• Annual Report •

2011

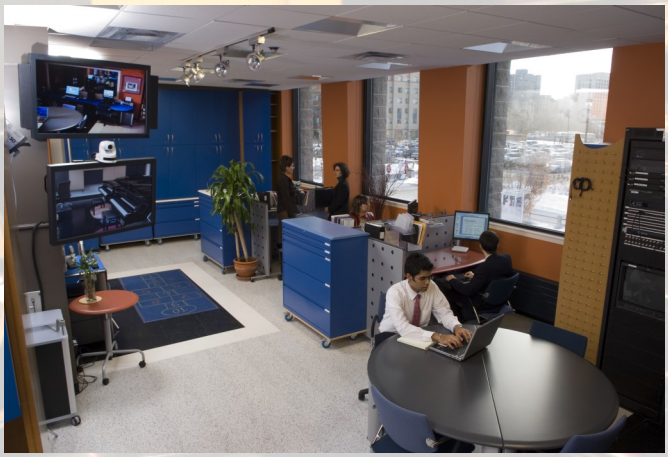
Gilles Comeau, Director
Kimberley Sundell, Administrative Assistant

Jada Watson, Design and Layout

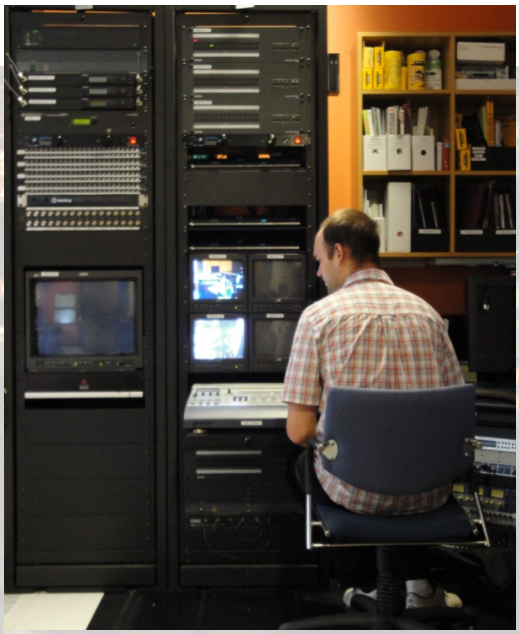
University of Ottawa - Pérez Hall
50 University - Room 204
Ottawa, Ontario K1N 6N5
613-562-5800, ext. 2704

Research Facility

Multi-Media Control Centre



Workstations where students conduct their research.



The production centre enables timely and cost-effective management of all audio and visual files, recording, editing, formatting, and transferring. Analog and digital video equipment records piano lessons directly.

"Learning music is not always easy, and this Lab is discovering things about learning to play the piano that are astonishing."
—*Mme Aline Chétien*

Sylva M. Gelber Studio

Large LCD screens allow for picture-in-picture display and instant replay.

Soundproof walls and moveable acoustic panels allow for a customized recording studio environment. Two 7'6" acoustic pianos are equipped with optical sensors and integrated MIDI.operating systems.

Video cameras capture piano lessons for distance teaching.

Resource Centre

The Resource Centre has one of the largest collections of piano method books in North America. It also has a large reference collection for researchers in piano pedagogy, including theses and dissertations, research literature, teaching materials, piano scores, audiovisual materials, and pedagogical aids.

The Lab presents at conferences in other countries via videoconferencing technologies and connects international research teams by way of overseas MIDI transfer.

Conference Room

This multi-purpose environment is ideal for seminars and lectures, workshops, and videoconferencing.

Research Facility

Period Instruments Studio

The Period Instruments Studio provides a firsthand opportunity for students to experience music in its historical context. Matters of performance practice and instrument capability are approached with the purpose of exploring musical authenticity. Open to students and researchers, this instrument collection has become a great asset to the Piano Lab.

Three and a half octave **Children's Butterfly** piano (original instrument reconstructed by Don Côté). The Butterfly Piano was very popular in the *art deco* period (1925-1940s). Because of its removable legs, it was often used as a travel instrument.

Five and a half octave **Anton Walter** forte-piano (built by Richard Hester). The Walter instrument represents a typical fortepiano at the end of the 18th century. All of Haydn, Mozart and Beethoven's early music can be played on this instrument.

Five and a half octave **Lindholm-Söderström** clavi-chord modeled after an 1806 Swedish instrument (built by Andrew Lagerquist). This instrument is known for its ability to stay tuned longer and play louder than the average clavichord.

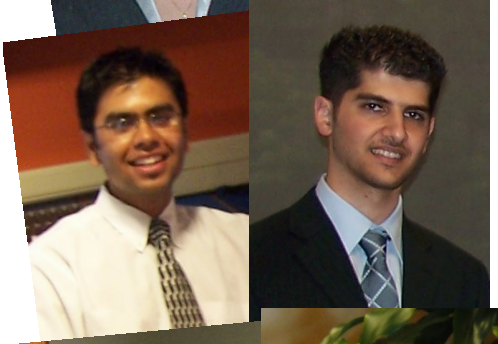
Six octave **Viennese Graf** pianoforte (built by R.J. Regier). Graf pianofortes were prominent at the highest level of early 19th century musical life: Beethoven, Chopin, Liszt, Clara Wieck and Brahms owned or played them.

Four and a half octave **John Morley of London** clavichord. The kit for this instrument was purchased in the UK and put together by Canadian physicist Hugh LeCaine.

Five and a half octave original **Broadwood** pianoforte. Established in 1728, "John Broadwood and Sons" is one of the oldest and most prestigious piano companies.

Student Involvement

Students have been an integral part of the Piano Lab since its October 2005 opening. Undergraduate and graduate students from a variety of disciplines from the University of Ottawa and Carleton University have contributed to both the administrative and research activities of the Lab.


