MaHRC On the MaHRC
The Newsletter of the Music and Health Research Collaboratory

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Faculty of Music
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GENERAL NEWS

Bartel and Team Preparing Application for Connaught Global Challenge Grant

The Connaught Global Challenge (CGC) supports synergistic multi-disciplinary research within the University of Toronto that brings together previously untapped potential and launches it to global recognition. The Connaught fund in 2012 provided MaHRC with $115,000 development money to support the development of a CGC proposal with visiting scholars and symposia. These have included Dr. Rodolfo Llinas, Dr. Gottfried Schlaug, Dr. Michael Thaut, and three research symposia as well as a Post Doc fellowship to pursue sound simulation research.

The project proposal currently being develop under the leadership of Lee Bartel is entitled, Music Medicine in Neuro-Rehabilitation: Foundations and Applications of Sound Stimulation. It involves a team of co-applicants consisting of: David Alter, Robert Chen, Karin Davis, Michael Evans, Morris Freedman, Allan Gordon, Sidney Kennedy, Andres Lozano, Rebecca Renwick, and Bernhard Ross. In addition there are specific research cluster teams of about another 20 researchers. The research will focus on four conditions that share dysregulation of neural circuits: Alzheimer's, Parkinson's, Major Depressive Disorder, and Neurogenic Pain. The central premise of the proposal is that the rhythmic nature of sound drives neural pulsation and therefore functions as brain stimulation and can contribute to regulation of brain circuits.

In addition to the research projects being developed in this grant proposal, the CGC supports plans for an international research conference on music and neurorehabilitation in 2016 as well as plans for Dr. Michael Thaut to come to the University of Toronto as visiting researcher for a year.

Although the CGC is competitive and there is no assurance MaHRC will receive funding for this application, the benefits of team building, discussion of research ideas, and formulation of project plans is highly valuable and will contribute to the long-term development of MaHRC and the research agenda in music medicine.

Schlaug Talks Very Well Attended

Dr. Gottfried Schlaug, Connaught Visiting Scholar in MaHRC 2013-14, spent some time at the University of Toronto in January meeting with research teams to review and plan several research studies related to Alzheimer's and to a neuroscience imaging examination of Rhythmic Sensory Stimulation, the basis for a number of MaHRC studies underway. While in Toronto, Dr Schlaug presented two talks. The first in the afternoon of January 16 was titled "Singing Out of Tune: A Neuroscience Perspective" and was the first 2014 lecture of the Collaborative Program in Neuroscience Distinguished Lecture Series. Some 100 CPIN students attended along with music students, faculty and general audience totaling around 200. In the evening of January 16 Dr. Schlaug presented a lecture sponsored by MaHRC entitled "Modulating brain activity to facilitate recovery from stroke" in the Doctors' Lounge Lecture Series of the Ontario Medical Association, District 11 at Mt Sinai Hospital. The evening that started with dinner supplied by OMA ended with a 45 minute question and answer session.

Bridgepoint Hospital Initiates Music Care Feasibility Study

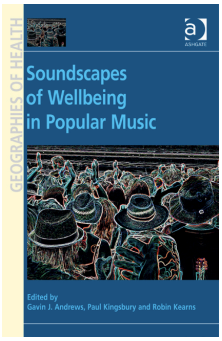
Through the initiative and cooperation of Lee Bartel of MaHRC and Renee Lyons, Associate of MaHRC and Director of the Bridgepoint Collaboratory for Research, Bev Foster, Director of the Room217 Foundation, has been engaged to head a comprehensive music care needs assessment of Bridgepoint Hospital. Funded through the Bridgepoint Foundation, this assessment is assumed to be a first of its kind and is expected to generate a conceptual model and procedural model for examining music care potential and needs/feasibility in hospitals.

