisation Committee
Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

5. RESEARCH FUNDING

COMPETITIVE FUNDNG

Funded

2018Aug-
2023Aug **Collaborator**, "Biomedical Technology Training Program". NSERC Collaborative Research and Training Experience Program (CREATE). 1,650,000.

2018 May -
2019 May **Principle investigator.** "The impact of fatigue on EEG-based brain-computer interface (BCI) applications for post-stroke rehabilitation". CBB Seed Funding Research Grant. Collaborators: Ning Jiang, Shojaeddin Chenouri, and Debbie Hebert. $20,000 CAD.

Apr 2018 –
Mar 2024 **Principle Investigator.** "Zero-effort ambient vitals monitoring". NSERC Discovery Grant. 162,00 CAD.

2018 Jan –
2020 Dec **Co-investigator.** "Dementia or mild cognitive impairment: @ work in progress". Joint Programming Initiative "More Years Better Lives". PIs: Louise Nygård, Anna Mäki-Petäjä-Leinonen, and Arlene Astell. 1,175,890 CAD.

2017 Dec –
2018 Nov **Co-investigator. "**SHADE - Scalable Heuristics for Assistive Design and Elaboration, Grant, Operating." AGE-WELL NCE Strategic Investment Program (SIP). Workshop grant. PI: Hélène Pigot; Co-investigators: Arlene Astell, Nathalie Bonnardel, Sylvain Giroux. 30,000 CAD.

2017 July – 2019 June	**Principle Investigator.** NSERC Research Incentive Fund. University of Waterloo. 30,000 CAD.
2017 May – 2018 Apr	**Principle investigator.** "Designing assistive technology that cares: Dissemination of knowledge generated by a multidisciplinary workshop to explore the holistic needs of family caregivers and care recipients". CIHR. Planning & Dissemination Grants – ICS. Co-investigators: Janet Fast, Louise Demers, Hélène Pigot, Bill Miller, Ron Beleno. 20,000 CAD.
2017 Apr – 2018 Mar	**Principle investigator.** "Designing assistive technology that cares: Multidisciplinary workshop to explore the holistic needs of family caregivers and care recipients". AGE-WELL NCE Strategic Investment Program (SIP). Workshop grant. Co-investigators: Janet Fast, Louise Demers, Hélène Pigot, Bill Miller, Ron Beleno, Josie d'Avernas.15,000 CAD.
2015 Apr – 2020 Apr	**Co-principle investigator.** "CARE RATE-an online assistive technology rating system for Caregivers (WP2.3)". AGE-WELL NCE Operating grant. PIs: Frank Rudzciz, Jennifer Boger. Investigator: Jan Polgar. 475,855 CAD.
2012 Sep - 2015 Aug	**Collaborator.** "Toward developing an assistive technology framework for older adults with dementia: A user-centred design approach". Alzheimer Society of Canada. Alzheimer Society Research Program. 120,000 CAD.
2007 Jul - 2011 Jan	**Collaborator.** "Development of an automated system to facilitate creative expression". American Alzheimer Association. ETAC Program. PIs: J. Hoey, A. Mihailidis. Collaborators: J. Boger, L. Young. 196,150 USD.
2007 Jul - 2009 Jun	**Collaborator.** "The efficacy of an intelligent prompting system to develop self-care activities in children with autism". CIHR (IHDCYH)/Hospital for Sick Children. New Investigator Program. PI: A. Mihailidis. Co-investigators: W. Roberts, H. Polatajko, T. Chau. Collaborator: J. Boger. 129,470 CAD.
2012 Sep - 2015 Aug	**Collaborator.** "Toward developing an assistive technology framework for older adults with dementia: A user-centred design approach". Alzheimer Society of Canada. Alzheimer Society Research Program. 120,000 CAD.
2009 Jan - 2009 Dec	**Co-investigator.** "Automated emergency detection and response system". Ontario Research Commercialization Program. TTT Program. PI: A. Mihailidis; Co-investigators: J. Boger, D. Giesbrecht. 15,000 CAD.

NON-COMPETITIVE FUNDING

2017 Apr – 2017 July	**Principle investigator.** Unrestricted educational grant to support the "Designing technology that cares" workshop. SCA/TENA (Industry grant). 17,000 CAD.
2016 Sept - 2021 Aug	**Principle Investigator**. New Faculty Start-up Funds. University of Waterloo. 90,000 CAD.

2016 Sept - 2019 Aug	**Research Chair.** Schlegel Research Chair in Technology for Independent Living. 75,000 CAD.

6.   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

Boger, J., Young, V., Hoey, J. Jiancaro, T., and Mihailidis, A. (in press). Zero Effort Technologies: Considerations, Challenges and Use in Health, Wellness, and Rehabilitation (2nd ed). In R. M. Baecker, (Ed.), *Synthesis Lectures on Assistive, Rehabilitative, and Health-Preserving Technologies*. San Rafael, CA: Morgan & Claypool Publishers.