Music
Leana Azareal
Ann Babin
Émilie Bertrand-Plouffe
Julia Brook
Hoadan Brown
Jacinda Chapman
Mélina Dalaire
Alicia Desjardins
Tamar Dubuc
Emily Gale
Rosemary Harden
Shirley Ho
Bonnie Huor
Nisreen Jardaneh
Danielle Lanteigne
Mary Claire Lazure
Catherine Lemay
YiFei Liu
Yuanyuan Lu
Ivea Mark
Lauren McGee
Milada Medinić
Joel Scott-Mignon
Aaron Mogenson
Line Morais
Hiroko Nakagawa
Erin Parkes
Jason Ray
Adam Saikaley
Kimberley Sundell
Michelle Vandal
Michèle Wheatley-Brown

Mathematics
Daniel de Repentigny

Psychology
Runa Das
Jacklynne Smith

Marketing
Lina Ji

Engineering
Caroline Andison
Baruyr Baghdasarian
Silvain Bériault
Zacharie Brunet
Pei Cao
Martin Côté
Christophe Herry
Nimeesh Kaushal
Ali Khanafer
Hanieh Khamseh-Zadeh
Houman Khamseh-Zadeh
Michel Khoury
Joshua Kotwas
Mathieu Kühn
Jonathan Lam
Javier Mora
Jonathon Neva
Allyshia Sewdat
Mihir Sharma
Christy Vant
Arjun Yogeswaran
Xi Zhang
Samira Zabhi

Health Sciences
YiFei Liu
Flora Nassrallah
Brian Richard

Sciences
Stephanie Akhen
Hoang Pham

Information Studies
Jada Watson

Film & Sonic Design
Christian Delahousse

Communications
Shaun Elie





Graduate Student Research in the Lab

The academic programs associated with the Piano Pedagogy Research Laboratory are research driven.

Faculty members are conducting first-class research, which in turn enriches what and how we teach.

The program encourages and supports interaction and cooperative effort between students and researchers, which promotes diversified modes of learning.

YiFei Liu

PhD in Music (Concentration in Music Education), Université Laval

Nisreen Jardaneh (in progress), research topic in memorization

PhD in Human Kinetics (Research Topic in Piano Pedagogy), University of Ottawa

YiFei Liu (in progress), dissertation focus on music reading

PhD in Electrical Engineering, Carleton University

Christophe Herry (2008) *Segmentation and extraction of regions of interest for automated detection of anomalies in clinical thermal infared images*

Nisreen Jardaneh

Master of Arts (with Thesis in Piano Pedagogy), University of Ottawa

Allows students to become familiar with existing research in the field and to train as researchers by participating in multidisciplinary research groups.

Kimberley Sundell (in progress), research topic in comprehensive musicianship

Yuanyuan Lu (in progress), research topic in cultural representations in early method books

Ivea Marks (in progress), research topic analysing the differences between teacher-student interaction in the studio and distance teaching context

Michèle Wheatley-Brown (in progress), research topic investigating and analysing the terminology used to describe the physical aspects of piano technique

Catherine Lemay (2008) *Sight-reading for piano students: Comparing three methods of assessment*

Catherine Lemay

Julia Brook (2007) *An on-line digital video library of piano teaching: A case study with five teachers*

Nisreen Jardaneh (2007) *Exploring young piano students' perceptions of effective practice strategies*

Ann Babin (2005) *Music conservatories in Canada and the piano examination system for the preparatory student: A historical survey and comparative analysis*

Line Morais (2005) *L'analogie comme stratégie d'enseignement en pédagogie du piano*

Master of Music with Major Research Paper in Piano Pedagogy, University of Ottawa

Jason Ray (2007) *The use of technology for the measurement and analysis of piano performance with a discussion of the implications for piano pedagogy*

YiFei Liu (2007) *Cross-cultural analysis of motivation levels of piano students in China and in North America*

Grace Bruno (2004) *Behind the scenes of musical expertise: Genes, environment, personality, motivation and cognition*

Karine Larochelle (2003) *L'impact de la musique dans le développement général de l'enfant de 0 à 6 ans*

Kimberley Sundell

Graduate Student Research in the Lab

Master of Applied Science (Electrical Engineering), University of Ottawa

Silvain Bériault (2008) *Multi-camera system design, calibration and 3D reconstruction for markerless motion capture*

Martin Côté (2007) *Video segmentation for markerless motion capture in unconstrained environments*

Master of Applied Science (Mechanical and Aerospace Engineering), Carleton University

Caroline Andison (in progress) *EMG-based assessment of co-contraction in forearm muscles while playing the piano*

Safaa Mohamed (in progress) research project on thermal imaging

Christy Vant (2007) *Driving point impedance measurements during piano playing*

Master of Science in Human Kinetics, University of Ottawa

Flora Nassrallah (2010) *Breathing patterns of pianists while executing four performing tasks*

Master of Computer Science, University of Ottawa

Javier Mora (2008) *Hapto-visual representation of three dimensional incompressible flows*

Flora Nassrallah

Graduate Certificate in Piano Pedagogy Research, University of Ottawa

Focuses on the study of multidisciplinary research for a better understanding of the processes involved in learning to play the piano. This certificate enables piano teachers to incorporate scientific knowledge into their practice and develops highly qualified professionals with a strong interest in piano pedagogy research.

Yuanyuan Lu (2010)
Ivea Mark (2010)
Michèle Wheatley-Brown (2010)
Shirley Ho (2009)
Marie-Claire Lazure (2008)
Mélina Dalaire (2007)
Erin Parkes (2007)
Julia Brook (2006)
Hoaden Brown (2006)
Leana Azerral (2006)
Nisreen Jardaneh (2006)

Yuanyuan Lu

Milestones

'08 Graduate and Undergraduate Certificate programs become available via audio-video-internet technology, extending the Lab's reach outside Ottawa to students across the country.

'07 New partnerships for doctoral programs created: PhD in Music (Concentration in Music Education) at Université Laval, and a PhD in Human Kinetics at the University of Ottawa.

'04 Undergraduate Certificate in Piano Pedagogy approved.

'03 Graduate Certificate in Piano Pedagogy Research approved.