It is proposed that music care delivery is comprised of informed and intentional musical implementation and music integration in a health care setting. Potential in eight domains of music care delivery will be included:

· **Community Music**: individuals or organizations that partner with the healthcare team to provide musical services or entertainment in the facility
· **Music Care Specialist**: individuals that bring their training and experience in music care to a healthcare setting, e.g., Harp Therapist, Music Thanatologist
· **Music Therapy**: a specific scope of music care practice that uses music and musical tools to address clinical goals and objectives within a therapeutic relationship
· **Music Programming**: staff or volunteers within the facility who plan for and employ the use of music into recreational or therapeutic programs that are delivered to individuals or groups

· **Music Technology**: the intentional use of technology and staff training to use technology to suit patients' musical needs or staff's treatment goals, e.g., bedside music terminals, iPod programs for sleep assistance or pain management.
· **Environmental Sound**: intentionally setting ambient healing sounds in the facility, e.g., recording of Tibetan bowls in prayer room, sounds to accompany labyrinth experience.
· **Music Medicine:** expanding the facility's understanding of music in healthcare as it pertains to research and best practices
· **Staff Music Wellness**: attending to the wellness of facility staff and volunteers through music

New Book Release: Soundscapes of Wellbeing in Popular Music



Congratulations to Gavin Andrews, MaHRC Associate, on the release of this new book.

The book, Soundscapes of Wellbeing in Popular Music, edited by MaHRC Associate Gavin J. Andrews, Paul Kingsbury and Robin Kearns, is being released by Ashgate Publishing in March.

Included in the book is a chapter entitled, "Dying healthy: music in places of palliative care" by Lee Bartel and Amy Clements-Cortes.

'No-one who grew up tapping, rocking, rapping or simply listening to the sounds of popular music will be able to resist this book. It is a page-turner. Musicologists are drawn into debates on wellbeing, health professionals confronted with the power of music, and geographers charged to pull it altogether. Innovative, challenging, entertaining; maybe therapeutic!'
Susan J. Smith, Girton College, Cambridge University, UK

For more information see:
http://www.ashgate.com/isbn/9781409443599

Upcoming MaHRC Sponsored Events

On Friday, March 7, 2014 at 1:00pm Dr. Michael Thaut will present a talk titled "A Vision for Music Medicine in Hospitals" sponsored by MaHRC and the Bridgepoint Collaboratory for Research. Dr. Thaut is Professor of Music and Neuroscience at Colorado State University, has served as Administrative Director of the School of the Arts from 2001 to 2010, and has been the Director of the Center for Biomedical Research in Music since 1994.
Location: 10th Floor Auditorium, Bridgepoint Hospital, 14 St. Matthews Road, Toronto, ON

Talk on Synesthesia by Dr. Julia Simner, PhD

Dr. Julia Simner is a neuropsychologist and leading expert in the field of synesthesia research. She trained at the Universities of Oxford, Toronto, and Sussex, and she currently runs the Synesthesia and Sensory Integration lab at the University of Edinburgh, Scotland. Her work focusses on the psychological and neuroscientific bases of synesthesia, and has been published in the high impact science journals such as 'Nature.' She is the editor of the Oxford Handbook of Synesthesia and is keenly interested in facilitating the public's understanding of science. Her work has been reported in over 100 media articles worldwide, including the NY Times, BBC, CBC, Telegraph, Times, New Scientist, Scientific American etc. In 2010 she was recognized as an outstanding European scientist by the European Commission's Atomium Culture Initiative and her science writing for the general public has been published in some of Europe's leading national newspapers.

Dr Simner's presentation is supported by MaHRC, OCAD University, The Colour Research Society of Canada, and the Fraser Mustard Institute for Human Development.

March 18, 7:00 pm
Room 330, Faculty of Music
Topic: Tasty coloured sounds: The experiences of synaesthetes
Free: Everyone welcome.

Abstract: Synaesthesia is an inherited neurological condition that gives rise to a kind of 'merging of the senses.' For example, synaesthetes might 'see' colours when they hear music, or experience tastes in the mouth when they read words. One particularly common variant is experiencing colours when reading letters or numbers, and this variant of the condition – known as grapheme-colour synaesthesia -- is found in around 1 in 100 people. What are the experience of synaesthetes, and how do these unusual experiences develop during childhood? How do they impact on schooling and early life development and how do adult synaesthetes navigate their multisensory worlds? I will explore the nature of these cross-sensory experiences and ask what they might also tell us about sensory processing in the population at large. I'll describe what I have learned from the scientific research carried out at my Synaesthesia and Sensory Integration lab over the last decade, and how synaesthesia might open novel ways of understanding creativity, perception and the very nature of reality.