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

Boger, J., Gentry, T, Martin, S., and Kelley, J. (in press). Understanding the End-User. In A. Mihailidis and R. O. Smith (Eds.), *Rehabilitation Engineering*. CRC Press.

Boger, J., Mulvenna, M., Moorhead, A. and Jutai, J. (in press). Ethical issues in technology for dementia. In A. Astell, S. Smith and P. Joddrell (Eds.), *Technology for dementia: A guide for everyday living*.

Chang, S. J. I., **Boger, J.**, Qiu, J. and Mihailidis, A. (2017). Pervasive computing and ambient physiological monitoring devices. In B. Bouchard (Ed.), *Smart Technologies in Healthcare*. Boca Raton, FL: CRC Press.

Mihailidis, A., Wang, R. and **Boger, J.** (2017). Gerontechnology. In H. Fillit, K. Rockwood and J. Young (Eds.), *Brocklehurst's Textbook of Geriatric Medicine and Gerontology (8th edition)*. Philadelphia, PA: Elsevier.

Boger, J. and Mihailidis, A. (2015). Assistive Technology for Psychomotor Functioning and Sequencing Complex Movements. In B. O'Neill and A. Gillespie (Eds.), *Assistive Technology for Cognition*. London, UK: Psychology Press.

Mihailidis, A., **Boger, J.**, Czarnuch, S., Nagdee, T. and Hoey, J. (2012). Ambient Assisted Living Technology to Support Older Adults with Dementia with Activities of Daily Living: Key Concepts and the State of the Art. In J.C. Augusto et al. (Eds.), *Handbook of Ambient Assisted Living: Technology for Healthcare, Rehabilitation and Well-being*. 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 and H. Aghajan (Eds.), *Behaviour Monitoring and Interpretation - BMI: Smart Environments*. Amsterdam, The Netherlands: IOS Press, ISBN: 978-1-60750-048-3.

TECHNICAL REPORTS, TRADE PUBLICATIONS AND INVITED ARTICLES

Boger, J. (2013). "Intelligent" LTC Environments: Coming Soon To A Facility Near You! *Long Term Care Magazine*, Summer 2013, 15-16.

Mihailidis, A., **Boger, J.**, Lockton, V. and Chibba, M. (2010). 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.

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).

REFEREED JOURNAL CONTRIBUTIONS

Chang, I. S., Armanfard, N., Javaid, A. Q., **Boger, J.**, and Mihailidis, A. (submitted). Unobtrusive Detection of Simulated Orthostatic Hypotension and Supine Hypertension using Ballistocardiogram and Electrocardiogram of Healthy Adults. IEEE Journal of Translational Engineering in Health and Medicine.

Chen, M., Fu, D., **Boger, J.** and Jiang, N. (submitted). Age-related Changes in Vibro-tactile EEG Response and its Implications in BCI Applications: A Comparison Between Older and Younger Populations. IEEE Transactions on Biomedical Engineering (TBME).

Chang, I. S., Javaid, A., **Boger, J.**, Arcelus, A., and Mihailidis, A. (in press). Design and Evaluation of an Instrumented Floor Tile for Measuring Older Adults' Cardiac Function at Home. *Gerontechnology.*

Boger, J. and Mercer, K. (2017). Technology for fostering intergenerational connectivity: scoping review protocol. *Systematic Reviews*, 6:250.

Chen, M. L., Yao, L., **Boger, J.**, Mercer, K., Thompson, B., & Jiang, N. (2017). Non-invasive brain stimulation interventions for management of chronic central neuropathic pain: a scoping review protocol. *BMJ Open, 7*(10), e016002.

Grace, S., Taherzadeh, G., Chang, I. S., **Boger, J.**, Arcelus, A. Mak, S. and Mihailidis, A. (2017). Perceptions of seniors with heart failure regarding autonomous zero-effort monitoring of physiological parameters in the smart-home environment. *Heart & Lung: The Journal of Acute and Critical Care, 46*(4), 313-319.

Boger, J., Jackson, P., Mulvenna, M., Sixsmith, J., Sixsmith, A., Mihailidis, A., Kontos, P., Polgar, J., Grigorovich, A. and Martin, S. (2017). Principles for Fostering the Transdisciplinary Development of Assistive Technologies. *Disability and Rehabilitation: Assistive Technology, 12*(5), 480-490.

Boger, J., Taati, B. and Mihailidis, A. (2015). Interdisciplinary development of manual and automated product usability assessments for older adults with dementia: Lessons learned. *Disability and Rehabilitation: Assistive Technology, 11*(7), 581-587.

Boger, J., Arcelus, A. and Mihailidis, A. (2014). Themes learned through the development of intelligent environments that support healthy well-being. *Journal of Ambient Intelligence and Smart Environments, 6*(2), 215-235.

Boger, J., Quraishi, M., Turcotte, N. and Dunal, L. (2014). The Identification of Assistive Technologies Being Used to Support the Daily Occupations of Community-dwelling Older Adults with Dementia: A Cross-sectional Pilot Study. *Disability and Rehabilitation: Assistive Technology, 9*(1), 17-30.

