

Laboratoire de recherche en pédagogie du piano

Piano Pedagogy Research Laboratory

# Annual Report • 2009

# Highlights of 2009

- *Piano Pedagogy: A Research and Information Guide*, written by the Piano Lab's faculty and graduate students, was published.
- Graduate and Undergraduate Certificate programs extended the Piano Lab's reach outside Ottawa to students across the country via audio-video-internet technology.
- An outreach presentation was given to the Association of Spouses of European Diplomats and Spouses of MPs at the home of the German Ambassador.
- A 19th century Broadwood pianoforte was added to the Piano Lab's period instrument collection.
- The Lab hosted the *Journées francophones de recherche en pédagogie du piano* (JFREM), an international conference of music educators.

# To come in 2010

- The 2010 International Conference on Multidisciplinary Research in Music Pedagogy, sponsored by the Piano Lab in collaboration with the University of Ottawa, Université Laval, and the Université du Québec à Montréal, will take place in May at Perez Hall, University of Ottawa. For more information, go to the conference website at www.musicpedagogyconference.uottawa.ca.
- In October 2010, the Piano Pedagogy Research Laboratory will celebrate its 5th anniversary.

Gilles Comeau, DirectorUniversity of Ottawa - Perez HallMilada Medinić, Administrative Assis-<br/>tantwww.piano.uOttawa.ca50 University Private - Room 204<br/>Ottawa, Ontario K1N 6N5<br/>613-562-5800 ext. 2704

# **Message from the Director**



**Gilles Comeau** 

This last year has been a busy one for the staff and students of Piano Lab, as you will see in the following pages. We have published a landmark research guide in our field, extended the reach of our on-campus programs through distance education, and organized two major conferences, one held in May 2009, and the other to unfold in May 2010. It has been a big year.

Change is always a constant, however, and we are about to undergo a major one with the departure of our Administrative Coordinator, Milada Medinić. Milada became engaged last year, and immediately following her wedding in May 2010, she is moving to Dallas, Texas, to start her new life. She is maintaining her interest in the Lab, however, and will continue with her plans to begin her PhD in musicology at Laval University in September, studying Bosnian traditional music.

Milada is leaving some very big shoes to fill-her job has dealt with every aspect of our work. She's been responsible for the day-to-day administration of the Lab and its staff, as well as all our communications with the university and the outside world, including everything from writing letters to organizing tours to managing the annual report and making sure the websites are updated. She has managed the finance campaign and dealt with the media. She has administered the distance education program and the Resource Centre, and helped with the organization of conferences, symposia and colloquiums. But apart from all the jobs she has taken on and the work she has done, one of Milada's most important contributions has been her kind and helpful persona. Instrumental in fostering an easygoing atmosphere of cooperation among those who work in the Lab, she's also been the professional and welcoming face of the Lab for people who come in contact with the Lab and its work. She is a woman for all seasons, and we will miss her. We wish her the best and look forward to seeing her on her visits back to Ottawa.



Milada Medinić

## Staff

## Technical Assistants

Stephanie Ahken (Science)
Zacharie Brunet (Electrical Engineering)
Hoang Pham (Science)
Allyshia Sewdat (Computer Science)
Xi Zhang (Mechanical Engineering)



Christian Delahousse

Web Master

Christian Delahousse (Film & Sonic Design)

## **Resource Center Coordinator**

Michelle Vandal (Education)



Xi Zhang



Jacinda Chapman



**Stephanie Ahken** 

#### Administrative Assistants

Jacinda Chapman (Music) Lu Yuanyuan (Music)



Lu Yuanyuan & Allyshia Sewdat

# Students

# PhD and Master's Students



Nisreen Jardaneh



Flora Nassrallah

## Nisreen Jardaneh – PhD in Music (Concentration in Music Education)

Nisreen is enrolled in the doctoral program at Université Laval and conducting her research at the Lab under Dr. Comeau's supervision, with Dr. Louise Mathieu of Laval as co-supervisor. Nisreen has recently completed her comprehensive exams and is working on her thesis proposal. She has also been on maternity leave for the last year, but has just returned to the Lab and is beginning a new research project on memorization.

