

**Personal Information****Identification**Title  Family Name  First Name  Date of Birth  Sex  Correspondence language Canadian Residency Status **Country of Citizenship**

	Country of Citizenship
1	Canada

**Language Skills**

	Language	Read	Write	Speak	Understand
1	English	Yes	Yes	Yes	Yes
2	French	No	No	No	No

**Address**

The primary Address is denoted by (\*)

*1	Address Type <input type="text" value="Primary Affiliation"/>
	Faculty of Medicine R106-771 McDermot Ave Winnipeg Canada / Manitoba R3E 0T6

**Telephone**

The primary Telephone is denoted by (\*)

	Phone Type	Area Code	Telephone Number
*1	Fax	204	7893927
*2		204	7874794

**Email**

The primary Email is denoted by (\*)

	Email Type	Email Address
*1	Work	ptsturm@ms.umanitoba.ca

**Education****Degrees**

1	Degree Type <input type="text" value="Doctorate"/> Degree Name <input type="text" value="Physiology"/> Specialization <input type="text" value="Neurophysiology"/> Organization <input type="text" value="The University of Manitoba"/> Degree Status <input type="text" value="Completed"/> Degree Start Date <input type="text" value="1984/9"/> Degree Received Date <input type="text" value="1988/6"/> <b>Supervisors</b> <table><tr><th></th><th>Supervisor Name</th></tr><tr><td>1</td><td>Dr. Ralph Jell</td></tr></table>		Supervisor Name	1	Dr. Ralph Jell
	Supervisor Name				
1	Dr. Ralph Jell				

2	Degree Type <input type="text" value="Bachelor's"/> Degree Name <input type="text" value="Bachelor's Science"/> Specialization <input type="text" value="Physical Therapy"/> Organization <input type="text" value="University of Western Ontario"/>
	Degree Status <input type="text" value="Completed"/> Degree Start Date <input type="text" value="1977/9"/> Degree Received Date <input type="text" value="1980/4"/>
<b>Supervisors</b>	
	<b>Supervisor Name</b>
1	Dr. Malcom Peat

  

3	Degree Type <input type="text" value="Bachelor's"/> Degree Name <input type="text" value="Bachelor's of Science"/> Specialization <input type="text" value="Biology"/> Organization <input type="text" value="University of Western Ontario"/>
	Degree Status <input type="text" value="Completed"/> Degree Start Date <input type="text" value="1974/9"/> Degree Received Date <input type="text" value="1977/4"/>
<b>Supervisors</b>	
	<b>Supervisor Name</b>
1	Dr. Barr

## Recognitions

	Recognition Type	Recognition Name	Other Organization	Other Organization Type	Other Organization Location	Effective Date	End Date	Amount	Currency
1	Prize / Award	PhD studentship research award	Manitoba Health Research Council	Provincial Government	Canada / Manitoba	1985/9	1986/	10000	Canadian dollar
2	Prize / Award	Graduate scholarship research award	Physiotherapy Foundation of Canada			1984/9	1985/	1000	Canadian dollar

## User Profile

Researcher Status  Research Career Start Date  Engaged in Clinical Research?

### Key Theory / Methodology

Research focus is on applied basic sciences, application of wearable motion and pressure sensors, computer technologies, signal analysis, computational engineering, translational and client-centered clinical research. Modern concepts of learning and Neuro-adaptation have been incorporated in my research, using a task-specific approach and coupling effective therapies and activities to video games, thus making exercise training both a challenging and enjoyable experience

### Research Interests

Expertise: Neurosciences and biomedical Engineering; Arthritis hand rehabilitation. Research is multidisciplinary through Telerehabilitation platforms which efficiently uses health system resources to provide health care in the community and home (urban and rural). The key features are; treatment integrated with assessment, documenting compliance and tracking (electronic records) over time.

### Research Experience Summary

My research is multidisciplinary and involves design, production and validation of technology-assisted Telerehabilitation platform and applications for engaging intervention with embedded monitoring tools. Electronic monitoring tools have been developed to provide feedback, outcomes/trend analysis and client support. Data analysis procedures have been developed that provide objective, reliable, verifiable, contextual information and electronic records about performance and capacity of each person during each use (assessment and treatment session). The idea of a tool where treatment and assessment are integrated is highly desirable as such objective methods and the need to track trajectory of change, determine drivers of change, and determine dose-response relationships. Our Telerehabilitation platform provide an integrated, blended perspective of sensory cognitive and motor function applied to rehabilitation of balance, gaze, locomotion, cognition and also finger-hand function.

## Fields of Application

	Field of Application
1	Communication and Information Technologies
2	Pathogenesis and Treatment of Diseases

## Disciplines Trained In

	Discipline Trained In
1	Neurosciences
2	Physiotherapy

## Areas of Research

	Area of Research
1	Cerebrovascular Accident
2	Loss of Independence

3	Motor System
4	Rehabilitation Care and Services
5	Vestibular Disorders

### Research Specialization Keywords

	Research Specialization Keywords
1	Aging
2	Arthritis rehabilitation
3	Cognitive Behavior
4	Fall Preventions
5	Finger-hand Functions
6	Game-based therapy
7	Motor Control Physiology
8	Neuro-muscular rehab
9	Neuro-Rehabilitation
10	Telerehabilitation

### Research Centres

	Research Centre
1	University of Manitoba

### Research Disciplines

	Research Discipline
1	Biomedical Engineering and Biochemical Engineering
2	Geriatrics-Gerontology
3	Neurosciences
4	Physiotherapy
5	Rheumatology

## Employment

### Academic Work Experience

	Position Title	Position Status	Start Date	Organization	Department	End Date
1	Adjunct Professor	Full-time	2010/9	The University of Manitoba	Bio-medical Engineering	
2	Associate Professor	Full-time	1994/7	The University of Manitoba	Medical Rehabilitation	
3	Adjunct Professor	Full-time	2003/1	The University of Manitoba	Electrical and Computer Engineering	2008/10
4	Adjunct Professor	Full-time	2002/1	The University of Manitoba	Physiology	2006/8
5	Assistant Professor	Full-time	1988/7	The University of Manitoba	Medical Rehabilitation	1994/6
6	Lecturer	Full-time	1986/7	The University of Manitoba	Medical Rehabilitation	1988/6

### Non-academic Work Experience

	Position Title	Start Date	End Date	Work Description	Other Organization	Other Organization Type	Other Organization Location	Unit / Division	Position Status
1	Research Counsellant	2007/1	2008/12	Research consultant for Phase 2 Multi-centre RCT clinical trial "A Four Week, Prospective, Randomized, Double Blind, Placebo-Controlled Trial	Avigen inc.	Private Sector	United States / California	1301 Harbor Bay pkwy Alameda, CA 94502	

				to Assess Safety, Tolerability, Pharmacokinetics and Preliminary Efficacy of AV650 in Patients with Spasticity due to Spinal Cord Injury". I am responsible for development training and analysis of the pendulum drop test which is the primary objective outcome measurement of spasticity.					
2	Physiotherapist	1980/7	1984/7		Health Science Center, Winnipeg	Health	Canada / Manitoba	Physiotherapy	Full-time