Boger, J., Craig, T. and Mihailidis, A. (2013). Examining the impact of familiarity on faucet usability for older adults with dementia. *BMC Geriatrics, 13*(63), online.

Leuty, V.[1], **Boger, J.**[1], Young, L., Hoey, J. and Mihailidis, A. (2013). Engaging Older Adults with Dementia in Creative Occupations Using Artificially Intelligent Assistive Technology. *Assistive Technology, 25*(2), 72-79.

Bimbrahw, J., **Boger, J.** and Mihailidis, A. (2012). Investigating the Efficacy of a Computerized Prompting Device to Assist Children with Autism Spectrum Disorder with Activities of Daily Living. *Assistive Technology*, *24*(4), 286-298.

Lu, E., Wang, R., Huq, R., Gardner, D., Karam, P., Zabjek, K., Hébert, D., **Boger, J.** and Mihailidis, A. (2011). Development of a robotic device for upper limb stroke rehabilitation: A user-centered design approach. Paladyn. Journal of Behavioral Robotics, 2(4), 176-184.

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), 271-280.

Green, S., **Boger, J.** and Mihailidis, A. (2011). Toward enabling winter occupations: testing a winter coat designed 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.

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.[2], **Boger, J.**[2], Craig, T. and Hoey, J. (2008). The COACH prompting system to assist older adults with dementia through handwashing: An efficacy study. *BMC Geriatrics, 8*(28).

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[1] Primary co-authors.
[2] Primary co-authors.

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 & Aging, 10*(4), 253-256.

Mihailidis, A., Krones, 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 Transactions on Information Technology in Biomedicine (Special Issue on Pervasive Healthcare), 8*(3), 238-247.

REFEREED CONFERENCE CONTRIBUTIONS

Workshop organisation

Boger, J. and Astell, A. (accepted). DATCares: Developing AT with informal care partners. Workshop presented at Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), July 15-18, Arlington, VA.

Lazar, A., Toombs, A., Morrissey, K., Kenning, G., **Boger, J.** and Brankaert, R. (2018). HCIxDementia Workshop: Engaging People Living with Dementia. CHI 2018, April 21-26, Montreal, ON.

Plante, M., Rosa-Fortin, M., Lockner, D., Dash, D., Beleno, R., and **Boger, J.** (2017). How to create a joint workshop that works: The story behind the Designing Assistive Technology that Cares (DATcares) workshop. AGE-WELL, Oct 17-19, Winnipeg, MB.

Chang, I. and **Boger, J.** (2017). Zero-effort ambient vitals monitoring. Workshop presented at Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), June 28-30, New Orleans, LA.

Boger, J., Pigot, H., Miller, B., Fast, J., Demers, L., Plante, M., Rosa-Fortin, M-M, Lockner, D., and Beleno, R. (2017). Designing assistive technology that cares: Dissemination of knowledge generated by a multidisciplinary workshop to explore the holistic needs of family caregivers and care recipients. June 7-9, Waterloo, ON.
  ▪ Lead planning and execution of three-day long workshop with 40 participants from multiple disciplines and sectors from across Canada.

Morrissey, K., Lazar, A., **Boger, J.** and Toombs, A. (2017). HCIxDementia: The Role of Technology and Design in Dementia. Workshop presented at CHI 2017, May 6-11, Denver, CO.

Boger, J., Viswanathan, P., and Wang, R. (2015). The Wizard of Oz approach: A method for developing assistive technology prototypes. Workshop presented at Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), June 10-14, Denver, CO.

Wang, R., **Boger, J.** and Taati, B. (2012). Creating Intelligent Rehabilitation Technology: An Interdisciplinary Effort. Workshop presented at the International Conference on NeuroRehabilitation, Nov. 14-16, Toledo, Spain.

Boger, J., Astell, A. and Nygård, L. (2011). The appropriate design of technologies to support people living with dementia. Workshop presented at the Festival of International Conferences on Caregiving, Disability, Aging, and Technology, June 5-11, Toronto, ON.

Symposia

Boger, J., Atoyebi, O. and Leslie, M. (2018; Convener). Caregiver-centred design of gerontechnologies for supporting unpaid care in the community. 11th World Conference of the International Society for Gerontechnology (ISG2018), May 7-11, St. Petersburg, FL.

Boger, J. and Eales, J. (2017). Designing technology that cares: Elements of technology that support carer's needs and the care recipient-carer relationship. Canadian Association on Gerontology (CAG 2017), Oct 19-21, Winnipeg, MB.

Fast, J., Strickfaden, M., Dalle, R., **Boger, J.** and Kim, C. (2017). Assistive technologies for carers: Pathways to innovation. 7th International Carers Conference, Oct 4-6, Adelaide, Australia.