## YiFei Liu – PhD in Human Kinetics with a Research Topic in Piano Pedagogy

Having completed all her course requirements and passed the comprehensive exam in the first two years of her program, YiFei is preparing her thesis proposal. She is also a research assistant in the Lab, continuing to be involved in the huge study on motivation. Her current research interests include the music reading and perceptual span project. She is working with Dr. Comeau to develop a scale for measuring music reading performances and using eye tracking to study the effect of illustration in piano method books.



YiFei Liu

## Flora Nassrallah – Master of Science in Human Kinetics with Thesis in Piano Pedagogy

After finishing an honours BA in Music and a BS in Biochemistry, Flora studied pianists' breathing patterns for her master's research, with Dr. Comeau as supervisor and Dr. Isabelle Cossette of McGill as co-supervisor. Flora completed her program in March 2010—congratulations to the new graduate! Flora also worked as a research assistant in the Lab, supervising the inventory of musical symbols in piano method books and coordinating the video-clip data base.

## Kimberley Sundell – Master of Arts in Music

Kimberley has a Bachelor of General Studies degree and a Bachelor of Education degree majoring in Early Years with a minor in Music from Brandon University. She started her MA program under the supervision of Prof. Gilles Comeau in September 2009. Her thesis research is on Comprehensive Musicianship and its inclusion in beginner piano method books. Kimberley is working as a research assistant with ongoing projects on method books and sight reading.



**Kimberley Sundell** 

# Students

# Graduate Certificate in Piano Pedagogy Research

## **Shirley Ho**

Shirley passed her oral examination last year and completed her Certificate. Congratulations! She was involved in a research project on performance practice in Baroque music.



## Ivea Mark

Ivea Mark began the Graduate Certificate as a distance student from Calgary in September 2008. She will take her oral examination to complete her Certificate program in May, and enter the MA program in September. Ivea is presently working on an extensive review of literature on the effect of learning to play the piano by ear in the early stages, instead of relying on music reading.

Ivea Mark

## Michele Wheatley-Brown

A distance student from Calgary, Michelle began the program two years ago. She will take her final course and the oral exam over the summer, entering the MA program in September 2010. Her research so far has involved a detailed review of literature on health issues, specifically the value of warming up, which has demonstrated how sparse and inconclusive the scientific knowledge in this area is.

## Lu Yuanyuan

Lu started the Graduate Certificate program in September 2009 and will finish in May 2010. She will continue on to begin her MA in September 2010. She is part of the music-reading project, doing a meticulous study on the inventory of musical symbols. She is also the main coordinator of the Resource Centre.



Lu Yuanyuan

# **Undergraduate Certificate in Piano Pedagogy Research**

## Émilie Bertrand-Plouffe

Émilie is a full-time Business Analyst for the Student IT Services at the University of Ottawa who is also teaching piano. She has been a part-time student in the program for two years.

## Marie Claude Lalonde

Marie Claude is a music educator working towards her honours BA in Music and the Undergraduate Certificate in Piano Pedagogy.

## **Esther Jean-Charles**

Esther is a distance student from Montreal. She has been in the program just over a year and is reviewing the research on playing-related health issues.

Graduates				
Leana Azareal	Ann Babin	Julia Brook	Hoaden Brown	
Mélina Dalaire	Alicia Desjardins	Rosemary Harden	Shirley Ho	
Nisreen Jardaneh	Mary Claire Lazure	Catherine Lemay	YiFei Liu	
Line Morais	Erin Parkes	Jason Ray		

# **Research Partners**

## Music

Elaine Keillor (Carleton University)

Louise Mathieu (Université Laval)

Matti Ruippo (Pirkanmaa University of Applied Sciences, Finland) Lauri Väinmaa (Pirkanmaa University of Applied Sciences, Finland)





Louise Mathieu

Psychology Veronika Huta (University of Ottawa) Virginia Penhune (Concordia University)

**Health Sciences** 

Isabelle Cossette (McGill University) Ursula Stuber (Université Laval)



**Isabelle Cossette** 



**Ursula Stuber** 

## **Cognitive Sciences**

Bruno Emond (National Research Council)