## Affiliations

The primary Affiliations is denoted by (\*)

	Position Title	Organization	Department	Start Date
1	Adjunct Professor in Biomedical Engineering	The University of Manitoba	Biomedical Engineering	2010/9
*2	Associate Professor	The University of Manitoba	Medical Rehabilitation	1994/7

## Research Funding History

1	<p>Funding Type <input type="text" value="Grant"/></p> <p>Funding Title</p> <p>Effects of innovative technology- assisted circuit training for dynamic balance and mobility; a community-based group training program as an alternate to out-patient rehabilitation post stroke; Phase randomized controlled trial</p> <p>Grant Type <input type="text" value="Operating"/></p> <p>Project Description</p> <p>This is an exploratory RCT to test the effectiveness of treating adults who have suffered a stroke using the following treatment components; a) community setting, b) group activity and c), task-specific, interactive computer-based exercise regime. It is designed to allow an extension of the in-patient rehabilitation experience to a community-based setting, in a cost-effective manner using paraprofessional staff and rehabilitation specialists, to promote recovery and independence from impairments affecting balance and walking. Specific objectives are: a) assess the feasibility and benefits of the multi-functional group exercise intervention for balance and mobility, and b) identify effective combinations of exercises &amp; activities that translate to increased abilities and participation levels.</p> <p>Clinical Research Project? <input type="text" value="Yes"/> Funding Status <input type="text" value="Awarded"/> Funding Role <input type="text" value="Principal Investigator"/> Funding Start Date <input type="text" value="2013/3"/></p> <p>Funding End Date <input type="text" value="2014/3"/></p> <p><b>Funding Sources</b></p> <table border="1"> <thead> <tr> <th></th> <th>Other Funding Organization</th> <th>Total Funding</th> <th>Currency of Total Funding</th> <th>Funding Competitive?</th> <th>Funding Start Date</th> <th>Funding End Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Manitoba Medical Services Foundation</td> <td>12000</td> <td>Canadian dollar</td> <td>Yes</td> <td>2013/3</td> <td>2014/3</td> </tr> </tbody> </table>		Other Funding Organization	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date	1	Manitoba Medical Services Foundation	12000	Canadian dollar	Yes	2013/3	2014/3
	Other Funding Organization	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date									
1	Manitoba Medical Services Foundation	12000	Canadian dollar	Yes	2013/3	2014/3									
2	<p>Funding Type <input type="text" value="Grant"/></p> <p>Funding Title</p> <p>Fully Instrumented Treadmill for Characterizing Stability of Energy-Efficient Bipedal Walking Robots, and application to Human Fall Prevention</p> <p>Grant Type <input type="text" value="Operating"/></p> <p>Project Description</p> <p>o develop and validate new methods to quantify stability criterion using a passive dynamic walker, a simple mechanism, which can walk on a ramp remarkably similar to human gait without actuators. Such natural gait is stable and energy-efficient. Passive walkers have the advantages over humans for further development of models of transient stability criteria, in that they are simple in structure and have low measurement errors. On monitoring</p>														

human walking, we developed a Telerehabilitation platform (TRP), a treadmill instrumented with low-cost sensors, for automated assessment and therapeutic exercise, specifically designed for use in community settings, such as Reh-Fit centre or Wellness institute. Fall monitoring is crucial. Our newly developed methods for quantification of walking stability, Lyapunov's stability analysis, shows promise for this purpose.

Clinical Research Project? ☒ Yes Funding Status ☒ Awarded Funding Role ☒ Co-investigator Funding Start Date

Funding End Date

#### Funding Sources

	Other Funding Organization	Program Name	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	NSERC Research Tools and Instruments	NSERC Research Tools and Instruments	14500	Canadian dollar	Yes	2012/8	2013/7

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Funding Type ☒ Grant

Funding Title

Automated Tracking and Assessment (ATA) System for Telemedicine-Based, Long-Term Monitoring, Support and Medical Management for Rheumatoid Arthritis of the Hand

Grant Type ☒ Operating

Project Description

This is an extension of our previous CIHR funded research project titled, "Development of a Universal Assessment Tool of Fine or Gross Finger-hand Functions in Daily Clinical Practice and Research"; this research focuses on a knowledge-based approach to tracking and assessing impairments and function of people with rheumatoid arthritis (RA) of the hand. RA impacts severely on hand and arm function. Objective ways to document the effect of pain, inflammation and joint stiffness on hand function, and a means to share this information among health care professionals is important for many reasons; for tracking disease activity and functional recovery, management and treatments with drug therapies and surgeries, strategies for prevention and rehabilitation, and provision of appropriate adaptive equipment. This work will evaluate an innovative computerized assessment tool that can quantify fine manual dexterity and finger-hand function for nearly any object, tool or utensil independent of th

Clinical Research Project? ☒ Yes Funding Status ☒ Awarded Funding Role ☒ Co-investigator Funding Start Date

Funding End Date

#### Areas of Research

	Area of Research
1	Rehabilitation Care and Services

#### Fields of Application

	Field of Application
1	Pathogenesis and Treatment of Diseases

#### Funding by Year

	Start Date	End Date	Currency of Total Funding
1	2008/10	2012/11	Canadian dollar

#### Funding Sources

	Funding Organization	Program Name	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	National Centers of Excellence (The) (NCOE)	Canadian Arthritis Network	600000	Canadian dollar	Yes	2008/10	2012/10

#### Other Investigators

	Investigator Name	Role
1	Dr.Barbara Shay	Co-investigator
2	Peters, James	Principal Investigator

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Funding Type ☒ Grant Funding Title  Grant Type ☒ Operating

Project Description

Purpose of this clinical pilot study is to examine the feasibility of and benefits from a fall prevention program consisting of dynamic balance exercises coupled to interactive video games

Clinical Research Project? ☒ Yes Funding Status ☐ Awarded Funding Role ☐ Principal Investigator Funding Start Date ☐ 2007/3Funding End Date ☐ 2008/3**Funding Sources**

	Other Funding Organization	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	Riverview Health Centre Foundation, Winnipeg MB, and, Industry Partner Vista Medical 55 Henlow Bay,	6600	Canadian dollar	Yes	2007/3	2008/3

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Funding Type ☐ Grant

Funding Title

☐ Reliability and validity of performance-based electronic measures of dynamic balance and gaze control in people with peripheral vestibular hypofunctionGrant Type ☐ Operating