Boger, J. (2017, invited). A village within a city: Technology's role in creating community hubs to support aging. WEiRED Symposium and Workshop, June 14 & 15, Waterloo, ON

Conference papers, oral presentations, and posters

Wei, J., **Boger, J.**, and Zhang, J. (submitted). What Wrist Temperature Tells Us When We Sleep Late: A New Perspective of Sleep Health. UIC 2018: The 15th IEEE International Conference on Ubiquitous Intelligence and Computing, October 8-12, Guangzhou, China.

Boger, J. (submitted). From lived experiences to actionable knowledge: Examples of knowledge products inspired by the Designing Assistive Technology that Cares workshop. Canadian Association on Gerontology (CAG2018), Oct 18-20., Vancouver, BC.

Nygård, L., Mäki Petäjä Leinonen, A., Astell, A., Nedlund, A., **Boger, J.**, Heimonen, S., Rosenberg, L., Ylhäinen, M., Karjalainen, K., Kottorp, A., Ryd, C., and Issakainen, M. (accepted). Dementia or mild cognitive impairment: @ work in progress. 28th Alzheimer Europe Conference, Oct 29-31, Barcelona, Spain.

Eisapour, M., **Boger, J.**, Domenicucci, L. and Cao, S. (accepted). Virtual Reality Exergames for People Living with Dementia Based on Exercise Therapy Best Practices, Human Factors and Ergonomics Society Annual Meeting, Oct 1-5, Philadelphia, PA.

Boroomand, A., Wei, J., **Boger, J.**, Shaker, G., Wong, A. and Morita, P. (accepted). Autonomous Tracking of Older Adults' Normal and Slow Walking Speeds Using 24GHz Radar. 2nd Workshop on AI for Aging, Rehabilitation and Independent Assisted Living (ARIAL) at International Joint Conference on Artificial Intelligence (IJCAI), July 13-19, Stockholm, Sweden.

Wambua, M., Raimondo, S., **Boger, J.**, Polgar, J., Chinaei, H. and Rudzicz, F. (accepted). Interactive search through iterative refinement, Second International Workshop on Conversational Approaches to Information Retrieval (CAIR18), at ACM SIGIR Conference on Research and Development in Information Retrieval, July 8-12, Ann Arbor, MI.

Hussein, T., **Boger, J.**, and Rudzicz, F. (accepted). The Impact of Design on Feelings of Trust of Online Information for Family Caregivers of People with Dementia. British Computer Society 32nd Human Computer Interaction Conference (BHCI-2018). 2-6 July, Belfast, UK.

Chen, M., Fu, D., **Boger, J.** and Jiang, N. (2018). Aging Effects on the Performance of a Brain-computer Interface. 2018 ACCES23-CMBEC41 Joint Conference, May 8-11, Charlottetown, PEI.

Chauhan, P., **Boger, J.**, Hussein, T., Moon, S., Rudzicz, F. and Polgar, J. (2018). Creating the CARE-RATE interface through multi-modal participatory design with caregivers of people with dementia. 11th World Conference of the International Society for Gerontechnology (ISG2018), May 7-11, St. Petersburg, FL.

Eisapour, M., Cao, S., Domenicucci, L. and **Boger, J.** (2018). Participatory Design of a Virtual Reality Exercise for People with Mild Cognitive Impairment. Paper and case study presented at ACM CHI Conference on Human Factors in Computing Systems (CHI 2018), Apr 21-26, Montreal, QC.

Eisapour, M., **Boger, J.**, Domenicucci, L. and Cao, S. (2018). Persuasive VR Design for Motivating Exercise for People Living with Dementia. Persuasive Technology 2018, April 16-19, Waterloo, ON.

Lau, B., Haider, S., Boroomand, A., Shaker, G., **Boger, J.**, Wong, A. and Morita, P. (2018). Gait speed tracking system using UWB radar. 12th European Conference on Antennas and Propagation (EUCAP), Apr 9-13, London, United Kingdom. *(IEEE student competition finalist)*

Boroomand, M., Shaker, G., Morita, P., Wong, A. and **Boger, J.** (2018). Gait Speed Estimation Using 24GHz FMCW Radar. IEEE International Conference on Biomedical and Health Informatics, Mar 4-7, Las Vegas, NV.

Denomme, L., Bruyn-Martin, L., Dash, D. and **Boger, J.** (2017). Caring is more than providing care: Lessons Learned from the "Designing Assistive Technology that Cares (DAT Cares) Workshop. Oral presentation at This is Long Term Care, November 27-29, Toronto, ON.

Boger, J., Eisapour, M., Domenicucci, L. and Cao, S. (2017; invited). Design of Virtual Reality Exergame to Promote Upper-Body Movement for Older Adults with Dementia. Paper presented at the 11th Conference on Rehabilitation Engineering and Assistive Technology Society of Korea (RESKO), Nov 9-11, Goyang, South Korea.

Boger, J., Miller, B. and Beleno, R. (2017). Designing technology that cares: Outcomes from the DATcares workshop. AGE-WELL, Oct 17-19, Winnipeg, MB.