Music Therapy Training Course at MaHRC – May 2-3

On May 2 – 3, MaHRC is offering a Continuing Education Experience for Music Therapists with instructor Blythe LeGasse. Dr. Blythe LaGasse is Coordinator and Assistant Professor of Music Therapy at Colorado State University. Dr. LaGasse holds degrees from the University of Kansas (Ph.D. with Music Therapy and Communication Neuroscience emphasis), Colorado State University (M.M. in Music, Music Therapy), and University of Kansas (B.M. in Music Therapy). Additionally, she holds Certification in Neurologic Music Therapy (NMT) and is a trainer for the NMT Academy. With a strong background in communication neuroscience, her research interests include the use of music to improve communication and cognitive skills in children with developmental disabilities and autism spectrum disorders. At CSU, Dr. LaGasse teaches undergraduate and graduate coursework in Music Therapy, coordinates the Music Therapy Clinics, and Directs the Music Therapy Distance Learning Program.

Course Title: Neuroscience, Speech and Language Training in Music Therapy
Date: May 2, 5-9 pm & May 3, 10am-5 pm, 2014
Location: University of Toronto, Faculty of Music
Course Fee: $160 (Includes lunch and refreshment breaks)

Course Description: This course unfolds in two modules: Neuroscience of Music Therapy & Facilitating Speech and Language in Music Therapy

Neuroscience of Music Therapy:
Have you ever wanted to better understand articles about music in the brain or explain what is happening when your clients listen to music? This continuing education experience will help the music therapy clinician understand basic neuroscience. We will go over important brain areas, systems, and networks. We will then explore how music activates the brain. This information will be presented so that clinicians can better: (1) read research by knowing basic structures, and (2) explain how music can affect behavior. We will relate information to different client populations. You will learn through lecture, video supplements, and coloring! **In order to maximize time in person, participants will engage in 2 hours of self-led video instruction before May 2nd.**

Learning Objectives:

Participants will have the opportunity to:

- learn basic neurological systems
- understand how music therapy treatment can promote brain changes to improve nonmusical skills
- learn how current neuroscience research literature can inform treatment implementation

- understand basic science language that may be used in professional conversations

Facilitating Speech and Language in Music Therapy
Many music therapists work with individuals who have speech and language needs. This continuing education experience is designed to help the professional music therapist learn about the neurological and developmental aspects of speech and language as they relate to client populations. We will review current research and apply findings to client populations across the ages. We will practice using Neurologic Music Therapy techniques that can facilitate functional speech and language goals. We will also learn about some assessment tools that can be used to measure progress. **In order to maximize time in person, participants will engage in 1 hour of self-led video instruction before May 2nd.**

Learning Objectives:
Participants will be able to:

- identify major factors in speech and language disabilities
- consider the role of neurological development in the production of speech
- identify the mechanisms that allow music to help in the development of speech and language
- identify relevant music therapy interventions for speech and language training

For more information contact:
Doreen at doreen.polestar@sympatico.ca

PLEASE NOTE: Although this course is financially subsidized by MaHRC, a minimum number of 15 registrants will be required to run the training. *If sufficient numbers are not registered by March 31st the training will be cancelled and fees refunded*

Registration Now Open for IAMM 3rd International Conference 2014

The 3rd International conference of IAMM will be held at the University of Toronto June 24 - 27 2014.

The 3rd International Conference of the International Association for Music & Medicine is promising to be an outstanding event with an unprecedented line-up of Keynotes and Plenaries. On the theme of Music Medicine through the Lifespan, three keynote addresses, looking at childhood, adulthood, and the later years, will be presented by Dr. Laurel Trainor, Director of the McMaster Institute for Music and Mind, Dr Julian Thayer, Ohio Eminent Scholar Professor in Health Psychology, Ohio State University, and Dr. Alicia Ann Clair, Professor and Director of Music Education and Music Therapy at the University of Kansas. Dr. Clair is also a Research Associate in Gerontology at KU. In addition there will be three neuroscience plenaries

featuring MaHRC associates and three hospital research associates featuring music research being conducted at Toronto hospitals. A special feature is the talk at the conference dinner by internationally celebrated neuroscience writer and MaHRC associate, Dr. Norman Doidge.

For general conference information, please see

http://www.iammcanada.com

MaHRC RESEARCH PROJECTS AND PLANS

In this issue of "On the MaHRC" we are featuring research in the sphere of Teaching, Learning, and Performing. Performance Science is an important research area in music with concerns for musician's health and optimum elite performance.

MaRHC researchers are voicing an exciting project to gather data on singers, mapping changes and developments across a timeline, and giving singers an authoritative overview on their vocal health.