Research Partners

Music

Denyse Blondin (Université du Québec à Montréal)
William Budai (Indiana University-Purdue University at Indianapolis, IUPUI)
Philip Donner (Virtuosi, Finland)
Francis Dubé (Université Laval)
Cynthia Floyd (University of Ottawa)
Elaine Keillor (Carleton University)*
Daniel Landes (Belmont University, Tennessee)
Louise Mathieu (Université Laval)*
Kathleen Riley (New York University)
Matti Ruippo (Pirkanmaa University of Applied Sciences, Finland)*
Lauri Väinmaa (Pirkanmaa University of Applied Sciences, Finland)

Elaine Keillor

Communications

John Spence (Communications Research Centre)*

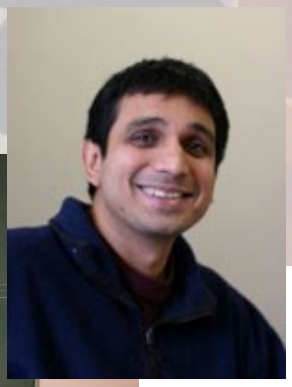
Louise Mathieu

John Spence

Veronika Huta reviewing data on the motion project.

Psychology

Alain Desrochers (University of Ottawa)
Isabelle Green-Demers (Université du Québec en Outaouais)
Veronika Huta (University of Ottawa)*
Virginia Penhune (Concordia University)*
Laurel Trainor (McMaster University)



Ramesh Balasubramaniam testing 3-D motion capture.

Neuroscience

Ramesh Balasubramaniam (McMaster University)*

*Current Research Partners

Research Partners

Engineering

Martin Brooks (National Research Council)*
Abdulmotaleb El Saddik (University of Ottawa)*
Monique Frize (University of Ottawa)*
WonSook Lee (University of Ottawa)
Pierre Payeur (University of Ottawa)
Christophe Herry (Carleton University)
Donald Russell (Carleton University)*
Shervin Shirmohammadi (University of Ottawa)*

Martin Brooks

Donald Russell testing the eye-tracker.

Library Network

Cécile Prud'homme (University of Ottawa)
Sam Popowich (University of Ottawa)

Ursula Stuber's Eutony workshop.

Isabelle Cossette

> "Piano Pedagogy hasn't really changed in a long time. Here at the Piano Pedagogy Research Laboratory they're actually finding new information, bringing new data to teachers, pianists and teaching us new techniques. This is extraordinary."
>
> —*Jon Kimura Parker*

Health Sciences

Nadine Bressler (Epidemiology, Toronto)
Isabelle Cossette (McGill University)*
Ursula Stuber (Université Laval)*

Cognitive Sciences

Bruno Emond (National Research Council)*

Bruno Emond

*Current Research Partners

Research Projects

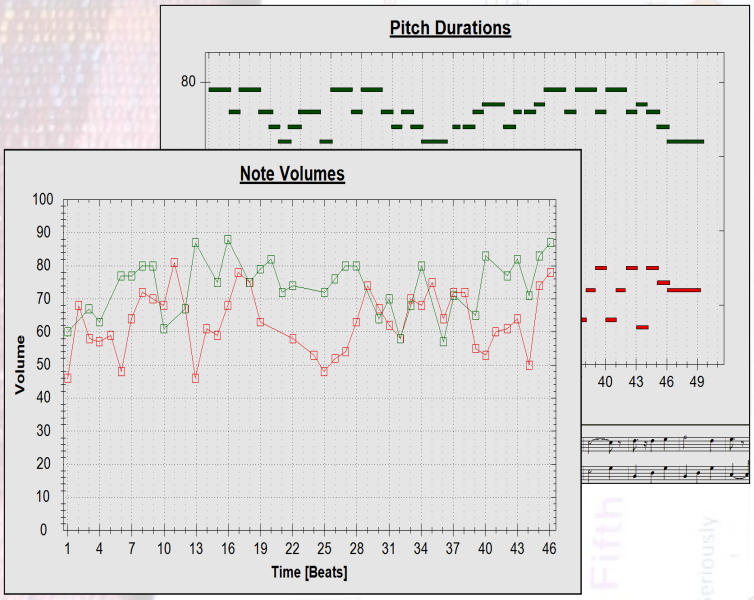
Music Reading

Detailed Inventory of Musical Symbols in Piano Method Books

The Lab is creating a database tracking musical symbols in collections of North American and European piano method books. We are investigating the sequencing of the symbols, the pace at which they are introduced and the way they are reinforced. We have designed a software program that assists with this data collection.

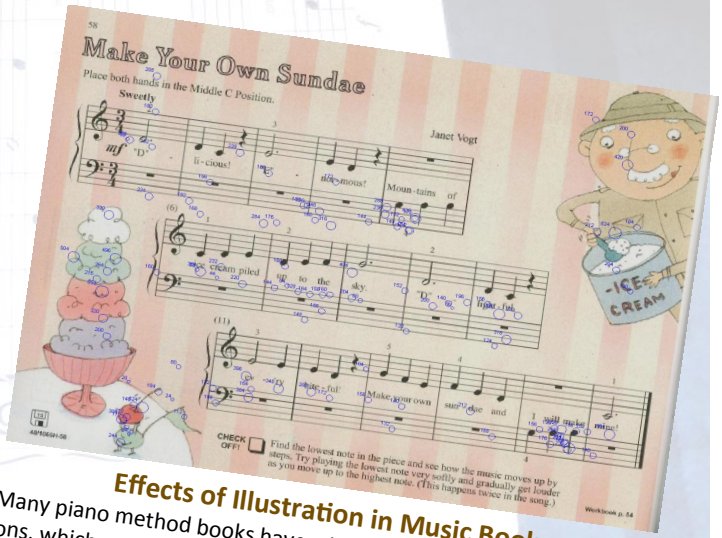
Number of Symbols in Method Books

Every method book uses a different approach to introduce the various symbols piano students must recognize while learning to play piano. Our analysis shows that the number of symbols introduced to students by the time they have finished a complete method ranges from 62 to 262.



Information Technology Development: MIDIator Software

We have developed a computer analysis tool to evaluate variations of dynamics and timing in piano students' performances.