#### Neurosciences

Ramesh Balasubramaniam (McMaster Univer-

## Library Network

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

## 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)

## Communications

John Spence (Communications Research Centre)





**Donald Russell** 



**Bruno Emond** 



Veronika Huta

**Ramesh Balasubramaniam** 

## **Music Reading**

## **Musical Symbols in Piano Method Books**

There is no clear consensus on how many musical symbols a student must be able to read to become musically literate. Every method book uses a different approach to introduce the various symbols piano students must recognize while learning to play piano. Over the last three years we have created a database tracking musical symbols as they are introduced. 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. In addition to the North American method books examined, European method books have been scanned to compare their approach to music reading. Based on preliminary observations, European method books present symbols in a condensed manner whereas in North American method books, the introduction of symbols is spread over many more volumes.





## A Detailed Analysis of Methods for Introducing Musical Symbols

Some methods present a symbol many times before students are expected to have learned it while others show it once and expect the student to remember. We are investigating the sequencing of the symbols, the pace at which they are introduced and the way they are reinforced, with the use of a computer program created in the Piano Lab. Each musical piece of a method book is scanned and transformed into a MIDI file. The latter is read by the computer program that then provides a summary and total of the pitches and note durations presented in the musical excerpt. To complete the analysis, a manual tracking of rests, dynamics and articulations is being conducted. The outcome is expected to provide insight on how musical symbols are reinforced in different method books.

#### **Effects of Illustration in Music Books**

Piano method books are among the principal tools of the instruction for young beginners. Many of these books have a large number of colourful illustrations raising 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? Young piano students were asked to sight read short music excerpts after a 30-second preview. Eye-tracking technology was used to study the number and duration of fixations on the picture zone relative to the music zone. During sight reading, the highest number of fixations recorded in the picture zone was approximately 20%, indicating that, in some cases, illustrations present a severe cognitive distraction from the musical notation. What is the effect of those colourful sketches on eye movement during practice? A follow-up project is being developed to observe young piano students' eye movements while learning to play short music pieces with colourful illustrations in a practice setting that is close to the normal practice environment.



## **Music Reading**

## **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. Yet measuring this ability is essential for evaluating the impact of the various teaching strategies used. It is also indispensable for evaluating the effects of various experimental conditions in research. We have therefore developed an instrument to measure one of the most complex of music reading activities reading piano scores. Following a rigorous analysis of psychometric tests used in music reading and an evaluation of the research on the algorithms used to quantify music reading errors, we have developed a test using original musical stimuli of increasing difficulty, a system for codifying errors and a scoring grid for evaluating the music-reading performance of beginning to advanced-level pianists. This is the first tool for measuring music reading specifically designed for pianists.

# Observable Eye-Movement Patterns during the Processing of Linguistic and 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. Participants' eye movements are measured as they read syntactically congruent or incongruent linguistic sentences aloud, and sight-read syntactically congruent or incongruent musical sequences, and the fixation duration is analyzed. This study is part of a growing body of research on music and linguistic syntactic integration and may help to expand our current knowledge of the underlying mechanisms of such processes in the brain.



Using the eye-tracking equipment while reading a score

### Sight Reading and Perceptual Span

Various studies on music reading have looked at perceptual span: the region around fixation from which useful information is extracted. Reading skills and harmonic difficulties do not seem to affect the span size: good sight readers and poor sight readers share a similar size of perceptual span. However, notational complexity (the amount of visual information within a certain region) does have an impact on eye movement during sight reading, and this effect might influence the perceptual span. Our study was designed to look 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 was available to the reader and the music only appeared when the eyes were looking ahead. Eye movement was recorded by Eyelink II, a head-mounted, binocular eye-tracking device. Results showed that notational complexity did not affect the perceptual span but it did affect the performance level and patterns of eye movement.