Project Description

Methods have been developed to quantify capacity to adapt balance and gaze stability to altered sensory conditions, graded task demands, gaze shifts and smooth pursuit with head movements. Together with the DHI and HRQL measures, this study will provide evidence regarding a physical construct underlying balance impairment, gaze instability and dizziness and its relationship to life role participation. In addition the results will shed light on the general physiological mechanisms that contribute to limitations and restriction in mobility, eye-head coordination, daily activities, and fall risk. This will provide a rationale for targeted interventions designed to improve balance, mobility and gaze functions in the clinical setting and for te

Clinical Research Project? ☒ Yes Funding Status ☐ Completed Funding Role ☐ Principal Investigator Funding Start Date ☐ 2010/9Funding End Date ☐ 2011/9**Fields of Application**

	Field of Application
1	Biomedical Aspects of Human Health

**Funding by Year**

	Start Date	End Date	Total Funding	Currency of Total Funding
1	2010/9	2011/9	10000	Canadian dollar

**Funding Sources**

	Funding Organization	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	Health Sciences Centre Foundation	10000	Canadian dollar	Yes	2010/9	2011/9

**Other Investigators**

	Investigator Name	Role
1	Tony Szturm	Principal Investigator

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Funding Type ☐ GrantFunding Title ☐ A randomized double-blinded crossover study assessing the effect of cannabinoids on spasticity in spinal cord injured persons: a pilot studyClinical Research Project? ☒ Yes Funding Status ☐ Completed Funding Role ☐ Principal Investigator Funding Start Date ☐ 2009/4Funding End Date ☐ 2009/9**Funding by Year**

	Start Date	End Date	Total Funding	Currency of Total Funding
1	2009/4	2009/9	7000	Canadian dollar

**Funding Sources**

	Funding Organization	Program Name	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
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1	ICN Pharmaceuticals Inc.	Operating Grant	7000	Canadian dollar	Yes	2008/1	2008/12
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**Other Investigators**

	Investigator Name	Role
1	Perry, Daryl	Principal Investigator

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7

Funding Type

Funding Title

A Four Week, Prospective, Randomized, Double Blind, Placebo-Controlled Trial to Assess Safety, Tolerability, Pharmacokinetics and Preliminary Efficacy of AV650 in Patients with Spasticity due to Spinal cord injury

Grant Type  Funding Status  Funding Role  Funding Start Date  Funding End Date

**Funding Sources**

	Funding Organization	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	Avigen	11000	Canadian dollar	Yes	2007/8	2008/8

**Other Investigators**

	Investigator Name	Role
1	Nance, Patricia	Principal Investigator

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Funding Type  Funding Title

Grant Type  Clinical Research Project?  Funding Status  Funding Role

Funding Start Date  Funding End Date

**Funding by Year**

	Start Date	End Date	Total Funding	Currency of Total Funding
1	2009/5	2009/8	10000	Canadian dollar

**Funding Sources**

	Funding Organization	Program Name	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	Canadian Institutes of Health Research (CIHR)	Emerging Team Grant: Alliances in Mobility in Aging	10000	Canadian dollar	Yes	2009/5	2009/8

**Other Investigators**

	Investigator Name	Role
1	Tony Szturm	Principal Investigator

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9

Funding Type

Funding Title

Grant Type  Clinical Research Project?  Funding Status  Funding Role

Funding Start Date  Funding End Date

**Funding by Year**

	Start Date	End Date	Total Funding	Currency of Total Funding
1	2008/4	2008/9	10000	Canadian dollar

**Funding Sources**

	Funding Organization	Program Name	Total Funding	Currency of Total Funding	Funding Competitive?	Funding Start Date	Funding End Date
1	Canadian Institutes	Emerging Team	10000	Canadian dollar	Yes	2008/4	2008/11

	of Health Research (CIHR)	Grant: Children with Disabilities (Bright...)				
<b>Other Investigators</b>						
	<b>Investigator Name</b>				<b>Role</b>	
1	Tony Szturm				Principal Investigator	

## Activities

### Teaching Activities

#### Courses Taught

	Role	Organization	Department	Course Code	Course Title	Course Level
1	Teacher	The University of Manitoba	Department of Physical Therapy	7010	Neurosciences	Graduate
2	Teacher	The University of Manitoba		3940	Neurophysiology for Medical Rehabilitation	Undergraduate
3	Teacher	The University of Manitoba	Department of Physical Therapy	2450	Introduction to Research Methodology and Statistic for Medical	Undergraduate
4	Teacher	The University of Manitoba	Department of Physical Therapy	7180	Readings in Rehabilitation	Graduate
5	Teacher	The University of Manitoba	Department of Physical Therapy	3760	Physical Therapy Neurological Interventions Across the Lifespan 2	Undergraduate
6	Teacher	The University of Manitoba	Department of Physical Therapy	7170	Topics in rehabilitation,	Graduate
7	Teacher	The University of Manitoba	Department of Physical Therapy	3750	Physical Therapy Neurological Interventions across the Lifespan 1	Undergraduate
8	Teacher	The University of Manitoba	Department of Physical Therapy	7160	Rehabilitation Research Techniques	Graduate

### Supervisory Activities

#### Student/Postdoctoral Supervision

1	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2012/9"/> Supervision End Date <input type="text" value="2014/9"/> Student Name <input type="text" value="Nayak,Akshata"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Study Permit"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2012/9"/> Student Degree Expected Date <input type="text" value="2014/9"/> Thesis/Project Title <input type="text" value="Effects of an innovative dual-task training program for mobility and cognition: A community-based training program."/> Present Position <input type="text" value="Graduate student"/>
2	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2012/1"/> Student Name <input type="text" value="Cristabel Nett"/> Student Institution <input type="text" value="University of Manitoba"/> Student Canadian Residency Status <input type="text" value="Canadian Citizen"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2012/1"/> Student Degree Expected Date <input type="text" value="2014/1"/> Thesis/Project Title <input type="text" value="Rehabilitation Boot Camp: an Innovative, Four-Week Program to Deliver Intensive Physical Therapy to People with Acquired Brain Injury"/> Present Position <input type="text" value="Graduate student"/>
3	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2011/9"/> Student Name <input type="text" value="a Kaniitkar,Anuprit"/> Student Institution <input type="text" value="U of Manitoba"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2011/9"/> Student Degree Expected Date <input type="text" value="2013/9"/> Project Description <input type="text" value="Effects of computer game-based exercise regimen in older adults with mobility limitations and mild cognitive dementia"/>