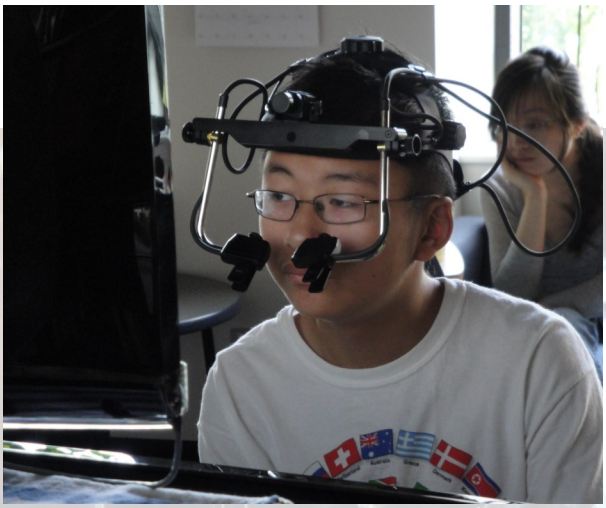
Effects of Illustration in Music Books

Many piano method books have a large number of colourful illustrations, which raises significant questions from a music-reading perspective: what is the impact of these colourful sketches on music reading and does their presence lower the quality of performance?

Music Reading

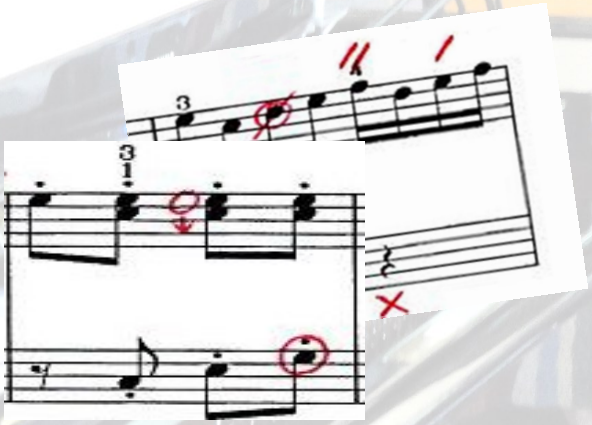
Observable Eye-Movement Patterns during the Processing of Linguistic & Musical Syntactic Incongruities

A possible link has been suggested between the way the brain processes the syntax of language and music. We are using eye-tracking technology to investigate the presence and significance of readers' eye movements during the processing of musical and linguistic syntactic incongruities.



Sight Reading and Perceptual Span

This study looks at the effects of notational complexity on the perceptual span of university piano majors during sight playing by using the moving-window paradigm: only a portion of the score around the fixation point is available to the reader and the music only appears when the eyes are looking ahead.



Developing a Tool to Measure Music Reading

Music reading is a skill that many music-education programs seek to develop. In spite of its recognized importance in learning to play a musical instrument, there exists no reliable tool to measure and quantify this skill in relation to reading music written for piano. The Piano Lab is developing the first scale to measure music reading for pianists.

Comparing Different Methods of Sight-Reading Assessment

This study compared three commonly used methods by researchers to assess music reading: sight-reading tests, performance of scales, and evaluation by experts.

Coordination of Eye and Hand Movements while Reading Music at the Piano

This project extends our fundamental understanding of music-reading processes in young piano students and how these relate to the execution of motor actions in piano playing.