Researchers:
Gilles Comeau – Music, University of Ottawa
Allyshia Sewdat – Undergraduate student, Computer Science, University of Ottawa
Lu Yuanyuan – Graduate student, Music, University of Ottawa
Ramesh Balasubramaniam – Kinesiology, McMaster University
YiFei Liu – Graduate student, Human Kinetics, University of Ottawa
Stephanie Ahken – Undergraduate student, Science, University of Ottawa
Flora Nassrallah – Graduate student, Human Kinetics, University of Ottawa
Kimberley Sundell – Graduate student, Music, University of Ottawa

## Motivation

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

One of music education's major concerns is the challenge of motivating students to continue learning piano. A high percentage of young students stop piano lessons within the first 18 months, before they begin to master the instrument. A likely correlate of this dropout rate is insufficient motivation. To provide better support for children's piano learning, we developed the Survey of Musical Interest (SMI) to measure young piano students' degree of motivation and their interest in piano-related activities, and an accompanying parents' questionnaire for background information. We now have a version in English, French and Chinese. So far, more than 300 piano students have been interviewed and we are actively increasing this number. We are currently studying correlations between levels of motivation and various factors like gender, teaching method being used and parental involvement.

## **Comparative Analysis of Motivation Patterns between Two Different Cultural Groups**

Anyone who has taught piano to Asian students has undoubtedly noticed their marked success in this area: they continue with their studies for a long time, and they achieve very good results in examinations and competitions. It has been suggested that there must be some link between this success and the motivation levels in these students. Motivation has been extensively studied in various educational settings, and cross-cultural differences have also been investigated, but not with young music students. This study was designed to measure and compare the motivational level of private piano students in North America and in the People's Republic of China (PRC) using the SMI. Participants consisted of 65 Caucasian North American piano students and 50 Chinese piano students in the same age range living in the PRC. Additional information was collected from parents and piano teachers in two complementary questionnaires. The results indicated that the North American and Chinese students differ from each other in every category. We observe that the Chinese students attribute success to hard work and think that failure means that they must work harder. North American students attribute success and failure to talent or lack of talent.



Researchers discussing data from the Survey of Musical Interest (SMI)



YiFei Liu interviewing a research subject at the Piano Lab

#### Researchers

Gilles Comeau – Music, University of Ottawa YiFei Liu – Graduate Student, Music, University of Ottawa Veronika Huta – Psychology, University of Ottawa Jaclynne Smith – Graduate Student, Psychology, University of Ottawa

## Research

## **Health Issues and Injury Prevention**

## **Pianists' Breathing Patterns**

Over the last fifty years, researchers have taken an interest in the breathing of various kinds of instrumentalists but little is known about the breathing patterns of pianists. The goal of this project was to examine how pianists' breathing is affected by various musical elements such as tempo, metre, rhythm, accentuated notes, melodic complexity and phrasing. Eight pianists played technical exercises and set pieces on a Yamaha Disklavier while their respiration was being monitored. Results indicated that the breathing of some pianists was related to their performance. With this project, we have established an efficient methodological layout to measure breathing during a performance while maintaining playing conditions closest to normal. More experiments will be conducted to solidify our conclusions.

## 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. Results from an interdisciplinary approach based on an analysis of descriptions of warm-up in the pedagogical literature and an examination of results in a number of related activities including athletics and typing are presented. Preliminary results suggest that although the activities are clearly different, musicians can benefit from exploiting some approaches seen in other disciplines such as athletics.



Lu Yuanyan wearing the breathing

## The choice between Intrinsic and Extrinsic Finger Muscles in Musical Performance

Most musical activities involve extensive use of the fingers on one or both hands. In flexing the fingers, the cian may focus on the use of the large powerful extrinsic muscles that reside in the forearm, or the small intrinsic muscles in the palm of the hand. This research will clarify the biomechanical issues involved in this choice and the possible medical implications of the two approaches. Initial experimental work based on EMG measurements is used to show some of the implications of this choice on wrist stiffness during piano performance.