The GLEE Project: Aaron Low, Dr. Paolo Campisi, Dr. Darryl Edwards, Katina Papaioannou
http://www.thevoiceclinic.com

Many singing professionals agree that singers do not need to know the science of voice performance to be a great performer, but one must stay healthy. The GLEE Project (Global Laryngeal Efficiency Evaluation), lead by Aaron Low, Director and Speech (Voice) Pathologist at The Voice Clinic in Toronto and Adjunct Professor of Music with the University of Toronto intends to collect each student singer's medical, auditory, aerodynamic and musculoskeletal data before and after each school year in order to track changes in their vocal athletic skill. Essentially, it is the 'singing voice physical examination' used to better define a 'healthy' voice. The GLEE Project includes testing for all bachelors, masters and doctoral students in Vocal Performance and our team of co-investigators includes Dr. Paolo Campisi, Paediatric Laryngologist at SickKids, Dr. Darryl Edwards, Head of the UofT Voice Studies Department and Ms. Katina Papaioannou, Research and Data Management Administrator.

First testing, using Sonneta, a brand new acoustic software program created by Dr. David Fernandes, was conducted in the Fall of 2013 at The Voice Clinic's singing voice laboratory and included 75 participants: an amazing contribution from UofT Music Department. Each singer's GLEE Score will provide knowledge about their voice - when it is healthy and not sick, swollen or congested!

For example, collecting data on a singer's vibrato in first year compared to fourth year allows one to better understand specific areas of strength and weakness for skills such as breathing or jaw tension patterns. In addition, the most common problem in singers, that we can prevent, is laryngeal tension or vocal fatigue. It is the root or source of many voice problems and usually appears in tandem with other complex complaints. Building a singer's awareness to what may cause vocal issues allows the Voice Team to implement long and short-term prevention and management strategies (i.e.) stretching programs, diet modifications, etc. to keep the performer informed and in top vocal health and skill. Anyone interested in participating in the next GLEE Score testing should contact The Voice Clinic at: katina@thevoiceclinic.com.

Advancing Interdisciplinary Research in Singing (AIRS): Dr. Darryl Edwards, Charlene Santoni

A Singing Round in Three Parts

Associate Professor and Head of Voice Studies at the University of Toronto, Dr. Darryl Edwards and research assistant, DMA student Charlene Santoni are aligned with a seven-year major collaborative research initiative called Advancing Interdisciplinary Research in Singing or "AIRS" (http://www.airsplace.ca). This project includes over 70 researchers representing every province in Canada and 15 other countries on 6 continents. AIRS' aim is to "understand individual, cultural, and universal influences on singing and the influences of singing on individuals and societies" by looking at:

1. The development of singing ability
2. Singing and learning
3. The enhancement of health and well-being through singing

Embracing all of these themes, Dr. Edwards and Ms. Santoni have three studies on which to report:

1. The Centre for Opera Studies in Italy (COSI)
http://www.co-si.com

In July 2013 we began a preliminary qualitative study at the Centre for Opera Studies in Italy examining the kind of training that exists at a summer opera training program. Our aim was rooted in developing and redeveloping propositions to unravel a standard theory surrounding teaching singing. In the study's initial stages; completed by questionnaire, standardized open-ended interview and video-recording analysis, core concepts emerged revealing anxiety, negative self-talk and negative (as opposed to active) physical tension in voice students - in the voice studio. Furthermore, what we found was that said population was either unaware or unwilling to acknowledge a propensity towards negative thoughts and their body's response to them in this context. We also uncovered that poor vocal performance outcomes (noted aurally) were supported by co-related examples from the data regarding the singer's negative mental state. This work provided us with preliminary grounded theories related to the psychological wellness and mindfulness of today's voice student population. It also provided us with groundwork for ongoing research at COSI.

2. Voice Studies at the University of Toronto Faculty of Music
http://www.music.utoronto.ca/programs/performance/voice.htm

Spurred on by our study at COSI, in February 2014, a project will be launched in the University of Toronto's Voice Studies Department aimed at acquiring a better understand of the relationship between singers' self-perception of their performance and observer-perception of the same performance within a voice lesson. The experience of music teachers suggests a discrepancy between the two suggesting a disconnect in either the student's salient features such as notational and articulatory accuracy or less salient features such as mental focus, psychological wellness and mindfulness or functional efficiency following instruction. The study will be carried out within voice studios wherein participating students' voice lessons will be video-recorded for observation. In addition, students will be required to fill out three modified questionnaires based on Spielberger's State-Trait Anxiety Inventory (STAI), Frost's Multidimensional Perfectionism Scale (MPS) as well as Obsorne and Kenny's Music Performance Anxiety Inventory for Adolescents (MPAI-A). Using the same tools, evaluators will then analyze the performers state based on the

lesson videos. NVivo software will be utilized for optimal qualitative analysis. What we are looking for is further development of our constructivist grounded theories related to learning optimization within the voice studio and to also undercover if there is a recurrence of weak psychological wellness and mindfulness in voice studios lending itself to poor vocal or mental health that requires further investigation and possible intervention.