Mulvenna, M., **Boger, J.** and Bond, R. (2017). Ethical by Design - A Manifesto. 35th European Conference on Cognitive Ergonomics (ECCE 2017), Sep 20-22, Umeå, Sweden.

Pearce, S., **Boger, J.**, Mrachacz-Kersting, N., Farina, D. and Jiang, N. (2017). Evaluating the Effectiveness of different External Cues on Non-Invasive Brain-Computer Interfaces. IEEE Engineering in Medicine and Biology Society (EMBC'17), July 11-15, Jeju Island, Korea.

Boger, J., Rudzicz, F., Chinaei, H., Jónasdóttir, S. K., Wambua, M. and Polgar, J. (2017). CARE-RATE: Initial development of an artificially intelligent online tool for connecting caregivers to relevant support. Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), June 28-30, New Orleans, LA.

Morrissey, K., Lazar, A., **Boger, J.** and Toombs, A. (2017). HCIxDementia Workshop: The Role of Technology and Design in Dementia. Paper presented at CHI 2017, May 6-11, Denver, CO.

Doering, R., Polgar, J., Rudzicz, F. and **Boger, J.** (2017). Designing CARE-RATE: An Online Assistive Tool for Dementia Caregivers. Paper presented at the HCIxDementia: The Role of Technology and Design in Dementia workshop, CHI 2017, May 6-11, Denver, CO.

Boger, J., Polgar, J., Rudzicz, F. and Jónasdóttir, S. (2016). CARE-RATE: An artificially intelligent online resource for caregivers of persons with dementia. Canadian Association on Gerontology (CAG2016), Oct 20-22, Montreal, ON.

Chinaei, H., **Boger, J.**, Jónasdóttir, S., Polgar, J. and Rudzicz, F. (2016). Designing and Building CARE-RATE: A Cognitive Computing System for Caregivers. AGE-WELL, Oct 18-20, Montreal, ON.

Polgar, J., Rudzicz, F., and **Boger, J.** (2016). CARE-RATE: An online resource system for caregivers of persons with dementia. International Society for Gerontechnology (ISG), Sept 28-30, Nice, France.

Wang, R., Viswanathan, P., Czarnuch, S., **Boger, J.**, Nejat, G. and Mihailidis, A. (2013). Developing advanced assistive technologies for older adults with dementia: Lessons learned. Poster presented at Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), June 22-24, Bellevue, WA.

Boger, J., Wang, R. and Taati, B. (2012). Interdisciplinary Development of Intelligent Rehabilitation Technologies. Oral presentation at the International Conference on NeuroRehabilitation, Nov. 14-16, Toledo, Spain.

Taati, B., **Boger, J.**, Snoek, J. and Mihailidis, A. (2012). Assessment of product use by older adults with dementia: Automated Video Analysis. Presentation given at the Alzheimer's Association International Conference (AAIC), July 14-19, Vancouver, BC.

Boger, J., Taati, B. and Mihailidis, A. (2012). Assessing the Usability of Water Taps by Older Adults with Dementia. Poster presented at the Alzheimer's Association International Conference (AAIC), July 14-19, Vancouver, BC.

Boger, J., Taati, B. and Mihailidis, A. (2012). Assessment of product use by older adults with dementia: Defining and analysing usability. Poster presented at the Alzheimer's Association International Conference (AAIC), July 14-19, Vancouver, BC.

Quraishi, M., Turcotte, N., Dunal, L. and **Boger, J.** (2011). An assessment tool to identify assistive technologies used to support community-dwelling older adults with dementia. Poster presented at the Festival of International Conferences on Caregiving, Disability, Aging, and Technology, June 5-11, Toronto, ON.

Czarnuch, S., **Boger, J.** and Mihailidis, A. (2011). COACH@Home: An ambient assistive living technology for people with dementia. Presentation to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology (FICCDAT), June 5-11, Toronto, ON.

Flagg, A., **Boger, J.** and Mihailidis, A. (2011). An intelligent toothbrush: Machines for Smart Brushing. Poster presented to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology (FICCDAT), June 5-11, Toronto, ON.

Lu, E., Wang, R., **Boger, J.**, Hebert, D. and Mihailidis, A. (2011). Development of a rehabilitation robot: National differences in therapist practice. Presentation given to the Festival of International Conferences on Caregiving, Disability, Aging, and Technology (FICCDAT), June 5-11, 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, Nov 3-5, 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, May 27-30, Vancouver, BC.

Hoey, J., Richards, B., Blunsden, S., Burns, J., Bartindale, T., Jackson, D., Olivier, P., **Boger, J.** and Mihailidis, A. (2009). ePAD: Engaging Platform for Art Development. Paper presented at the International Joint Conference on Artificial Intelligence (IJCAI) 2009 workshop on Intelligent Systems for Assisted Cognition, July 11-17, Pasadena, CA, USA.

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, June 9-13, 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, Oct 22-24, 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), July 26-31, 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), June 16-19, 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), June 16-19, Toronto, ON.