	Present Position <input type="text" value="Graduate student"/>				
4	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2010/9"/> Student Name <input type="text" value="Karen Reimer,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Canadian Citizen"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2010/9"/> Student Degree Expected Date <input type="text" value="2012/12"/> Project Description <input type="text" value="Home-based computer gaming in vestibular telerehabilitation: Effects on gaze and balance impairment"/> Present Position <input type="text" value="Graduate student"/>				
5	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2010/9"/> Student Name <input type="text" value="Vedant Sakhalkar,"/> Student Institution <input type="text" value="Univ. of Manitoba"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2010/9"/> Student Degree Expected Date <input type="text" value="2012/12"/> Project Description <input type="text" value="Validation of a game based rehabilitation platform for assessment and treatment of mobility and cognitive decline with age"/> Present Position <input type="text" value="Graduate student"/>				
6	Supervision Role <input type="text" value="Co-Supervisor"/> Supervision Start Date <input type="text" value="2010/9"/> Student Name <input type="text" value="Tim Graham,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Canadian Citizen"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2010/9"/> Student Degree Expected Date <input type="text" value="2012/9"/> Project Description <input type="text" value="Evaluation of perceptual mechanisms in visually-guided object grasp and manipulation tasks"/> Present Position <input type="text" value="Graduate student"/>				
7	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2010/9"/> Student Name <input type="text" value="Swarnalatha Srikesavan,Cynthia"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Study Permit"/> Study / Postdoctoral Level <input type="text" value="Doctorate"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2010/9"/> Student Degree Expected Date <input type="text" value="2014/9"/> Thesis/Project Title <input type="text" value="Effects of Home Based Computer Gaming Hand Exercise Regimen in People with Rheumatoid Arthritis (RA) or Osteoarthritis (OA) -A Randomized Controlled Pilot Trial"/> Present Position <input type="text" value="Graduate student"/> <b>Student Country of Citizenship</b> <table border="1"> <thead> <tr> <th></th> <th>Student Country of Citizenship</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>India</td> </tr> </tbody> </table>		Student Country of Citizenship	1	India
	Student Country of Citizenship				
1	India				
8	Supervision Role <input type="text" value="Co-Supervisor"/> Supervision Start Date <input type="text" value="2010/9"/> Student Name <input type="text" value="Loni Desanghere,"/> Student Institution <input type="text" value="U of Manitoba"/> Study / Postdoctoral Level <input type="text" value="Doctorate"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2010/9"/> Student Degree Expected Date <input type="text" value="2012/8"/> Project Description <input type="text" value="Gaze strategies in Perception and Action, examining how fixation locations and grasp kinematics change through an implicit pairing of an objects COM an shape during grasp and perceptual tasks"/> Present Position <input type="text" value="Graduate student"/>				
9	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2010/1"/> Student Name <input type="text" value="Shiva Shrestha,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Permanent Resident"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2010/1"/> Student Degree Expected Date <input type="text" value="2012/12"/> Thesis/Project Title <input type="text" value="Structural equation modelling (SEM) approach to design and validation of a computer-based rehabilitation platform for assessment of finger-hand function in people with Rheumatoid Arthritis"/> Present Position <input type="text" value="Graduate Student"/>				

10	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2009/9"/> Student Name <input type="text" value="Beth Wonneck,"/> Student Institution <input type="text" value="Univ. of Manitoba"/> Student Canadian Residency Status <input type="text" value="Canadian Citizen"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2009/9"/> Student Degree Expected Date <input type="text" value="2012/8"/> Project Description <input type="text" value="Reliability and validity of performance-based electronic measures of dynamic balance and gaze control in people with peripheral vestibular hypofunction"/> Present Position <input type="text" value="PT Clinician"/>
11	Supervision Role <input type="text" value="Co-Supervisor"/> Supervision Start Date <input type="text" value="2012/1"/> Student Name <input type="text" value="Srikesavan Sabapathy"/> Student Institution <input type="text" value="University of Manitoba"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2009/9"/> Thesis/Project Title <input type="text" value="Aging effects on balance, gait and cognition during treadmill walking"/>
12	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2008/1"/> Student Name <input type="text" value="Chandrashekhar Yaduvanshi,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Permanent Resident"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2008/1"/> Project Description <input type="text" value="The interacting effect of increasing cognitive and motor task demands on performance of visual tracking tasks and balance in young adults"/> Present Position <input type="text" value="Graduate Student"/>
13	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2007/9"/> Student Name <input type="text" value="Dan Lockery,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Canadian Citizen"/> Study / Postdoctoral Level <input type="text" value="Doctorate"/> Student Degree Status <input type="text" value="In Progress"/> Student Degree Start Date <input type="text" value="2007/9"/> Student Degree Expected Date <input type="text" value="2012/12"/> Project Description <input type="text" value="Store-and-Feed-Forward Adaptive Gaming System for Hand Motion-Tracking in Telerehabilitation"/> Present Position <input type="text" value="Graduate Student PhD"/>
14	Supervision Role <input type="text" value="Co-Supervisor"/> Supervision Start Date <input type="text" value="2010/2"/> Student Name <input type="text" value="Ben Meeks,"/> Student Institution <input type="text" value="U of Manitoba"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="Completed"/> Student Degree Start Date <input type="text" value="2010/2"/> Student Degree Received Date <input type="text" value="2012/5"/> Project Description <input type="text" value="Posterior Cortical Atrophy: An Investigation of Grasping"/> Present Position <input type="text" value="Graduate student"/>
15	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2008/1"/> Student Name <input type="text" value="Pramila Maharjan,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Permanent Resident"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="Completed"/> Student Degree Start Date <input type="text" value="2008/1"/> Student Degree Received Date <input type="text" value="2011/12"/> Project Description <input type="text" value="The interacting effect of increasing cognitive and motor task demands on performance gait, balance and cognition in young adults"/> Present Position <input type="text" value="Graduate Student"/>
16	Supervision Role <input type="text" value="Co-Supervisor"/> Supervision Start Date <input type="text" value="2008/9"/> Student Name <input type="text" value="Pavithra Rajan,"/> Student Institution <input type="text" value="U of Manitoba"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="Completed"/> Student Degree Start Date <input type="text" value="2008/9"/> Student Degree Received Date <input type="text" value="2011/10"/> Project Description <input type="text" value="Evaluation of a muscle strengthening exercise program on balance and mobility in older female adults with fall history"/> Present Position <input type="text" value="Graduate Student"/>
17	Supervision Role <input type="text" value="Principal Supervisor"/> Supervision Start Date <input type="text" value="2008/9"/> Student Name <input type="text" value="Kalpana Ravala,"/> Student Institution <input type="text" value="U of Manitoba"/> Student Canadian Residency Status <input type="text" value="Permanent Resident"/> Study / Postdoctoral Level <input type="text" value="Master's Thesis"/> Student Degree Status <input type="text" value="Completed"/> Student Degree Start Date <input type="text" value="2008/9"/> Student Degree Received Date <input type="text" value="2011/5"/>