Research Projects

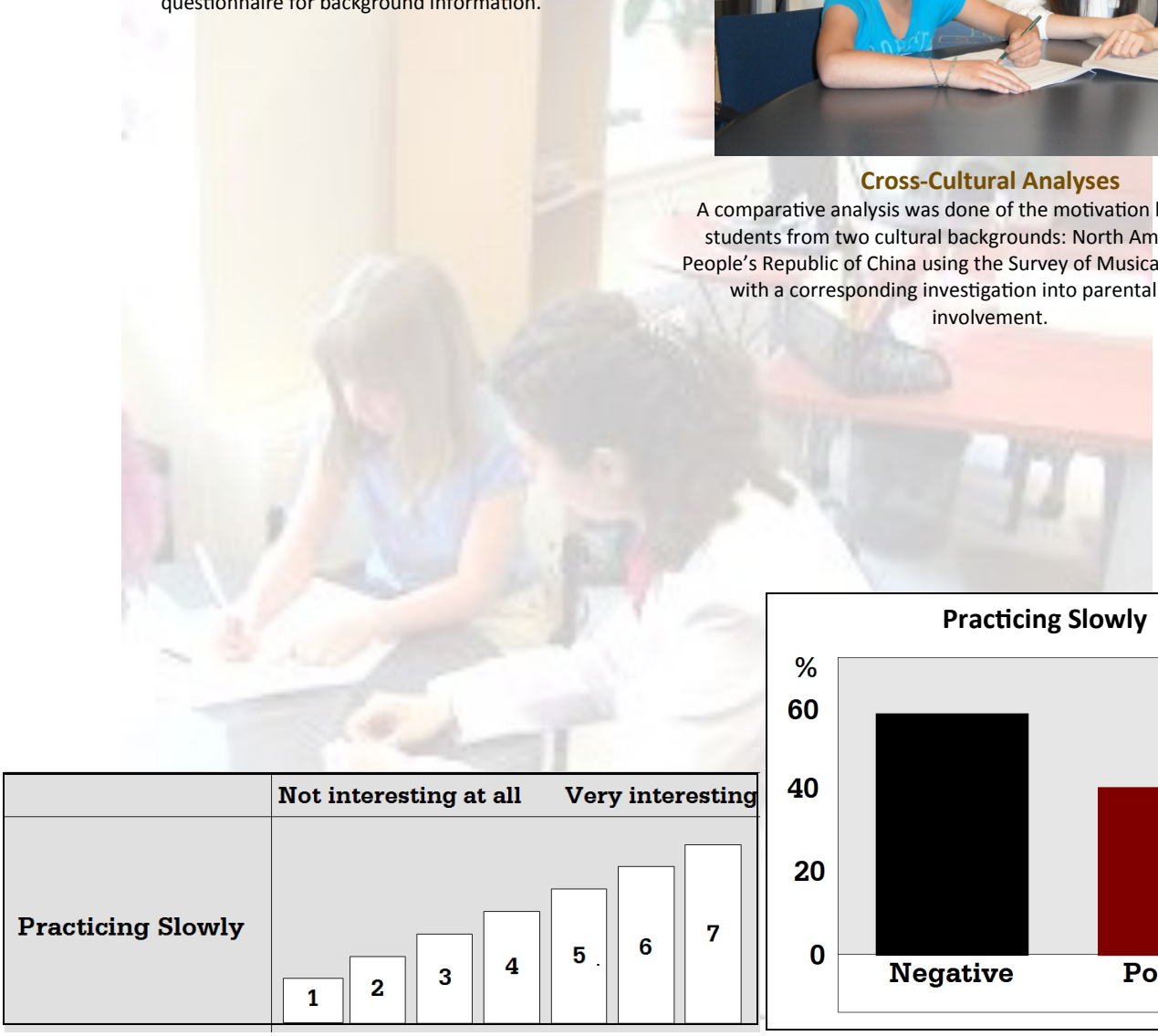
Motivation

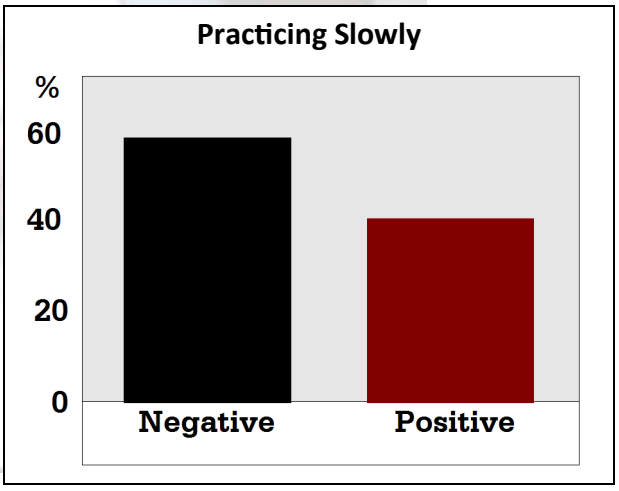
Measuring Young Piano Students' Degree of Motivation and Their Interest in Piano-Related Activities

A high percentage of young students stop piano lessons within the first 18 months. A likely correlate of this dropout rate is insufficient motivation. To provide better support for children, we developed the Survey of Musical Interest to measure young piano students' degree of motivation and their interest in piano-related activities, and an accompanying parents' questionnaire for background information.

Cross-Cultural Analyses

A comparative analysis was done of the motivation levels of piano students from two cultural backgrounds: North America and the People's Republic of China using the Survey of Musical Interest (SMI), with a corresponding investigation into parental styles and involvement.





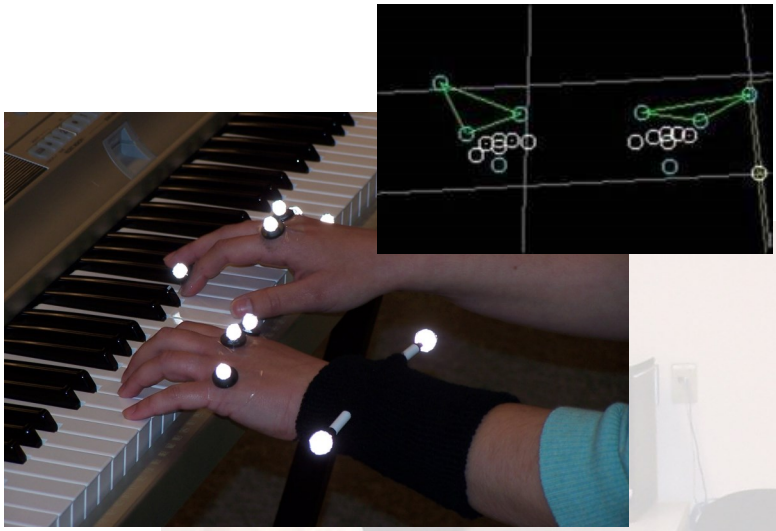
Motivation and Practice Strategies

This study examined piano students' perceptions of their practice strategies and the relationship of these strategies to motivation. Students answered a survey entitled Young Piano Students' Perceptions of their Practice Strategies, in which they ranked their practice strategies on a scale of 1 to 7. For example, one of the questions asks children how interested they are in practicing a piece of music slowly. Sixty percent of those questioned responded negatively to this statement, showing little to no interest in slow practice techniques.

Physical Aspects of Piano Playing

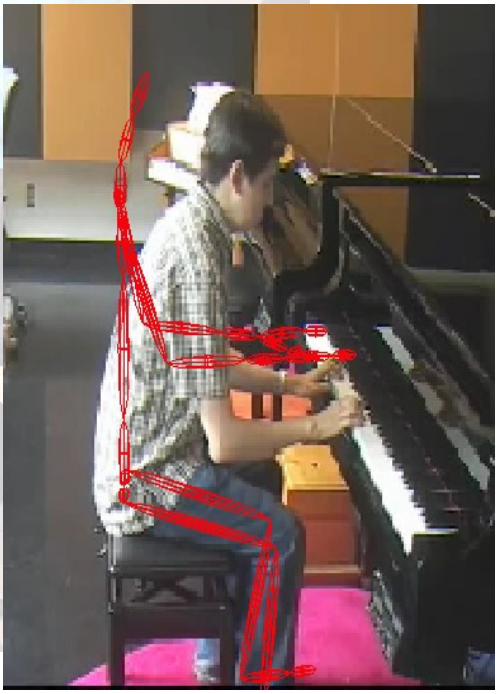
Warm-Up in a Music Practice Session: An Interdisciplinary Examination of the Issues

From a biomechanical perspective, warm-up may mean a wide variety of things. This study considers the possible biomechanical implications of warm-up ranging from changes in joint or muscle properties to changes in the nervous system.



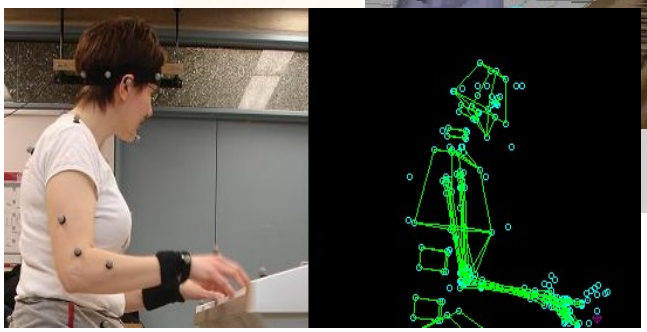
Analyzing Movement, Force, and Timing in Piano Performance

A sophisticated video-camera system is used to study the finger, hand, and arm movements of piano performers. Spatio-temporal and musical constraints in motor coodination during piano performance are also being studied.