### Researchers

Donald Russell – Engineering and Design, Carleton University Gilles Comeau – Music, University of Ottawa Flora Nassrallah – Graduate student, Human Kinetics, University of Ottawa Isabelle Cossette – Music, McGill University Ursula Stuber – Music, Université Laval Caroline Andison – Graduate student, Mechanical Engineering, Carleton University Ivea Mark – Graduate student, Music, University of Ottawa Michele Wheatley-Brown – Graduate student, Music, University of Ottawa

## Research

## Video-Mediated Learning

## Video Database Development

We are in the process of completing a video-clip database that will serve as a resource for students and piano teachers. Recordings of complete lessons were reviewed and clips that best represent specific teaching strategies were selected and edited. With the help of Dr. Martin Brooks and the lab technicians, a search-engine application is being developed so that clips will be retrievable by different categories of keywords. The database will contain clips on period instruments, the use of technology while teaching, and different teaching strategies. Most importantly, clips demonstrating various piano -playing techniques such as drop-rolls or staccato playing will be available, as well as clips illustrating how to teach these skills.



Videoclip of a piano lesson in the database

#### Researchers

Gilles Comeau – Music, University of Ottawa Martin Brooks – Computational Video, National Research Council of Canada Sam Popowich – Emerging Technologies Librarian, University of Ottawa Flora Nassrallah – Graduate student, Human Kinetics, University of Ottawa Jacinda Chapman – Undergraduate student, Music, University of Ottawa Xi Zhang – Undergraduate student, Mechanical Engineering, University of Ottawa

## **Distance Piano Teaching**

For the past two years, the Piano Lab has been conducting a research project to explore 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. In September 2007, two five-year-old girls in Indiana began weekly distance piano lessons with Dr. Comeau. Another five-year-old girl began piano lessons at the same time with Dr. Comeau in the Piano Lab, and the data from all three are being compared to see the effect of the different teaching environments. Currently, lesson videos are being analyzed using SCRIBE data-mapping software to examine the behaviours of teacher, students and parents.



Video cameras capturing a piano lesson for distance teaching

#### Researchers

Gilles Comeau – Music, University of Ottawa Martin Brooks – Computational Video, National Research Council of Canada William Budai – Music, IUPUI Music Academy, Indiana University Ivea Mark – Graduate student, Music, University of Ottawa Michele Wheatley-Brown – Graduate student, Music, University of Ottawa

# Outreach

# **CFI Outcome Measurement Study Expert Panel**

The Canadian Foundation for Innovation conducts Outcome Measurement Studies to ascertain whether their investment in infrastructure is effective in achieving the CFI's national goals for Canadian research. The Piano Lab was selected for a tour by an Expert Panel from the OMS as part of their visit to various CFI-funded projects at the University of Ottawa. It was a great opportunity to showcase the Lab, its unique infrastructure and its research to the distinguished international researchers who made up the Panel.



CFI panel members gather in the Studio



Nisreen Jardaneh presents a research to the Expert Panel

# The Association of Spouses of European Diplomats and Spouses of MPs

In May, Dr. Comeau was the guest speaker at a meeting of the Association of Spouses of European Diplomats and Spouses of MPs hosted by the German Embassy at the home of the Ambassador. Dr. Comeau presented the Lab and its infrastructure and discussed the ongoing research projects. Emma Huang, a young student of Dr. Comeau's, performed several pieces. The event was very well received, with more than 60 people attending.



Dr. Comeau highlighting a point on one of his slides



Emma Huang, 5, has just finished playing her pieces



Christina Hoepfner, spouse of the German ambassador, thanks Dr. Comeau for his presentation

# A Major New Resource Is Published

# **Piano Pedagogy: A Research and Information Guide**

It was obvious from the very beginnings of the Piano Lab that a research and information guide in piano pedagogy was essential for the growth and development of this field of research. After Dr. Comeau received word from Routledge in 2006 that it would publish a research guide in piano pedagogy, he and a group of graduate students began the long and involved process of gathering and annotating information on reference works and selected scholarly sources to inform and assist anyone conducting research in piano pedagogy or training in that field.



Piano Lab administrator Milada Medinić working on manuscript continuity with Catherine Lemay

The guide directs its readers to comprehensive access points for research, like indexes, databases and bibliographies, as well as individual sources of research information, such as encyclopedias and dictionaries, journals and magazines, theses and dissertations, tests and measurement scales, and monographs. These sources encourage scholars and students to find and use the broadest range of sources to enhance the overall quality of their work. The book directs them to both contemporary and older studies, including indexation and bibliographical tools, encyclopedias, books, journal articles, audio and video recordings and online sources.