	<p>Project Description</p> <p>Change in grip force pattern and movement accuracy due to variation in torque levels and centre of mass during manipulation of objects containing fluids</p> <p>Present Position Graduate Student</p>
18	<p>Supervision Role Principal Supervisor    Supervision Start Date 2006/9    Student Name Naaz Kapadia,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Master's Thesis    Student Degree Status Completed    Student Degree Start Date 2006/9</p> <p>Student Degree Received Date 2008/10</p> <p>Project Description Effect of Geometric Properties and Varying Torque Levels on Movement: Accuracy and Grip Force Pattern During Object Manipulation</p> <p>Present Position Clinician Researcher</p>
19	<p>Supervision Role Principal Supervisor    Supervision Start Date 2007/9    Student Name Maciej Borkowski,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Doctorate    Student Degree Status Completed    Student Degree Start Date 2007/9</p> <p>Student Degree Received Date 2008/9</p> <p>Project Description</p> <p>Design and Production of "instrumented" video games suitable for contestual logging of game events and player performance, adaptive learning during exersices telegaming</p> <p>Present Position Graduate student</p>
20	<p>Supervision Role Principal Supervisor    Supervision Start Date 2005/9    Student Name Ankur Desai,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Master's Thesis    Student Degree Status Completed    Student Degree Start Date 2005/9</p> <p>Student Degree Received Date 2008/5</p> <p>Project Description Developing a Clinical Tool to Assess Balance Disorders in Community Dwelling Seniors.    Present Position Clinician Researcher</p>
21	<p>Supervision Role Co-Supervisor    Supervision Start Date 2005/9    Student Name Saurabh Mehta,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Master's Thesis    Student Degree Status Completed    Student Degree Start Date 2005/9</p> <p>Student Degree Received Date 2008/5    Project Description Gait analysis in Osteoarthritis    Present Position Graduate Student</p>
22	<p>Supervision Role Principal Supervisor    Supervision Start Date 2005/9    Student Name Aimee Betker,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Doctorate    Student Degree Status Completed    Student Degree Start Date 2005/9</p> <p>Student Degree Received Date 2008/5    Project Description Interactive tools for diagnosing, treating and assessing balance and mobility limitations</p> <p>Present Position Postdoctoral Student</p>
23	<p>Supervision Role Principal Supervisor    Supervision Start Date 2004/9    Student Name Chris Otto,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Doctorate    Student Degree Status Completed    Student Degree Start Date 2004/9</p> <p>Student Degree Received Date 2008/5    Project Description Motivating Rehabilitation Exercise via a Configurable Universal Translation Peripheral.</p> <p>Present Position Industry Engineer</p>
24	<p>Supervision Role Co-Supervisor    Supervision Start Date 2004/9    Student Name Elizabeth Hammond,    Student Institution Univ of Manitoba</p> <p>Study / Postdoctoral Level Master's Thesis    Student Degree Status Completed    Student Degree Start Date 2004/9</p> <p>Student Degree Received Date 2008/5    Project Description Objective Evaluation of Fine Motor Dexterity of the Hand in Normal Human Participants.</p> <p>Present Position PT Clinician</p>
25	<p>Supervision Role Principal Supervisor    Supervision Start Date 2004/9    Student Name Arun Archana,    Student Institution U of Manitoba</p> <p>Study / Postdoctoral Level Master's Thesis    Student Degree Status Completed    Student Degree Start Date 2004/9</p> <p>Student Degree Received Date 2006/9</p>

	Project Description <span style="border: 1px solid black; padding: 2px;">Assessment of Balance and Coordination While Walking on Surfaces that Emulate Outdoor Terrains</span>
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## Staff Supervision

Number of Scientific and Technical Staff 2    Number of Visiting Researchers 0    Number of Highly Qualified Personnel in Research Training 1

## Assessment and Review Activities

### Journal Review Activities

	Role	Review Type	Journal	Number of Works Reviewed / Refereed	Start Date	End Date
1	Reviewer	Double Blind	Journal of Rehabilitation Medicine	1	2011/	2012/
2	Reviewer	Double Blind	Journal of Neuro Engineering and Rehabilitation	1	2011/	2012/
3	Reviewer	Double Blind	Gait & Posture	1	2011/	2012/
4	Reviewer	Double Blind	Archives of Gerontology	1	2011/	2012/
5	Reviewer	Double Blind	Journal of Rehabilitation Research and development	1	2010/	2012/
6	Reviewer	Double Blind	Journal of Applied Bio mechanics	1	2010/	2012/
7	Reviewer	Double Blind	Engineering in Medicine and biology conference (EMBC)	3	2009/	2012/

### Research Funding Application Assessment Activities

	Funding Reviewer Role	Assessment Type	Reviewer Type	Committee Name
1	External Reviewer	Organization	Academic Reviewer	Medical Research Council, UK
2	External Reviewer	Organization	Academic Reviewer	Hong Kong Health and Health Services Research Council
3	External Reviewer	Organization	Academic Reviewer	Heart and Stroke Foundation
4	External Reviewer	Organization	Academic Reviewer	NSERC (Biomedical Engineering)

## Memberships

### Committee Memberships

	Role	Committee Name	Organization	Membership Start Date	Membership End Date
1	Ex-Officio	Promotion and Tenure committee	McMaster University	2006/	
2	Committee Member	Executive Council, School of Medical Rehabilitation	The University of Manitoba	1990/	
3	Committee Member	Research Ethics Board for Research Involving Human Subjects, Faculty of Medicine	The University of Manitoba	2005/	2010/
4	Ex-Officio	Promotion and Tenure committee	Dalhousie University	2006/	2006/
5	Committee Member	Faculty Council of Graduate Studies, Faculty of Graduate Studies	The University of Manitoba	1998/	2004/
6	Chair	Graduate Committee, Master of Science, Rehabilitation	The University of Manitoba	1992/	2004/
7	Committee Member	Promotion and Tenure Committee, School of Medical Rehabilitation	The University of Manitoba	1993/	/9

### Other Memberships

	Role	Membership Start Date	Description	Other Organization Type	Other Organization Location
1	Member	2011-01-01	IEEE society		
2	Member	1980-09-01	College of Physiotherapy of Manitoba	Health	Canada / Manitoba