Vision-Based Monitoring of a Pianist's Movements

A group of software tools was designed to assist teachers to identify and analyze their students' patterns of movement in piano performance.

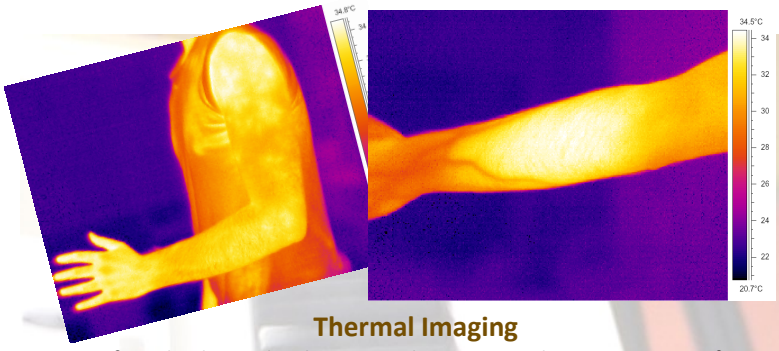


3D Visualization of Piano Playing

A specialized motion capture system provides novice piano students with a 3D representation of a professional performance to help them visualize body posture at the piano.

Research Projects

Health Issues



Thermal Imaging

Infrared video technology is used to monitor the temperature of a performer's hands, arms, shoulders, neck and face during piano playing, thereby enabling researchers to pinpoint underlying muscle tension and inflammation.

Piano Playing-Related Health Problems

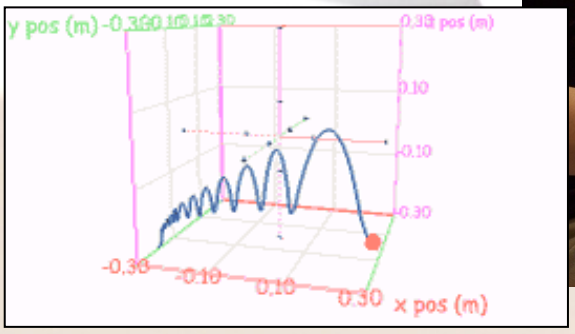
New technological resources allow us to apply scientific research methods to diagnose, treat, and prevent injuries related to piano performance.

Wrist Stiffness

Stiffness, relaxation, co-contraction and multi-joint issues are key concepts in piano pedagogy that also have specific meaning in biomechanics. We examined the wrist movement of experienced pianists in reaction to small, short-duration forces acting on the wrist.

EMG and the Choice between Intrinsic and Extrinsic Finger Muscles in Musical Performance

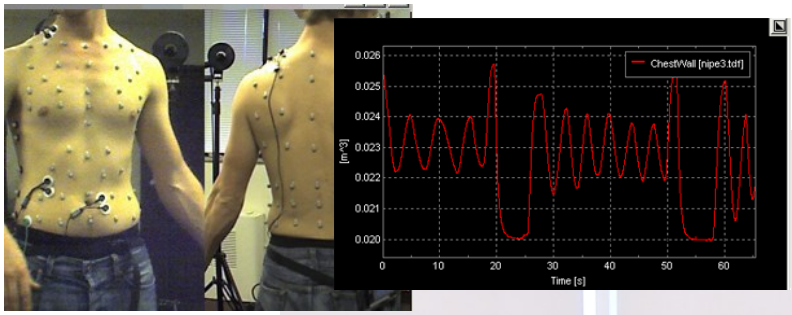
In flexing the fingers, the musician may focus on the use of the large powerful extrinsic muscles that reside in the forearm, or small intrinsic muscles in the palm of the hand. Experimental work based on EMG measurements is used to show some of the implications of this choice on wrist stiffness during piano performance.

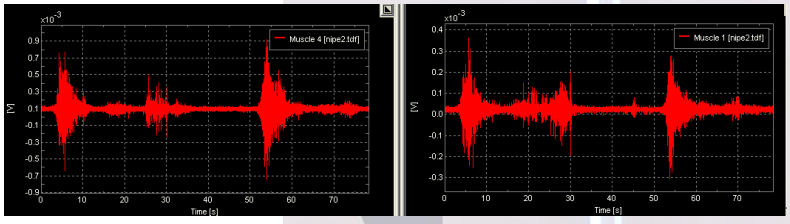


Studying Piano Technique with Motion-Visualizing Software

Specialized motion-visualizing software, which graphically represents movement, is used to analyze piano technique.

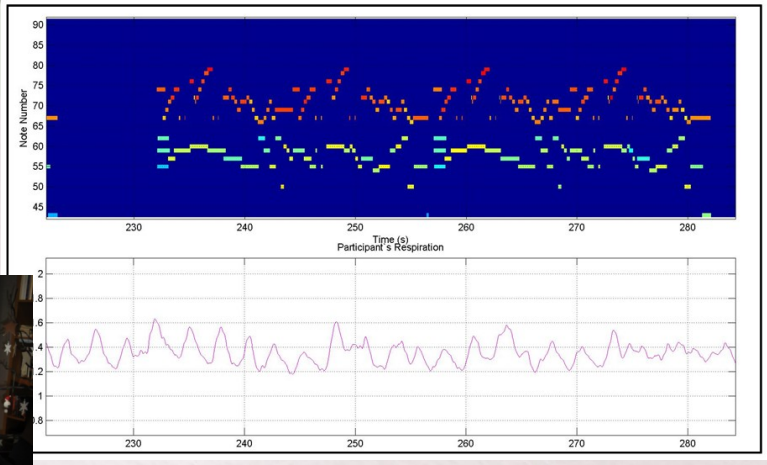
Health Issues

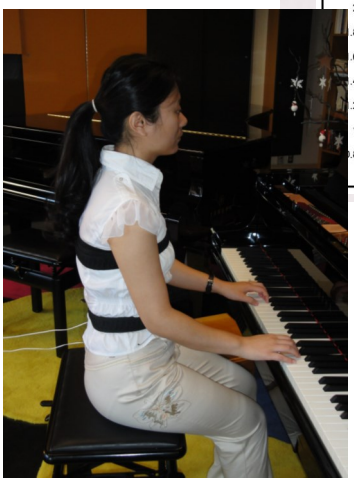




Respiratory Measurement

These experiments are looking into whether the respiratory patterns of novice and expert musicians are factors in the performance of piano pieces, providing a clearer understanding of the physiological aspects involved in piano learning and performing.