Hoey, J., von Bertoldi, A., Fenton, K., **Boger, J.** and 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), June 16-19, 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), June 16-19, 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), June 16-19, 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), June 16-19, 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), June 16-19, Toronto, ON.

Viswanathan, P., **Boger, J.**, Hoey, J., Elinas, P., Little, J., Mackworth, A. and Mihailidis, A. (2007). An intelligent powered wheelchair to enable mobility in older adults with cognitively 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, April 19-20, 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. Poster presented at 5th International Conference on Ubiquitous Computing (UbiComp), Oct 12-15, 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 (UbiComp), Oct 12-15, Seattle, WA.

INVITED PRESENTATIONS / LECTURES

Presentation. (June 2018). Ethical issues in biomedical engineering. BioMedInnov Summer School, University of Waterloo / Paris-Sorbonne University, June 18-22, Paris, France.

Presentation. (Apr 2018). "CARE-RATE: Finding resources that support carers of people living with dementia". TechThatCares (online conference).

Scientific Talk. (Mar 2018). "Technologies that work for you: Leveraging human-centred design to create zero-effort technologies". TRI research rounds, Toronto, ON.

Guest lecturer. (Mar 2018). Fostering Intergenerational Connectivity. Undergraduate/Graduate level course *Multidisciplinary Perspectives on Aging* (*HLTH/GERON 400; HLTH 620)*, University of Waterloo, Waterloo, ON.

Scientific Talk. (Nov 2017). Intelligent Technologies for Supporting Health, Wellbeing, and Quality of Life for Aging. Inha University, Incheon, South Korea.

Presentation. (Jul 2017). From ideas to implementation: Exploring the design process. AGE-WELL EPIC Summer Institute, Shediac, NB.

Presentation. (Jul 2017). Creating solutions with and for the people who use them. AGE-WELL EPIC Summer Institute, Shediac, NB.

Keynote/plenary session. (Jun 2017). "The Future of Assistive Technology is in Supporting Functional Limitations Caused by Aging (Debate)". Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), June 28-30, New Orleans, LA.

Guest lecturer. (Mar 2017). Fostering Intergenerational Connectivity. Undergraduate/Graduate level course *Multidisciplinary Perspectives on Aging* (*HLTH/GERON 400; HLTH 620)*, University of Waterloo, Waterloo, ON.

Keynote speaker. (Dec 2016). Intelligent technologies for supporting aging and wellbeing. 17th Annual Human Factors Engineering Inter-University Workshop, Waterloo, ON.

Guest lecturer. (2016). Design for Aging: An Introduction. Undergraduate level course *Introduction to Design (SYDE161/BME161)*, University of Waterloo, Waterloo, ON.

Panel member. (2015). Women in science. University Health Network, Toronto, ON.

Session keynote. (2015). Intelligent assistive technologies for supporting people who have dementia. Students Against Alzheimer's at the University of Toronto (SAAUT) annual conference, University of Toronto, Toronto, ON.

Guest lecturer. (2015). Artificially intelligent technologies for supporting older adults who have dementia. Graduate level course *Cognitive Rehabilitation: Theory and Practice (PSY5221HS)*, University of Toronto, Toronto, ON.

Guest lecturer. (2015). Technologies for people with cognitive impairments. Graduate level course *Aging in a Technological World (GERO830)*, Simon Fraser University, Vancouver, BC.

Guest lecturer. (2015). Research in Intelligent Ambient Technologies for Older Adults. Graduate level course *Clinical Engineering Instrumentation II (BME1439)*, University of Toronto, Toronto, ON.

Presentation. (2015). Unobtrusive monitoring of the physiology and activity of seniors with HF. *Cardiac and Circulatory Physiology Rounds*, Mt. Sinai Hospital, Toronto, ON.

Guest lecturer. (2014). Intelligent technologies for supporting wellbeing. Graduate level course *Technology, Design, and OT (OCT1100)*, University of Toronto, Toronto, ON.

Panel member and mentor. (2014). #DementiaHack: Hacking to help people with dementia and their caregivers. British Consulate-General Toronto and HackerNest, Toronto, ON.

Guest lecturer. (2014). Creating Intelligent Assistive Technology: A Transdisciplinary Effort. Graduate level course *Clinical Engineering Instrumentation II (BME1439)*, University of Toronto, Toronto, ON.

Guest lecturer. (2013). Research in Rehabilitation and Compensatory Technologies for Older Adults. Graduate level course *Clinical Engineering Instrumentation II (BME1439)*, University of Toronto, Toronto, ON.

Speaker. (2013). Intelligent Technologies for Supporting Aging-in-place. CARP association meeting, Toronto, ON.

Speaker. (2012). Intelligent technologies for supporting healthcare in the home. 12th annual eHealth Summit, Muskoka, ON.

Speaker. (2012). Intelligent technologies for the home. Home & Vehicle Modification Summit, Toronto, ON.