## Contributions

## Presentations

	Presentation Title	Conference / Event Name	Location	City	Main Audience	Presentation Date	Co-Presenters	Invited?	Competitive?	Description / Contribution Value
1	Reliability and Convergent Validity of a Novel Finger Hand Function Assessment Tool in People with Arthritis	American Physical Therapy Association (APTA) Annual Scientific 2. Conference and Combined Sections Meeting.	United States / Illinois	Chicago	Knowledge User	2012-02-08	Cynthia Swarnalatha Srikesavan, Shiva Shrestha, Dr. Barbara Shay			
2	Effects of an individualized computer game hand exercise regimen delivered through telerehabilitation in people with rheumatoid arthritis (RA) or osteoarthritis (OA): A randomized controlled trial	Canadian Arthritis Network (NCE) Annual symposium	Canada / Quebec	Quebec city	Knowledge User	2011-10-27	Cynthia S Srikesavan, Dr. Barbara Shay			
3	Clinimetric Evaluation of a Computer Based Hand Function Assessment Tool in Rheumatoid Arthritis and Osteoarthritis of Hand	Canadian Arthritis Network (NCE) Annual symposium	Canada / Quebec	Quebec city	Knowledge User	2011-10-27	Cynthia Swarnalatha Srikesavan, Shiva Shrestha, Dr. Barbara Shay			
4	An Ongoing Development of a Telerehabilitation Platform Linked With a Function Registry to Provide Multidisciplinary Continuum of Care in Clients with Rheumatoid Arthritis [RA] of Hand -A Research Utilization Initiative	Canadian Arthritis Network (NCE) Annual Symposium	Canada / Quebec	Quebec city	Knowledge User	2011-10-27	Cynthia Srikesavan, Shiva Shrestha, Dr. Barbara Shay			
5	Interactive, game- based rehabilitation platform to provide enhanced and enriched access to combined balance, locomotor and cognitive intervention-assessments for the aging population and people with acquired brain injury	Seventh Annual Games for Health Conference (Games beyond Entertainment Week	United States / Massachusetts	Boston	Knowledge User	2011-05-18		Yes		
6	An ongoing development of a telerehabilitation platform	Centre on Aging 28th Annual Spring Research Symposium	Canada / Manitoba	Winnipeg	Knowledge User	2011-05-02	. Cynthia Swarnalatha Srikesavan, Shiva Shrestha, Dr.		Yes	

	linked with a function registry to provide multidisciplinary continuum of care in clients with rheumatoid arthritis [RA] of hand. -A research utilization initiative						Barbara Shay			
7	A novel computer based assessment tool of fine or gross finger-hand functions for people with rheumatoid arthritis	University of Manitoba Applied Health Sciences PhD Program Research Day	Canada / Manitoba	Winnipeg	Knowledge User	2011-04-01	Cynthia Swarnalatha Srikesavan, Shiva Shrestha, Dr. Barbara Shay		Yes	
8	CIHR Café Scientifiques - Use it or Lose it: Mobility in Older Adults.	CIHR Cafe Scientifiques 2011	Canada / Manitoba	Winnipeg	General Public	2011-03-21	Dr. Phillip Gardiner, Dr. Michelle Porter	Yes		Regular physical activity is important whether we are young or old. Factors that can slow us down include osteoarthritis, vision changes, and stroke. With the ever-aging baby boomer population finding solutions to these challenges and keeping mobile at any age is crucial to the quality of life we are able to live. Researchers are developing unique ways to keep us moving. Things like tele-gaming and tele-monitoring, increasing long-term rehabilitation services through tele-rehab are being explored. As well, research into aging and driving and what you can do to keep mobile was discussed at this interactive café.
9	Activity-Based Telerehabilitation for Mobility Function in Older Adults: Module for Automatic Tracking of Performance	Toronto Falls Network, Sunnybrook Health Sciences Centre	Canada / Ontario	Toronto	Knowledge User	2010-05-05		Yes		
10	Feasibility and Benefits of an	Manitoba Institute of	Canada / Manitoba	Winnipeg	Knowledge User	2009-11-12	Polyzoi E, Peters J,	Yes		

	Innovative Educational and Exercise Telegaming/Telemonitoring Program for Young Children with Learning and Movement Disabilities.	Child Health. 5th Annual Child Health Research Day, Growing Up – Growing Better					Ramanna S, Marota J, Yaduvanshi C, Ravala K			
11	Relationship between Dynamic Balance. Relationship of Dynamic Balance Assessment and Clinical Assessment Tools to Fall Risk and Fall History	38th Scientific and Educational Meeting (ASEM) of the Canadian Association on Gerontology	Canada / Manitoba	Winnipeg	Knowledge User	2009-10-22				
12	Interactive Game-based Exercise Regime for Community-dwelling Older Adults with Balance Impairment and Fall History: A Randomized Pilot Trial	38th Scientific and Educational Meeting (ASEM) of the Canadian Association on Gerontology	Canada / Manitoba	Winnipeg	Knowledge User	2009-10-22				

## Interviews and Media Relations

### Text Interviews

	Topic	Interviewer	Forum	Publication Date	URL
1	Bringing physical therapy into the computer age	Dani Finch	CANSTAR community news-The Sou'wester	2012-08-01	<a href="http://www.winnipegfreepress.com/our-communities/souwester/Bringing-physical-therapy-into-the-computer">http://www.winnipegfreepress.com/our-communities/souwester/Bringing-physical-therapy-into-the-computer</a>
2	Researchers hoping to gain from arthritis pain	Simon Fuller	CANSTAR community news-The Sou'wester	2011-03-23	<a href="http://www.winnipegfreepress.com/our-communities/souwester/Researchers-hoping-to-gain-from-arthritis">http://www.winnipegfreepress.com/our-communities/souwester/Researchers-hoping-to-gain-from-arthritis</a>

## Publications

### PubMed Articles

1	<p>PubMed ID <input type="text" value="23497529"/></p> <p>Title</p> <p><input type="text" value="Task-oriented training with computer gaming in people with rheumatoid arthritis or osteoarthritis of the hand: study protocol of a randomized controlled pilot trial."/></p> <p>Journal <input type="text" value="Trials"/> Volume <input type="text" value="14"/> Publication Date <input type="text" value="2013-01-01"/> Authors <input type="text" value="Srikesavan CS, Shay B, Robinson DB, Szturm T"/> Open Access? <input type="text" value="Yes"/></p> <p>URL To Free Article <input type="text" value="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3599819/"/></p> <p><b>Funding Sources</b></p> <table border="1"> <thead> <tr> <th></th><th>Other Funding Organization</th></tr> </thead> <tbody> <tr> <td>1</td><td>Canadian Arthritis Network</td></tr> </tbody> </table>		Other Funding Organization	1	Canadian Arthritis Network
	Other Funding Organization				
1	Canadian Arthritis Network				
2	<p>PubMed ID <input type="text" value="21799138"/></p> <p>Title</p> <p><input type="text" value="Effects of an interactive computer game exercise regimen on balance impairment in frail community-dwelling older adults: a randomized controlled trial."/></p>				