YiFei Liu working on indexes for the book



Milada Medinić and YiFei Liu checking a bibliographic reference for consistency



One of many editorial meetings

## **Reception with the Friends of the Piano Pedagogy Research**



Yi Fei Liu and Emma Huang performing a duet at the book launch

In December, the Piano Lab celebrated the publication of Piano Pedagogy: A Research and Information Guide with a book launch attended by some 40 guests, including most of the graduate students who helped write the book. Dr. Comeau gave a presentation thanking everyone who was involved in the publication process. He explained that while the genesis of the book was in his work in piano pedagogy as a researcher, professor and dissertation supervisor, the strongest motivation was the multidisciplinary nature of the Piano Lab itself and the need for a tool to facilitate access to the research being done across many disciplines. A comprehensive research guide bringing together all the available bibliographic resources was essential. It had to include all the traditional ways of surveying various fields of research, but also take into account the changes that technology has made to the information-gathering process.

Dr. Comeau acknowledged the invaluable help of Cécile Prud'homme at the Morriset Library and Debra Begg, the School of Music's Librarian. The guide was published in August, but the first printing sold out so quickly that the celebration had to be delayed until the second printing was out, just so that a copy of the book could be there for the party!



Routledge published the book in June 2009

#### • List of students involved in the project: Nisreen Jardaneh – Graduate student, Music, Université Laval

YiFei Liu – Graduate student, Music, University of Ottawa Catherine Lemay – Graduate student, Music, University of Ottawa Mary Claire Lazure – Certificate student, Music, University of Ottawa Mélina Dalaire – Graduate student, Music, University of Ottawa Julia Brook – Graduate student, Music, University of Ottawa



Gilles Comeau and Emma Huang at the book launch



Guests at the launch listen to Dr. Comeau's story of how the book came to be

# **Conference & Symposia**

# Journées francophones de recherche en éducation musicale

In May 2009, in partnership with Université Laval and the Université du Québec à Montréal, the Piano Pedagogy Research Laboratory hosted the ninth JFREM conference, only the second to take place in North America. JFREM has arisen from a partnership of international Francophone music educators based in Belgium, Canada, France and Switzerland who wish to encourage multidisciplinary research in music education by providing an opportunity for Francophone researchers in related fields to gather, to find possibilities for working together and to publish their research. The theme for the 2009 conference was Music Education in the 21st Century: What Kind of Research? What Kind of Education? Fortyseven participants from five countries gave papers and poster presentations on the current state of research and teaching in four main areas of music education: body awareness for the musician, instrumental pedagogy, teachprofessional identity. Approximately ing methods and approaches, and fifteen of the papers presented will be published in 2010 as the conference proceedings in the journal Recherche en éducation musicale.



The conference opened with a concert on period instruments. Dr. Elaine Keillor of Carleton University performed on the Lab's clavichord, and the Walter and Graf pianofortes.



Conference sessions were held in the auditorium of the Music School



The conference ended with the closing address by Claude Dauphin of UQAM, given as part of afternoon tea at Tabaret Hall



Conference participants were given an opportunity to tour the Piano Lab

#### • Organizing Committee:

Gilles Comeau, Piano Pedagogy Research Laboratory, University of Ottawa Louise Mathieu, Music Education, Université Laval Denyse Blondin, Music Education, Université du Québec à Montréal Jonathan Bolduc, Faculty of Education, University of Ottawa



At the closing concert, young musicians from the Ottawa area performed works by Canadian composers, many of whom were not familiar to conference participants from outside North America

# Applying Movement Principles to Piano Playing: Bridging the Gap between Research and Practice

The Piano Lab hosted a two-day workshop and symposium exploring the relationship between music and the physical in piano technique in March of 2009. Donald Himes of Toronto conducted a Feldenkrais workshop and Allan Fraser from the University of Novi Sad, Serbia, demonstrated the application of Feldenkrais principles to piano technique. Laval's Ursula Stuber gave a workshop and demonstration of Eutony movement principles and Laval's interactive multimedia eutony website. Dr. Gilles Comeau of the Piano Lab and Matti Ruippo of the Pirkanmaa University of Applied Sciences, Finland, conducted discussion sessions for both workshops. The second day's theme was *Scientific Measurement of Body Reaction during Piano Performance*. The sessions began with a Feldenkrais workshop by Marianne Rivington, a physiotherapist and Feldenkrais teacher from the Ottawa Hospital.