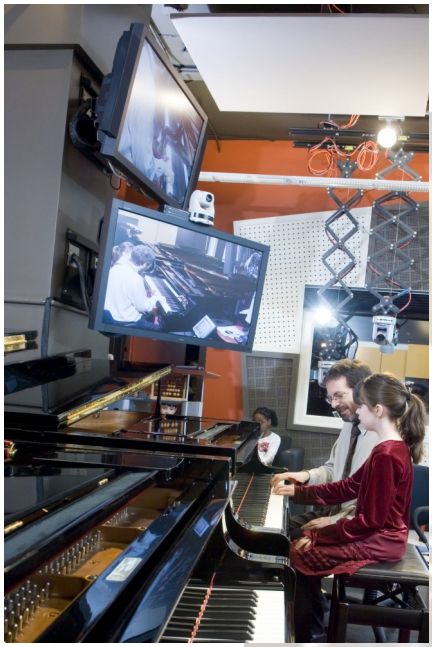


Pianists' Breathing Patterns

This project examined how pianists' breathing is affected by various musical elements such as tempo, metre, rhythm, accentuated notes, melodic complexity and phrasing. Pianists played technical exercises and set pieces while their respiration was being monitored.

Research Projects

Video-Mediated Learning



Video Monitoring in the Piano Studio

The Piano Lab is examining the use of video cameras as teaching tools and research aids in the study of piano playing and learning.

Video Database Development and Its Use as a Tool in Piano Pedagogy

The Piano Lab has been developing a huge database of piano teaching video clips that are available to all students registered in our piano pedagogy programs. The database has over 700 clips illustrating various teaching strategies, technique motions, and full piano lessons.

Distance Education

Trans-Atlantic Piano Teaching: The Alliance of Technology & Pedagogy

With research partners in Finland, we are developing computer programs and software that provide the essential technical interface and teaching tools for distance piano teaching.

Cross-Border Piano Teaching

The Piano Lab has been researching the methodology for starting a young student in piano via distance education. The challenges are many: there is no physical contact, no face-to-face interaction, and parental involvement may take on extra importance when there is no teacher in the room.

Inuit Keyboarding Project

Music Grid is an intensive program that explores music teaching in the context of broadband videoconferencing. Keyboard lessons are provided via videoconference to a group of young children in Kangiqsualujjuag, Northern Quebec.

Research Activities in 2011-2012

MUSIC READING

Researchers:

Gilles Comeau—Music, University of Ottawa
Bruno Émond—Cognitive Science, National Research Council
Sylvie Hébert—Audiology, Université de Montréal
Ramesh Balasubramaniam—Neuroscience, McMaster University
Stephanie Ahken—Medicine Student, University of Ottawa
Kimberley Sundell—Music, Graduate Student at the University of Ottawa
Yuanyuan Lu—Music, Graduate Student at the University of Ottawa
Allyshia Sewdat—Computer Engineering, Undergraduate Student at the University of Ottawa
Hoang Pham—Science, Undergraduate Student at the University of Ottawa

Publications:

Ahken, S., Comeau, G., Hébert, S., Balasubramaniam, R. (accepted). Observable eye-movement patterns during the processing of linguistic and music syntactic incongruities. *Psychomusicology: Music, Mind & Brain.*

Émond, B., Comeau, G. (accepted). Cognitive modelling of early music reading skill acquisition for piano. ICCM 2012 Conference Proceedings.

Comeau, G. (submitted). Playing by ear in the Suzuki Method: Supporting evidence and concerns in the context of piano playing.

Comeau, G. (submitted). Suzuki's mother-tongue approach: concerns about the natural learning process.

Communication:

Comeau, G. (2011, July). Music Reading and the Piano Method Books. 3rd World Piano Conference. Isidor Bajic Music School, Novi Sad, Serbia. Invited Guest Speaker.

MOTIVATION

Researchers:

Gilles Comeau—Music, University of Ottawa
Veronika Huta—Psychology, University of Ottawa
Matti Ruippo—Music, Pirkanmaa University of Applied Sciences, Finland
YiFei, Liu—Human Kinetics, Graduate Student at the University of Ottawa
Émilie Bertrand-Plouffe—Music, Undergraduate Certificate in Piano Pedagogy
Paula Croucher—Music, Undergraduate Certificate in Piano Pedagogy

Publications:

Comeau, G., Huta, V., Liu, Y., Smith, J. (submitted). Relationships between piano students' motivation and selected aspects of parental influences.

Comeau, G., Liu, Y., Huta, V. (in preparation). Motivation and work ethic regarding piano learning: Comparisons among Chinese, North American Mixed Asian/ Caucasian, and North American Caucasian families.

METHODS OF TEACHING APPROACH

Researchers:

Gilles Comeau—Music, University of Ottawa
Yuanyuan Lu—Music, Graduate Student at the University of Ottawa
Kimberley Sundell—Music, Graduate Student at the University of Ottawa

Communications:

Comeau, G. (2012, February). Comparing Dalcroze, Orff and Kodaly: Choosing your approach to teaching music. Dalcroze Society of Canada. Toronto, Ontario. Invited guest speaker.

Comeau, G. (2012, March). Exploring Period Keyboard Instruments. Ottawa, Ontario. Invited guest speaker.

PHYSICAL ASPECTS OF PLAYING PIANO

Researchers:

Gilles Comeau—Music, University of Ottawa
Donald Russell—Mechanical Engineering, Carleton University
Isabelle Cossette—Music, McGill University
Flora Nassrallah—Audiology, Graduate Student at the University of Ottawa
Michèle Wheatley-Brown—Music, Graduate Student at the University of Ottawa

Publications:

Nassrallah, F., Comeau, G., Russell, D., Cossette, I. (submitted). Coordination between breathing and different movement markers during pianists' performance tasks.