	JournalPhysical therapy Volume91 Issue10 Publication Date2011-10-01 AuthorsSzturm T , Betker AL , Moussavi Z , Desai A , Goodman V
3	PubMed ID21536526 TitleStore-and-feedforward adaptive gaming system for hand-finger motion tracking in telerehabilitation. JournalIEEE transactions on information technology in biomedicine : a publication of the IEEE Engineering in Medicine and Biology Society Volume15 Issue3 Publication Date2011-05-01 AuthorsLockery D , Peters JF , Ramanna S , Shay BL , Szturm T Open Access?No
4	PubMed ID22942516 TitleKinematic Analysis of Gait Following Intra-articular Corticosteroid Injection into the Knee Joint with an Acute Exacerbation of Arthritis. JournalPhysiotherapy Canada. Physiothérapie Canada Volume63 Issue4 Publication Date2011-01-01 AuthorsMehta S , Shay BL , Szturm T , El-Gabalawy HS
5	PubMed ID20434606 TitleA randomized, double-blinded, crossover pilot study assessing the effect of nabilone on spasticity in persons with spinal cord injury. JournalArchives of physical medicine and rehabilitation Volume91 Issue5 Publication Date2010-05-01 AuthorsPooyania S , Ethans K , Szturm T , Casey A , Perry D
6	PubMed ID20223944 TitleRelationship between dynamic balance measures and functional performance in community-dwelling elderly people. JournalPhysical therapy Volume90 Issue5 Publication Date2010-05-01 AuthorsDesai A , Goodman V , Kapadia N , Shay BL , Szturm T
7	PubMed ID20609561 TitleManipulation of objects with and without the use of the index finger: implications for digital amputations. JournalJournal of hand therapy : official journal of the American Society of Hand Therapists Volume23 Issue4 Publication Date2010-01-01 AuthorsHammond ER , Szturm T , Shay BL
8	PubMed ID19775986 TitleEstimation of 2-D center of mass movement during trunk flexion-extension movements using body accelerations. JournalIEEE transactions on neural systems and rehabilitation engineering : a publication of the IEEE Engineering in Medicine and Biology Society Volume17 Issue6 Publication Date2009-12-01 AuthorsBetker AL , Szturm T , Moussavi ZM
9	PubMed ID18950989 TitleObjective evaluation of fine motor manipulation-a new clinical tool. JournalJournal of hand therapy : official journal of the American Society of Hand Therapists Volume22 Issue1 Publication Date2009-01-01 AuthorsAndersen Hammond ER , Shay BL , Szturm T
10	PubMed ID18990618 TitleAmbulatory center of mass prediction using body accelerations and center of foot pressure. JournalIEEE transactions on bio-medical engineering Volume55 Issue11 Publication Date2008-11-01 AuthorsBetker AL , Moussavi ZM , Szturm T
11	PubMed ID19163858 TitleEffect of a visual-based sensory motor task on muscle tuning during a dynamic balance task. Journal Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference Volume2008 Publication Date2008-01-01 AuthorsBetker AL , Moussavi Z , Szturm T
12	PubMed ID17712036 TitleGame-based exercises for dynamic short-sitting balance rehabilitation of people with chronic spinal cord and traumatic brain injuries. JournalPhysical therapy Volume87 Issue10 Publication Date2007-10-01 AuthorsBetker AL , Desai A , Nett C , Kapadia N , Szturm T
13	



	<p>PubMed ID <b>18003409</b> Title <b>Visual-based sensory motor learning during dynamic balance tasks viewed in a virtual environment.</b></p> <p>Journal</p> <p>Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference</p> <p>Volume <b>2007</b> Publication Date <b>2007-01-01</b> Authors <b>Betker AL , Moussavi Z , Szturm T</b></p>
14	<p>PubMed ID <b>16876562</b> Title <b>Video game-based exercises for balance rehabilitation: a single-subject design.</b></p> <p>Journal <b>Archives of physical medicine and rehabilitation</b> Volume <b>87</b> Issue <b>8</b> Publication Date <b>2006-08-01</b></p> <p>Authors <b>Betker AL , Szturm T , Moussavi ZK , Nett C</b></p>
15	<p>PubMed ID <b>16602575</b> Title <b>Center of mass approximation and prediction as a function of body acceleration.</b></p> <p>Journal <b>IEEE transactions on bio-medical engineering</b> Volume <b>53</b> Issue <b>4</b> Publication Date <b>2006-04-01</b></p> <p>Authors <b>Betker AL , Moussavi ZM , Szturm T</b></p>
16	<p>PubMed ID <b>17945775</b> Title <b>Center of mass approximation during walking as a function of trunk and swing leg acceleration.</b></p> <p>Journal</p> <p>Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference</p> <p>Volume <b>1</b> Publication Date <b>2006-01-01</b> Authors <b>Betker AL , Szturm T , Moussavi Z</b></p>
17	<p>PubMed ID <b>17945844</b> Title <b>Estimation of the center of body mass during forward stepping using body acceleration.</b></p> <p>Journal</p> <p>Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference</p> <p>Volume <b>1</b> Publication Date <b>2006-01-01</b> Authors <b>Han J , Betker AL , Szturm T , Moussavi Z</b></p>
18	<p>PubMed ID <b>17282704</b> Title <b>Development of an interactive motivating tool for rehabilitation movements.</b></p> <p>Journal</p> <p>Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference</p> <p>Volume <b>3</b> Publication Date <b>2005-01-01</b> Authors <b>Betker AL , Szturm T , Moussavi Z</b></p>
19	<p>PubMed ID <b>17271770</b> Title <b>Center of mass function approximation.</b></p> <p>Journal</p> <p>Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference</p> <p>Volume <b>1</b> Publication Date <b>2004-01-01</b> Authors <b>Betker AL , Moussavi Z , Szturm T</b></p>

## Journal Articles

	Article Title	Journal	Publishing Status	Date	Open Access?	Synthesis ?	Contribution Role	Number of Contributors	Authors	Volume	Issue	Page Range	Refereed?
1	The interacting effect of cognitive and motor task demands on performance of gait, balance and cognition in young adults	Gait & Posture	In Press	2013/1	No	No	First Listed Author	6	Tony Szturm, Pramila Maharjan, Jonathan J. Marotta, Barbara Shay, Shiva Shrestha, Vedant Sakhalkar				

2	Task-oriented training with computer gaming in people with rheumatoid arthritis (RA) or osteoarthritis (OA) of the hand: Study protocol of a randomized controlled pilot trial	Trials	Accepted	2012/9	Yes		Co-Author	4	Cynthia S Srikesavan, Barbara Shay, David B Robinson, Tony Szturm				
3	Kinematic Analysis of Gait Following Intra-articular Corticosteroid Injection into the Knee Joint with an Acute Exacerbation of Arthritis.	Physiotherapy Canada	Published	2011/10	No		Co-Author	4	Mehta S, Shay BL, Szturm T, El-Gabalawy HS.	65	4	395-404	
4	Effects of an interactive computer game exercise regimen on balance impairment in frail community-dwelling older adults: a randomized controlled trial.	Physical Therapy	Published	2011/10	No		Co-Author	5	Szturm T, Betker AL, Moussavi Z, Desai A, Goodman V.	91	10	1449-62	
5	Store and Feed Forward Adaptive Gaming System for Hand Finger Motion Tracking in Telerehabilitation,	IEEE TRANSACTIONS ON INFORMATION TECHNOLOGY IN BIOMEDICINE	Published	2011/1			Co-Author		Daniel Lockery, James F. Peters, Sheela Ramanna, M Barbara L. Shay, and Tony Szturm	15	3	467-473	Yes
6	Manipulation of objects with and without the use of the index finger: implications for digital amputations.	Journal of Hand Therapy	Published	2010/10	Yes		Co-Author	3	Hammond ER, Szturm T, Shay BL.	23	4	352-359	
7	A randomized, double-blinded, crossover pilot study assessing the effect of nabilone on spasticity in persons	Arch Phys Med Rehabil	Published	2010/5	No		Co-Author	5	Pooyania S, Ethans K, Szturm T, Casey A, Perry D.	91	5	703-7	