Researchers talked about how they are measuring the body's reactions during performance. Dr. Comeau and Dr. Donald Russell demonstrated the use of electromyography (EMG) to study the biomechanical issues involved with the finger musculature in piano playing. Dr. Christophe Herry of Carleton University is working on the effects of warming up, and he illustrated the use of thermal imaging to measure differences in skin temperature on the arms and hands during performance. Isabelle Cosette of McGill and Flora Nassrallah, one of the Piano Lab's graduate students, showed how they are assessing the effect of various musical elements like tempo, metre, rhythm, melodic complexity and phrasing by monitoring pianists' respiration while they are performing.



Ursula Stuber demonstrating Eutony principles on a

# **Colloquium on Music Pedagogy**

On April 28, 2009, the 6th Annual Colloquium on Music Pedagogy was held at the University of Ottawa. Six of the Lab's students presented papers.

- Ivea Mark, a student in the Graduate Certificate program, compared teacher, student and parent behaviours in studio and distance teaching of beginner Suzuki piano students.
- Undergraduate Certificate student Émilie Bertrand-Plouffe reported on a study analyzing selected piano method books to see whether the concepts introduced facilitate the student's progression to the RCM grade 1 repertoire book.
- Esther Jean-Charles and Michele Wheatley-Brown, both in the Undergraduate Certificate program, reviewed the literature on warming up and cooling down for pianists and other musicians and found a striking lack of information on the subject in comparison with the sports medicine literature.
- Jacinda Chapman, a student in the undergraduate music program, studied the standards of comprehensive musicianship in four different method books, comparing the learning strategies used, concepts taught, technique developed, practising guidelines offered, and the musicianship developed.
- Special student Vanessa Rektor worked on a pilot project to develop methodology to study the effectiveness of modelling and mental practice on students' rhythmic performance.

## The Ann Southam Music Reading Fund

Ann Southam has been one of the Piano Lab's staunchest supporters over the years. We have just received a third major donation from her in support of the Lab's research on music reading. To honour her and her generosity, we have created the Ann Southam Music Reading Fund, which will form the basis of support for the music reading research projects.



Alan Merriam

## A Partnership in the Science of Music

The Piano Lab is in the second year of a collaborative study with the Merriam School of Music in Oakville, Ontario (www.merriammusic.com). Merriam is the largest music school in Ontario and the Lab's researchers have been collecting data for the studies on motivation and music reading from their large pool of students. The Lab is grateful to Mr. Merriam for his generous financial support to help maintain the operational costs and the research activities of the Piano Lab.



Ann Southam

## Longtime Friends of the Piano Lab

The Piano Lab was pleased to receive a donation from Leekor Engineering, Inc. Leekor's president and CEO Lee Atkinson, and his wife Jeanette St-Jacques, have been supporters of the Lab since its inception, always attending Lab events and showing a constant interest in the Lab's work.

## **Donated Piano**

Mr. Peter Mansfield has graciously donated a 19th century pianoforte to the Piano Pedagogy Research Laboratory's period instrument collection. The instrument is a Broadwood built in London, England, ca. 1829. It is an example of the English school of pianoforte construction, which had a very different and stronger hammer mechanism from those built in Vienna. This gift has broadened the Music School's collection and allows the students to compare the two types of pianoforte and to have experience with the kind of instrument that was the direct ancestor of the modern piano.



Several anonymous donors contributed to the Lab's scholarship fund providing research fellowships for the Lab's graduate students.



The inscription inside reads: "Patent, John Broadwood And Sons, Makers to His Majesty And the Princesses, Great Pulteney Street, Golden Square, London. 1829."

## Total Funding (since 2002)

\$2,366,638

External Funding \$1,929,696

Internal Funding \$436,942