Guest lecturer. (2012). Research in Rehabilitation and Compensatory Technologies for Older Adults. Graduate level course *Clinical Engineering Instrumentation II (BME1439)*, University of Toronto, Toronto, ON.

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

Speaker. (2011). Interventions to improve safety for people with Alzheimer's and their caregivers. International Conference on Alzheimer's Disease. Toronto, ON.

Guest lecturer. (2011). Research in Rehabilitation and Compensatory Technologies for Older Adults. Graduate level course *Clinical Engineering Instrumentation II (BME1439)*, University of Toronto, Toronto, ON.

Guest lecturer. (2011). Supporting People with Dementia's Independence. Undergraduate/graduate level course *Human Behavioural Biology (HMB420)*, University of Toronto, Toronto, ON.

Speaker. (2010). The Development of Intelligent Systems to Support Aging in Place. American Speech-Language-Hearing Association (ASHA), Philadelphia, PA. Co-speaker: A. Mihailidis.

Presentation. (2010). Considerations for Developing Intelligent Assistive Technologies for Older Adults with Dementia: Lessons Learned Through Real-world Applications. NIPS, Whistler, BC.

Guest lecturer. (2010). Supporting People with Dementia's Independence. Undergraduate/graduate level course *Human Behavioural Biology (HMB420)*, University of Toronto, Toronto, ON.

Speaker and panel member. (2009) Using Technology to Support Wellness and Aging-in-place (presentation); "Can Technology Help Us to Age in Place?" (panel topic), Atlantic Seniors Housing Needs Conference (ASHRA), Halifax, NS.

Speaker. (2009). The development of artificially intelligent technology to support wellness and aging-in-Place. SPARC & KT-EQUAL workshop, Reading, Reading, United Kingdom.

Guest lecturer. (2009). The Development of Intelligent Systems to Support Wellness and Aging-in-Place. Undergraduate/graduate level course *Human Behavioural Biology (HMB420)*, University of Toronto, Toronto, ON.

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

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

DISSERTATIONS

Boger, J. (2014). *Transdisciplinary development of intelligent assistive technologies to support wellbeing*. Ph.D. thesis, University of Ulster, Belfast, United Kingdom.

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

7. MEDIA APPEARANCES

2018 Jan	"Using VR to help seniors exercise". 6 PM news, CTV Kitchener. Feb 2 2018.
2015 Mar	"AI and Robotics: Toward meeting the rising needs of dementia and caregiving". Radio Regent. Radio interview.
2015 Mar	"Dementia patients may one day get assistance from robot helpers". CBC News. Print article.
2012 Feb	"Jen the Engineer". The Space, TVO Kids. TV segment.
2005 Nov	"Wheelchair Anti-Collision System". Canada AM, CTV. TV segment.

8. RESEARCH SUPERVISION

POSTDOCTORAL FELLOWS

2017 May -	**Co-supervisor.** Postdoctoral fellow, Ameneh Boroomand, University of Waterloo. *Wireless markerless activity and falls tracking for supporting health and wellbeing in*

2018 May	*older adults.*

GRADUATE EDUCATION

2018 May - present	**Primary (sole) supervisor**. MASc. Amir Mehdi Shamsi, SYDE, University of Waterloo. *Optimisation of website user interface for family caregivers.*
2018 May - present	**Co-supervisor**. MASc. Jacob Manuel, SYDE, University of Waterloo. *Effects of fatigue on EEG and BCI for post-stroke rehabilitation.*
2018 May - present	**Primary (sole) supervisor**. MASc. Karan Shastri, SYDE, University of Waterloo. *MCI@work: A digital tool for supporting people diagnosed with early onset dementia in the workplace.*
2017 Sept - present	**Primary (sole) supervisor**. MASc. Jing Wei, SYDE, University of Waterloo. *Activity detection and classification using high-frequency radar.*
2017 Sept - present	**Primary (sole) supervisor**. MASc. Ahmed Malik, SYDE, University of Waterloo. *Portable zero-effort ambient detection of vital signs.*
2017 Jan - present	**Co-supervisor.** MASc. Mahzar Eisapour, University of Waterloo. *The use of virtual reality to augment music therapy for older adults living with dementia.*
2017 Jan - present	**Co-supervisor.** MASc, Sarah Pearce, University of Waterloo. *Using wearable ECG to support emotion control for people with Autism spectrum disorder.*
2017 Jan - 2017 Sept	**Primary (sole) supervisor**. MASc. Riley Doering, University of Waterloo. *User-driven development of the interface of a cloud-based platform to connect caregivers with resources for supporting dementia care.*

UNDERGRADUATE THESIS SUPERVISION

2017 Sept –2018 Apr	*Automatic Brake-Locking Wheelchair System for Wheelchairs* (SYDE 461/462). Tristan Amini, Jonathan Devries, Mousa Khan, and Aaron Wiersma.
2016 Sept –2017 Apr	*Reciprocal Volunteerism Network: A cloud-based platform for fostering intergenerational connectivity* (SYDE 461/462). Arieze Kanji, Danyal Montazeralghaem, Kathika Uthayakumar, Kajaruban Kulasingham, and Sam Barnard.
2017 Jan – 2017 Apr	*Comparison of tools for assessing the development of pressure sores in older adults: A scoping review* (HLTH 472). Basil Ahmad and Matthew Sefati.
2017 Jan – 2017 Apr	*Sit-to-Stand Assist: Additional stability for older adults using a cane when transitioning between upright and sitting positions* (SYDE 362). Fionna Fenlon, Hannah Van Opstal, Thanuree Pathiranawasam, and Kieran Ratcliffe.