	with spinal cord injury.												
8	Relationship between dynamic balance measures and functional performance in community-dwelling elderly people.	Physical Therapy	Published	2010/5	No		Co-Author	5	Desai A, Goodman V, Kapadia N, Shay BL, Szturm T.	90	5	748-60	
9	Estimation of 2-D center of mass movement during trunk flexion-extension movements using body accelerations.	IEEE Trans Neural Syst Rehabil Eng	Published	2009/12	No		Co-Author	3	Betker AL, Szturm T, Moussavi ZM.	17	6	553-59	
10	Objective evaluation of fine motor manipulation-a new clinical tool	Journal of Hand Therapy	Published	2009/1			Co-Author		Andersen Hammond, E. R., Shay, B. L., & Szturm, Tony	22	1	28-36	Yes
11	Ambulatory center of mass prediction using body accelerations and center of foot pressure.	IEEE Trans Biomed Eng.	Published	2008/11	No		Co-Author	3	Betker AL, Moussavi ZM, Szturm T.	55	11	2491-8	
12	Task-specific rehabilitation of finger-hand function using interactive computer gaming.	Arch Phys Med Rehabil.	Published	2008/11	No		Co-Author	5	Szturm T, Peters JF, Otto C, Kapadia N, Desai A.	89	11	2213-7	
13	Staying in tune.	IEEE Eng Med Biol Mag	Published	2008/9	No		Co-Author	3	Betker A, Szturm T, Moussavi ZM.	27	5	91-8	

## Journal Issues

1	Issue Title <input data-bbox="207 1528 574 1560" type="text" value="Exercise is fun? You're kidding right?"/>				
	Journal <input data-bbox="180 1581 1446 1612" type="text" value="Institute of Musculoskeletal Health and Arthritis (IMHA) and the Canadian Arthritis Network (CAN) Research Impact Story publication."/>				
	Number of Contributors <input data-bbox="334 1633 358 1707" type="text" value="4"/>	Authors <input data-bbox="464 1633 1341 1707" type="text" value="Tony Szturm &amp; Barbara Shay, James F Peters, Cynthia S Srikesavan University of Manitoba"/>			
	Funding Sources				
	<table border="1"> <thead> <tr> <th></th> <th>Other Funding Organization</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Canadian Arthritis Network</td> </tr> </tbody> </table>			Other Funding Organization	1
	Other Funding Organization				
1	Canadian Arthritis Network				

## Book Chapters

	Chapter Title	Book Title	Publishing Status	Date	Publisher	Contribution Role	Number of Contributors	Authors	Page Range
1	Wireless adaptive	Pervasive computing:	Published	2009/1	London; Springer	Co-Author	6	Peters, J. F., Szturm, T.,	

	therapeutic TeleGaming in a pervasive computing environment.	Innovations in intelligent multimedia and applications						Borkowski, M., Lockery, D., Ramanna, S., & Shay, B. L.	
2	Interactive Video Game-Based Tool for Dynamic Rehabilitation Movements. Encyclopedia of Healthcare Information Systems	Information Science Reference , IGI Global	Published	2008/1		Co-Author	3	Betker A., Szturm T., Moussavi Z.	786-792

## Conference Publications

1	<p>Conference Publication Type <input type="text" value="Poster"/></p> <p>Publication Title <input type="text" value="Clinimetric Evaluation of a Computer Based Hand Function Assessment Tool in Rheumatoid Arthritis and Osteoarthritis of Hand."/></p> <p>Conference Name <input type="text" value="Canadian Arthritis Network (CAN) Annual Scientific Conference (ASC) 2011"/> Conference Location <input type="text" value="Canada / Quebec"/></p> <p>Conference Date <input type="text" value="2011-10-27"/> Authors <input type="text" value="Cynthia Swarnalatha Srikesavan, Shiva Shrestha, Dr. Barbara Shay, Dr.Tony Szturm"/></p> <p><b>Funding Sources</b></p> <table border="1"> <tr> <td></td> <td><b>Other Funding Organization</b></td> </tr> <tr> <td>1</td> <td>Canadian Arthritis Network</td> </tr> </table>		<b>Other Funding Organization</b>	1	Canadian Arthritis Network
	<b>Other Funding Organization</b>				
1	Canadian Arthritis Network				
2	<p>Conference Publication Type <input type="text" value="Poster"/></p> <p>Publication Title <input type="text" value="The Ongoing Development of a Telerehabilitation Platform Linked with a Function Registry to Deliver Multidisciplinary Care for People with Rheumatoid Arthritis (RA) or Osteoarthritis (OA) of the Hand - A Research Utilization Initiative"/></p> <p>Conference Name <input type="text" value="Canadian Arthritis Network (CAN) Annual Scientific Conference (ASC) 2011"/> Conference Location <input type="text" value="Canada / Quebec"/></p> <p>Conference Date <input type="text" value="2011-10-27"/> Authors <input type="text" value="Cynthia Swarnalatha Srikesavan, Shiva Shrestha, Dr. Barbara Shay, Dr.Tony Szturm"/></p> <p><b>Funding Sources</b></p> <table border="1"> <tr> <td></td> <td><b>Other Funding Organization</b></td> </tr> <tr> <td>1</td> <td>Canadian Arthritis Network</td> </tr> </table>		<b>Other Funding Organization</b>	1	Canadian Arthritis Network
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3	<p>Conference Publication Type <input type="text" value="Paper"/></p> <p>Publication Title <input type="text" value="Task- specific Training with Computer Gaming in People with Arthritis Affecting the Hands: Methodology and Preliminary Findings of a Pilot Randomized Controlled Trial"/></p> <p>Conference Name <input type="text" value="Second Singapore Rehabilitation Conference"/> Conference Location <input type="text" value="Singapore"/> City <input type="text" value="Singapore"/></p> <p>Conference Date <input type="text" value="2013-02-27"/> Authors <input type="text" value="Cynthia S Srikesavan, Barbara Shay, Tony Szturm"/></p> <p><b>Funding Sources</b></p> <table border="1"> <tr> <td></td> <td><b>Other Funding Organization</b></td> </tr> <tr> <td>1</td> <td>Canadian Arthritis Network</td> </tr> </table>		<b>Other Funding Organization</b>	1	Canadian Arthritis Network
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