3. Toronto Children's Chorus Vocal Academy

http://www.torontochildrenschorus.com

In order to acquire a better understanding of how students are learning at the pre-university level, tracking singers' music training must be considered. In light of this, in May 2014, we will begin a narrative study using open-ended interviews with choir members in the Toronto Children's Chorus. Our hope is to uncover themes that will help us to formulate theories that will inform post-secondary level singing teachers and music faculties alike. Such dissemination will provide a foundation for decision-making and intervention regarding pedagogy as well as the psychological wellness resources and models made available to students in University voice programs to optimize vocal health in this kind of setting.

Adjunct and Status-Only Appointed Members of MaHRC, Faculty of Music:

Heidi Ahonen, PhD, MTA. Professor of Music Therapy at Wilfrid Laurier University.

Claude Alain, PhD. Assistant Director and Senior Scientist of the Rotman Research Institute at the Baycrest Centre

Quincy Almeida, PhD. Director, Sun Life Movement Disorders Research & Rehab Centre, Wilfrid Laurier University.

Dr. David Alter, MD, PhD, FRCPC. Cardiologist, Senior Scientist in the Institute for Clinical Evaluative Sciences.

Dr. Jennifer Anderson, MD, FRCSC. St Michael's Hospital, Otolaryngologist in Chief, Department of Otolaryngology - Head and Neck Surgery

Gavin Andrews, PhD. Professor, Department of Health, Aging, & Society, McMaster University.

Dr. John Axler, MD, CCFP. Director of Continuing Education Projects for the Department of Family and Community Medicine, University of Toronto.

Katherine M. Boydell, PhD. Senior Scientist and Scientific Dir of Qualitative Inquiry, Child Health Evaluative Sciences, The Hospital for Sick Children.

Dr. Davor Cepo, DC. Wasser Pain Management Centre, Mount Sinai Hospital

Tom Chau, PhD. Vice Pres, Research - Holland Bloorview Kids Rehab; Director - Bloorview Research Inst; Canada Res Chair in Paediatric Rehab Eng

Dr. Joseph Chen, MD, FRCSC. Otolaryngologist-in-Chief at Sunnybrook Health Sciences Centre; Associate Professor, University of Toronto.

Joyce Chen, PhD. Stroke Rehabilitation Scientist, Heart and Stroke Foundation Centre for Stroke Recovery, Sunnybrook Hospital

Dr. John Chong, MD, CGPP, ABIME, FACPM, FRCPC, DOHS, ARCT. Medical Director of Musicians' Clinics of Canada.

Amy Clements-Cortes, PhD. MTA, MT-BC, FAMI. Senior Music Therapist, Baycrest Centre; Assistant Professor (Research) Faculty of Music, U of T

Angela Colantonio PhD. Prof, Dept of Occup Sci & Occup Therapy, Dalla Lana Sch of Pub Health; Grad Dept of Rehab Sc, Fac of Med, U of T

Maureen Dennis, PhD. Senior Scientist, Psychology, The Hospital for Sick Children; Professor, Institute Medical Sciences

Dr. Norman Doidge, MD, FRCP(C). MACPsa. Assistant Professor of Psychiatry, Faculty of Medicine, UT, CAMH Clarke Institute Division.

Colleen Dockstader, PhD. Research Associate, Mabbott Laboratory, Sick Kids Hospital.

Michael J Evans, PhD. Professor of theoretical statistics and biostatistics, U of T, cross-appointment to the Dalla Lana School of Public Health.

Joaquin Farias PhD. Prof of Ergonomics at the Conservatorio Superior de Música de Sevilla; Researcher, School of Medicine at the Univ of Valencia.