OTHER ROLE

2018 Jan – 2018 April	**Primary (sole) supervisor.** Undergraduate research assistant, Anjali Thatte, BME, University of Waterloo. *Establishing groundtruth for wireless detection of walking speed.*
2018 Jan – 2018 April	**Primary (sole) supervisor.** Undergraduate research assistant, Terence Li, SYDE, University of Waterloo. *CARE-RATE interface development.*
2018 Jan – 2018 April	**Primary (sole) supervisor.** Undergraduate research assistant, Zi Zhang, SYDE, University of Waterloo. *CARE-RATE interface development.*
2017 Oct – present	**Primary (sole) supervisor.** Graduate research assistant, Harmanpreet Chauhan, Psychology, Wilfrid Laurier University. *Validation of CARE-RATE interface.*
2017 Oct – present	**Primary (sole) supervisor.** Graduate research assistant, Thana Hussein, SYDE, University of Waterloo. *Design of CARE-RATE interface: The incorporation of trust in design.*
2017 May – 2017 Dec	**Co-supervisor.** Undergraduate research assistant, Emily Giau, KIN, University of Waterloo & Carleton University. *Online social networking to reduce loneliness and enhance well-being among older adults.*
2017 Sept – 2017 Dec	**Primary (sole) supervisor.** Undergraduate research assistant, Nicholas Sia, SYDE, University of Waterloo. *Interface design for Pressiona pressure management system.*
2017 June – 2017 Aug	**Primary (sole) supervisor.** Undergraduate research assistant, Nolan Dey, SYDE, University of Waterloo. *Custom-built video communication for advanced multiple sclerosis.*
2017 June – 2017 Aug	**Primary (sole) supervisor.** Undergraduate research assistant, Anrui (Andrew) Chen, SYDE, University of Waterloo. *Custom-built video communication for advanced multiple sclerosis.*
2017 Jan – 2017 Apr	**Primary supervisor.** Undergraduate research assistant, Sae Young (Sally) Moon, SYDE, University of Waterloo. *Investigation of factors to inform development of technologies to support intergenerational connectivity.*
2017 Jan – 2017 Apr	**Primary supervisor**. Logan Reis, Co-op Research Assistant, University of Waterloo. *Scoping review on technologies to support intergenerational connectivity.*

THESIS COMMITTEE MEMBER

2018 Apr - present	**PhD Comprehensive exam committee member.** Kirti Sahu. School of Public Health and Health Systems. *Public Health Surveillance Using IoT Technology*.
2018 Apr - present	**PhD Comprehensive exam committee member.** Leila Homaeian. Systems Design Engineering. *Investigating the Impact of Data Transfer User Interfaces on Communication Grounding in Cross-Device Collaborative Environments*.
2018 Feb - present	**PhD Comprehensive exam committee member.** Cayley MacArthur. Systems Design Engineering, University of Waterloo. *The Role of Gender in the Design Process of Games & Mixed Reality Technology*.
2017 June – present	**PhD thesis committee member.** Kaylen Pfisterer. Systems Design Engineering, University of Waterloo. *Computational Biophotonic Imaging for Nutrient Sensing and Quantification*.

THESIS EXAMINER

2018 Aug	**PhD,** Ramtin Lotfabadi. Systems Design Engineering, University of Waterloo.
2017 Aug	**MASc**, Kaela Shea, Mechatronics Engineering, University of Waterloo.
2017 Apr	**MASc.** Damla Kerestecioglu, Systems Design Engineering, University of Waterloo.
2016 Dec	**PhD.** Tom Beltrame, Kinesiology, University of Waterloo.

9. PATENTS

19 Oct 2012. Emergency Detection and Response System and Method, Patent Pending, Application, US20130100268 A1, United States. Alex Mihailidis, Yani Ioannou, Jennifer Boger, James E. Gastle.

22 May 2009. Automated emergency detection and response, Patent, Granted, US8063764 B1, United States. Alex Mihailidis, David Giesbrecht, Jesse Hoey, Tracy Lee, Vicky Young, Melinda Hamill, Jennifer Boger, John Paul Lobos, Babak Taati.

10. COMMUNITY AND VOLUNTEER ACTIVITIES

2015 – 2016	**Chair**, Parental Advisory Committee, Mindwerx Education Centre
2010 - present	**Science Representative**, Let's Talk Science
2006 - 2010	**Tutor**, Pathways to Education