Nassrallah, F., Comeau, G., Russell, D., Cossette, I. (in preparation). Breathing pattern changes observed while pianists performed technical exercises and repertoire.

Wheatley-Brown, Comeau, G., Russell, D. (in preparation). An analysis of terminology in Piano Technique.

HEALTH ISSUES

Researchers:

Gilles Comeau—Music, University of Ottawa
Donald Russell—Mechanical Engineering, Carleton University
Monique Frize—Biomedical Engineering, University of Ottawa
Saffa Mohamed—Computer Engineering, Graduate Student at Carleton University
Caroline Andison—Mechanical Engineering, Graduate Student at Carleton University

Publications:

Mohamed, S., Frize, M., Comeau, G. (2011). Assessment of piano-related injuries using infrared imaging. Proceedings of the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society.

Russell, D., McDill, M., Comeau, G., Ahmadi, N. (submitted). A biomechanical Investigation of warm-up procedures for musicians. Canadian Medical and Biological Engineering Conference Proceedings.

VIDEO-MEDIATED LEARNING AND DISTANCE EDUCATION

Researchers:

Gilles Comeau—Music, University of Ottawa
Matti Ruippo—Music, Pirkanmaa University of Applied Sciences, Finland
Martin Brooks—Computer Engineering, National Research Council
Bruno Émond—Cognitive Science, National Research Council
Erin Parkes—Music, Graduate Student at McGill University

Publications:

Parks, E., Comeau, G. (submitted). The Inuit keyboarding project: A cross-Cultural distance teaching experience.

MEDIA COVERAGE

Un Laboratoire de recherche en pédagogie du piano. (2011, July). *Campus. Canal Savoir.*

La recherche au Laboratoire de recherche en pédagogie du piano. (2011, May). *Les samedis du monde. Radio-Canada.*

The **Sylva M. Gelber Foundation** supports research and training of undergraduate and graduate students in piano pedagogy research.

Building an Endowment Fund

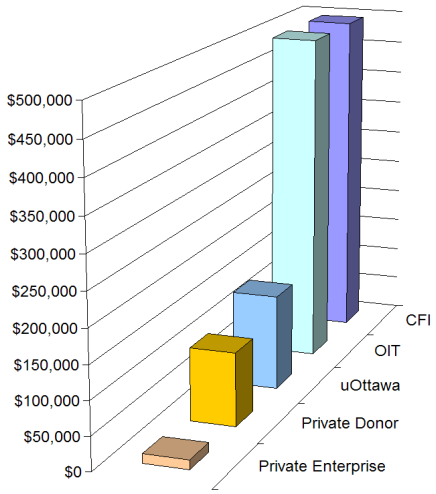
Our ability to pursue the Laboratory's mission depends on the availability of financial resources. We are very grateful to all the Friends of the Piano Lab who have provided financial support to address the Laboratory's emerging needs and priorities.

Official Room Dedication

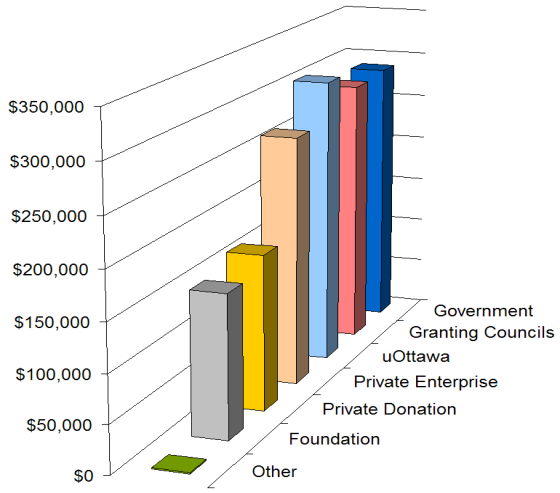
The naming of the Ann Southam Room at the Piano Pedagogy Research Laboratory in November 2011 is a way of further honouring Ann's continuous support for the Lab.

Ann Southam (1937-2010) has been one of the Piano Lab's staunchest supporters over the years. She came to the Lab's official opening ceremonies and became a member of the Friends of the Piano Pedagogy Research Laboratory. Her particular interest in the Lab's research on music reading led her to establish the Ann Southam Music Reading Fund to promote the Lab's research in this area.

Infrastructure Funding: $1.25M



Research Funding: $1.45M



Media

La leçon de piano – Découverte, Radio Canada
March 2008

Entretien avec Gilles Comeau **-** Le monde selon Mathieu – CBOF-FM
October 2007

Notes on the future **-** The Sunday Edition – CBC Radio ONE
January 2006

Piano revolution **-** The National – CBC News
October 2005

Entretien avec Gilles Comeau **-** Bernier et Cie – CBOF-FM
October 2005

Les mystères de l'apprentissage du piano – Via TVA
February 2006

Piano "Keys" **-** Tech Now – CTV News
October 2005

Blessures chez les artistes - Panorama – TFO
May 2007

Le laboratoire de recherche en pédagogie du piano - Panorama – TFO
January 2007

OTTAWA CITIZEN

Piano: Thermal imaging cameras
December 2005

Young pianist loves his lesson, but really hates to practise
December 2005

Professors tune in to musicians' pain: Carpal tunnel syndrome, other conditions could be eased using new imaging system
February 2005

LE DEVOIR

Le pourquoi des fausses notes
March 2006

Un clavier bien mesuré
March 2006

LeDroit

Inuits au diapason d'Ottawa
January 2005

Ontario Innovation Trust

Why doesn't every good boy do fine?
2005-2006

Canada Foundation for Innovation
Fondation canadienne pour l'innovation

Keys to success
November-December 2007

LAB BUSINESS

Hitting the right notes: New scientific lab keys on piano pedagogy
Summer 2006

TIME

The finger fixer: Gilles Comeau
June 2005

University Affairs
Affaires universitaires

Teaching leadership: A laboratory with rhythm
August-September 2006

A high note for piano research
December 2005

TABARET

Harmony in the laboratory
Spring 2005