Dr. Morris Freedman MD FRCP(C). Exec Medical Dir Centre for Memory and Neurotherapeutics; Medical Dir of the Ross Memory Clinic at Baycrest

Shari Geller, PhD. Clinical Psychologist; Faculty in Health Psychology, York University;

Dr. Allan Gordon, MD, FRCP(C) Clinical Neurologist and Director of the Wasser Pain Management Centre, Mount Sinai Hospital.

Jessica Grahn, PhD Assistant Professor at the Centre for Brain and Mind in the Department of Psychology, University of Western Ontario.

Robert Harrison, PhD. Senior Scientist in Otolaryngology, Neurosciences & Mental Health, and Auditory Science at Sick Children's Hospital;

Sylvain Houle, PhD. Director of the Research Imaging Centre at the Centre for Addiction and Mental Health (CAMH) and the University of Toronto.

Gabriela Ilie, PhD. Lecturer, Department of Psychology, UTS; Post-Doc St. Michael Hospital, Neurosurgery, Injury Prevention Office and CAMH

Pia Kontos, PhD. Scientist, Toronto Rehabilitation Institute; Assistant Professor in the Dalla Lana School of Public Health.

Nancy J. Lobaugh, PhD. CAMH Indep Scientist, Research Imaging Centre MRI Suite and Assist Prof of Neurology at the U of T Faculty of Medicine.

Aaron J. Low, MSc. Speech-Language Pathologist, The Voice Clinic, Toronto.

Renee Lyons, PhD, Scientific Dir, Bridgepoint Collaboratory for Research and Innovation; Professor in the Dalla Lana School of Public Health at Uof T.

Lynn McDonald, PhD. Prof, Faculty of Social Work; Dir, Inst for the Life Course and Aging; Scientific Dir, National Initiative for Care of the Elderly

Patricia McKeever, PhD. Sen Scientist, Bloorview Kids Fndn Chair in Childhood Disability Studies, Bloorview Research Institute; Prof, Fac of Nursing

Dr. Henry Moller, MD, DABSM, FRCPC. Assistant Professor, Department of Psychiatry, University of Toronto; Toronto Sleep Clinics.

Sylvain Moreno, PhD Scientist, Rotman Res Inst, Baycrest; Assist Prof, Dept of Psychology; Dir, NeuroEducation Across the Lifespan Lab, Rotman.

Dr. Lili Naghdi, MD, CCFP. The Health Centre of Maple, Sound Therapy Centre of Vaughan.

Kristine Newman, RN, CRN(C), PhD. Daphne Cockwell School of Nursing, Ryerson University.

Dr. Allan Peterkin, MD FRCP(C) FCFP Assoc Prof, Psychiatry and Fam Medicine, U of T; Coord, Narrative Medicine & Humanities Prog, Mt Sinai Hosp;

Dr. Larry M. Picard, MD. FRCP(C). Clinical Neurologist, Wasser Pain Management Centre, Mount Sinai Hospital.

Rebecca Renwick, PhD. Professor, Department of Occupational Science and Occupational Therapy; Director of the Quality of Life Research Unit

Larry E. Roberts, PhD. Professor in the Department of Psychology, Neuroscience, and Behaviour at McMaster University.

Mark Rosenberg, PhD. Prof of Geography, Prof of Community Health and Epidemiology, Canada Res Chair in Development Studies, Queen's Univ

Bernard Ross, PhD. Senior Scientist at Rotman Research Institute, Baycrest Centre and Associate Professor in the Department of Medical Biophysics.

Frank Russo, PhD. Associate Professor, Department of Psychology, Ryerson University; Director, Science of Music, Auditory Research and Tech Lab.

Glenn Schellenberg, PhD. Professor, Department of Psychology, University of Toronto. Director, Music & Cognition Laboratory, UTM

Mark Schmuckler, PhD. Prof, Dept of Psychology, University of Toronto; Director, Laboratory for Infant Studies; Director, Music Cognition Lab, UTS.

Michael Schutz, PhD Assist Prof of Music, McMaster Univ; Dir, MAPLE (Music, Acoustics, Perception, and LEarning) Lab. Core member, MIMM;

Sandra Trehub, PhD. Professor Emeritus, Department of Psychology, University of Toronto; Director, Auditory Development Laboratory, UTM

Lidan You, PhD. Assistant Professor, Department of Mechanical and Industrial Engineering, University of Toronto.

On the MaHRC Newsletter is created and edited by: Prof. Lee Bartel, Associate Dean-Research and Acting Director of MaHRC. For questions or comments: music.research@utoronto.ca